The Annapolis Riddle: Advocacy, Ship Design and the Canadian Navy’s Force Structure Crisis, 1957-1965

by

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This degree is dedicated to my wife Tara.
Abstract


The General Purpose Frigate was the centrepiece of the Royal Canadian Navy’s fleet planning for over three years, and its cancellation by the newly elected Liberal government in October 1963 set off a divisive and chaotic yearlong debate over what should be built in its place. After exploring numerous options, such as aircraft carriers and nuclear submarines, the navy came to the conclusion that its best option was to pursue a guided missile destroyer program that was similar to the General Purpose Frigate. What happened next has confounded a number of modern naval historians. Just as the navy was about to acquire its long sought after guided missile destroyers, a decision was made to build four smaller specialized anti-submarine vessels that would repeat the less sophisticated Annapolis class instead.

Although a number of theories have been put forward to explain this decision, the one common factor among these hypotheses is the notion that an egocentric and dominant defence minister named Paul Hellyer forced the Repeat Annapolis upon a reluctant navy that unanimously despised the concept. According to these interpretations, both the Repeat Annapolis and General Purpose Frigate were reflective of a larger debate over whether the navy should have the capability to participate in more versatile operations, such as containing limited wars in the Third World, or maintaining a specialised antisubmarine fleet. Conventional wisdom, therefore, suggest that Hellyer’s selection of the repeat Annapolis was indicative of a minister who gave the navy little choice but to specialize in anti-submarine warfare. This dissertation, however, challenges
this premise by arguing that the navy was far from united over its force structure - a term used to describe the process through which the navy selects the types of ships it requires to fulfil its current and future roles. Instead, it will show how the birth of the Repeat Annapolis was actually the product of conflicting opinions and struggles from within the navy itself. Understanding the self-inflicted damage resulting from these conflicts is crucial, particularly since the force structure that emerged from this chaotic period (1957 - 1965) would influence the composition of the Canadian navy for the next forty years.
Acknowledgments

There are a great number of people who have my internal thanks because without their assistance this dissertation would never have been completed. First and foremost, I would like to acknowledge the efforts of my advisor Dr. Allan English and co-advisor Dr. Richard Gimblett. Both men are model supervisors who not only gave me the latitude to discover the exact topic that I wanted to explore, but also had the good sense to keep me on track once I began writing. I would also like to thank the other members of my committee, namely Dr. Doug Bland, Dr. Jim Pritchard, Dr. Roger Sarty and Dr. Bob Shenton, who all provided excellent advice and suggestions for improvement. It is equally important to thank the department of history (and in particular Yvonne Place - the graduate secretary) as well as Queen’s University itself. Queen’s is a wonderful institution and my time there was a truly rewarding experience.

The Directorate of History and Heritage at National Defence Headquarters is another organisation that deserves much credit, the more so because of the friendship and guidance I received from this fine institution. In particular, Dr. Steve Harris, Mr. Mike Whitby, and Dr. Isabel Campbell were not only constant sources of encouragement, but also key figures who helped me with the formation of ideas and concepts. Unfortunately, there are simply too many historians at DHH to thank everyone, but it is important to record that I cherish all the discussions I had with them as well as their advice for both this dissertation as well as my work on Volume III of the Official History of the Royal Canadian Navy. Other DHH staff also played a pivotal role in helping me. As with other projects of mine, Warren Sinclair has yet again proven that he is one of the finest archivists I know. Likewise, Madeleine LaFleur-Lemire, DHH’s Librarian, went well
beyond her normal duties in finding numerous obscure references, books and articles. But it was Andrea Schlecht who truly made things possible through her efforts to declassify the mountain of documents that were required for this dissertation.

The kindness, patience and helpfulness at the various archives I visited need similar recognition. I was always treated with the utmost courtesy whether it was the British archives at the Public Records Office (Kew), the Imperial War Museum (London), and the National Maritime Museum (Brass Foundry) or the domestic institutions at the Canadian War Museum and the Library and Archives of Canada. There is, however, one individual at the latter organization that deserves a special word of thanks. Working on a subject that dealt with so many classified sources was never easy, but Danielle Simard and her staff at the Access to Information division at the Library and Archives did an amazing job in clearing the documentation needed for this dissertation.

My greatest appreciation, however, is reserved for my family and friends. Jamie Paxton, a fellow PhD candidate at Queens and close friend since my undergraduate days at the University of Toronto, was always willing to listen and offer suggestions on my dissertation (frequently over coffee or beer at the local café or pub). The same was true for Chris Knowlton and a number of others who stuck by me despite the fact that I was often an absent friend while researching and writing. My Mom, Helen, late father, Richard, brother, Michael and sisters Alyson and Susan, always believed in my academic pursuits and provided an unbelievable level of support. While he arrived later in the process, my son Matthew (my pride and joy) was a particularly welcome addition who made the final stretch much more pleasurable. But it is my wife Tara who lived with this PhD on a day to day basis. Tara is one of those special spouses who are willing to make
any sacrifice to see their partner succeed. She is a wonderful woman who I was extremely fortunate to meet and had the common sense to marry. It is to her that I owe (and dedicate) this degree.
# Table of Contents

Dedication ii  
Abstract iii  
Acknowledgments v  
Abbreviations ix  
Chapter One  
Introduction 1  
Chapter Two  
“Small, Cheap and Many” 29  
Chapter Three  
“A Cold Hard Look” 103  
Chapter Four  
“A Wasteful Navy Project” 175  
Chapter Five  
The Battle of the Iwo Jima 246  
Chapter Six  
Victory over the Essex and the “poor man’s solution” 311  
Chapter Seven  
“A poor cousin on a picnic” 385  
Chapter Eight  
Conclusion 434  
Bibliography 445  
Annex A Comparison of proposed naval force structures, 1961-1964 457  
Annex B Comparison of destroyer designs 458  
Annex C Illustrations of Various Ships and Aircraft 459
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td>Anti Aircraft</td>
</tr>
<tr>
<td>AAW</td>
<td>Anti Aircraft Warfare</td>
</tr>
<tr>
<td>ACDS</td>
<td>Assistant Chief of the Defence Staff</td>
</tr>
<tr>
<td>ACNS (A&amp;W)</td>
<td>Assistant Chief of the Naval Staff (Air and Warfare)</td>
</tr>
<tr>
<td>ACNS (P)</td>
<td>Assistant Chief of the Naval Staff (Plans)</td>
</tr>
<tr>
<td>ACLANT</td>
<td>Allied Commander Atlantic</td>
</tr>
<tr>
<td>A/S</td>
<td>Anti-submarine</td>
</tr>
<tr>
<td>ASROC</td>
<td>Anti-submarine Rocket</td>
</tr>
<tr>
<td>ASW</td>
<td>Anti-submarine Warfare</td>
</tr>
<tr>
<td>A/VCNS</td>
<td>Acting Vice Chief of the Staff</td>
</tr>
<tr>
<td>AVM</td>
<td>Air Vice Marshal</td>
</tr>
<tr>
<td>CANAVHED</td>
<td>Canadian Naval Headquarters</td>
</tr>
<tr>
<td>CAS</td>
<td>Chief of Air Staff</td>
</tr>
<tr>
<td>CCSC</td>
<td>Chairman Chief of Staff Committee</td>
</tr>
<tr>
<td>CDC</td>
<td>Cabinet Defence Committee</td>
</tr>
<tr>
<td>CDS</td>
<td>Chief of the Defence Staff</td>
</tr>
<tr>
<td>CF</td>
<td>Canadian Forces</td>
</tr>
<tr>
<td>CFHQ</td>
<td>Canadian Forces Headquarters</td>
</tr>
<tr>
<td>CGS</td>
<td>Chief of the General Staff</td>
</tr>
<tr>
<td>CHSS-2</td>
<td>Canadian Sea King helicopter (American version known as HSS-2)</td>
</tr>
<tr>
<td>CINCEASTLANT</td>
<td>Commander in Chief Eastern Atlantic</td>
</tr>
<tr>
<td>CLG</td>
<td>guided missile cruiser</td>
</tr>
<tr>
<td>CNP</td>
<td>Chief of Naval Personnel</td>
</tr>
<tr>
<td>CNS</td>
<td>Chief of the Naval Staff</td>
</tr>
<tr>
<td>CNTS</td>
<td>Chief of Naval Technical Services</td>
</tr>
<tr>
<td>COR</td>
<td>Chief of Operational Readiness</td>
</tr>
<tr>
<td>CRMS</td>
<td>Close Range Missile System</td>
</tr>
<tr>
<td>CSC</td>
<td>Chief of Staff Committee</td>
</tr>
<tr>
<td>CUSRPG</td>
<td>Canada United States Regional Planning Group</td>
</tr>
<tr>
<td>CVH</td>
<td>Helicopter carrying aircraft carrier</td>
</tr>
<tr>
<td>CVN</td>
<td>Nuclear powered aircraft carrier</td>
</tr>
<tr>
<td>CVS</td>
<td>Escort aircraft carrier</td>
</tr>
<tr>
<td>DASH</td>
<td>Drone Anti-submarine Helicopter [check]</td>
</tr>
<tr>
<td>D/COR</td>
<td>Deputy Chief of Operational Readiness</td>
</tr>
<tr>
<td>DD</td>
<td>Destroyer</td>
</tr>
<tr>
<td>DDG</td>
<td>Guided missile destroyer</td>
</tr>
<tr>
<td>DDH</td>
<td>Helicopter-carrying destroyer</td>
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<tr>
<td>DE</td>
<td>Destroyer escort</td>
</tr>
<tr>
<td>DDE</td>
<td>Destroyer escort</td>
</tr>
<tr>
<td>DDP</td>
<td>Department of Defence Production</td>
</tr>
<tr>
<td>DG Air</td>
<td>Director General Aircraft</td>
</tr>
<tr>
<td>DGFD</td>
<td>Director General Force Development</td>
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<tr>
<td>DGFE</td>
<td>Director General Fighting Equipment</td>
</tr>
<tr>
<td>DG Ships</td>
<td>Director General Ships</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
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</tr>
<tr>
<td>DGNS</td>
<td>Director General Naval Supply</td>
</tr>
<tr>
<td>DGSF</td>
<td>Director General Support Facilities</td>
</tr>
<tr>
<td>DHH</td>
<td>Directorate of History and Heritage</td>
</tr>
<tr>
<td>DNFER</td>
<td>Director of Naval Fighting Equipment Requirements</td>
</tr>
<tr>
<td>DNI</td>
<td>Director of Naval Intelligence</td>
</tr>
<tr>
<td>DOD</td>
<td>Date of Death</td>
</tr>
<tr>
<td>DOR</td>
<td>Director of Operational Research</td>
</tr>
<tr>
<td>DM</td>
<td>Deputy Minister</td>
</tr>
<tr>
<td>DNAR</td>
<td>Director of Naval Air Requirements</td>
</tr>
<tr>
<td>DND</td>
<td>Department of National defence</td>
</tr>
<tr>
<td>DNPC</td>
<td>Director of Naval Programme Control</td>
</tr>
<tr>
<td>DNOR</td>
<td>Director Naval Operational Requirements</td>
</tr>
<tr>
<td>DNPO</td>
<td>Director of Naval Plans and Operations</td>
</tr>
<tr>
<td>DNSR</td>
<td>Director of Naval Ship Requirements</td>
</tr>
<tr>
<td>DSDC</td>
<td>Director Ship Design and Construction</td>
</tr>
<tr>
<td>DSNSP</td>
<td>Defence Supply Naval Shipbuilding Panel</td>
</tr>
<tr>
<td>EASTLANT</td>
<td>Eastern Atlantic</td>
</tr>
<tr>
<td>FOAC</td>
<td>Flag Officer Atlantic Coast</td>
</tr>
<tr>
<td>FOPC</td>
<td>Flag Officer Pacific Coast</td>
</tr>
<tr>
<td>FRAM</td>
<td>Fleet Rehabilitation and Modernization</td>
</tr>
<tr>
<td>F/Y</td>
<td>Fiscal Year</td>
</tr>
<tr>
<td>GIUK</td>
<td>Greenland Iceland United Kingdom</td>
</tr>
<tr>
<td>GPD</td>
<td>General Purpose Destroyer</td>
</tr>
<tr>
<td>GPF</td>
<td>General Purpose Frigate</td>
</tr>
<tr>
<td>HMCS</td>
<td>Her Majesty’s Canadian Ship</td>
</tr>
<tr>
<td>HMS</td>
<td>Her Majesty’s Ship</td>
</tr>
<tr>
<td>ICBM</td>
<td>Intercontinental Ballistic Missile</td>
</tr>
<tr>
<td>IFF</td>
<td>Identification Friend or Foe</td>
</tr>
<tr>
<td>IRE</td>
<td>Improved Restigouche</td>
</tr>
<tr>
<td>ISL</td>
<td>Improved St. Laurent</td>
</tr>
<tr>
<td>LAC</td>
<td>Library and Archives Canada</td>
</tr>
<tr>
<td>LPD</td>
<td>Landing Platform Dock</td>
</tr>
<tr>
<td>LPH</td>
<td>Landing Platform Helicopter (also helicopter-carrying assault ship)</td>
</tr>
<tr>
<td>MAD</td>
<td>Magnetic Anomaly Detection</td>
</tr>
<tr>
<td>MND</td>
<td>Minister of National Defence</td>
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<tr>
<td>MPA</td>
<td>Maritime Patrol Aircraft</td>
</tr>
<tr>
<td>MRMS</td>
<td>Medium Range Missile System</td>
</tr>
<tr>
<td>MSSG</td>
<td>Maritime System Study Group</td>
</tr>
<tr>
<td>NATO</td>
<td>North Atlantic Treaty Organization</td>
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<tr>
<td>NCC</td>
<td>Naval Constructor in Chief</td>
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<tr>
<td>NHQ</td>
<td>Naval Headquarters</td>
</tr>
<tr>
<td>NPCC</td>
<td>Naval Policy Coordinating Committee</td>
</tr>
<tr>
<td>NSST</td>
<td>Nuclear Submarine Survey Team</td>
</tr>
<tr>
<td>OSS</td>
<td>Operational Support Ship</td>
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<tr>
<td>PDMS</td>
<td>Point Defence Missile System</td>
</tr>
<tr>
<td>PPCC</td>
<td>Policy and Plans Coordinating Committee</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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</tr>
<tr>
<td>PRO</td>
<td>Public Records Office</td>
</tr>
<tr>
<td>RAN</td>
<td>Royal Australian</td>
</tr>
<tr>
<td>RCAF</td>
<td>Royal Canadian Air Force</td>
</tr>
<tr>
<td>RCN</td>
<td>Royal Canadian Navy</td>
</tr>
<tr>
<td>RN</td>
<td>Royal Navy</td>
</tr>
<tr>
<td>SAACLANT</td>
<td>Supreme Atlantic Commander Atlantic</td>
</tr>
<tr>
<td>SACEUR</td>
<td>Supreme Allied Commander Europe</td>
</tr>
<tr>
<td>SCOA (A)</td>
<td>Senior Canadian Officer Afloat (Atlantic)</td>
</tr>
<tr>
<td>SHP</td>
<td>Ship Horse Power</td>
</tr>
<tr>
<td>SLBM</td>
<td>Submarine Launched Ballistic Missile</td>
</tr>
<tr>
<td>SOSUS</td>
<td>Sound Surveillance System</td>
</tr>
<tr>
<td>SSBN</td>
<td>Nuclear powered ballistic missile carrying submarine</td>
</tr>
<tr>
<td>SSK</td>
<td>Conventional Submarine</td>
</tr>
<tr>
<td>SSN</td>
<td>Nuclear powered attack submarine</td>
</tr>
<tr>
<td>VCNS</td>
<td>Vice Chief of the Naval Staff</td>
</tr>
<tr>
<td>VDS</td>
<td>Variable Depth Sonar</td>
</tr>
<tr>
<td>VSTOL</td>
<td>Vertical Short Take Off and Landing</td>
</tr>
<tr>
<td>VTOL</td>
<td>Vertical Take Off and Landing</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>USN</td>
<td>United States Navy</td>
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Chapter 1 Introduction

On 24 October 1963, the Minister of National Defence, Paul Hellyer, told the Canadian public that the Liberals were cancelling the previous Conservative government’s plan to build eight General Purpose Frigates. These guided missile destroyers had been the centrepieces of the Royal Canadian Navy’s fleet planning for over three years. Their termination not only left a tremendous gap in the navy’s ship replacement program but also sparked a year-long debate over what should be built in their place. After exploring numerous options - such as Iwo Jima and Essex class aircraft carriers, nuclear submarines and various specialized sealift ships - the navy would emerge from this chaotic and introspective year right back where it had started. With numerous internal and external reports all extolling the virtues of the guided missile destroyer’s ability to immediately fill serious deficiencies in the fleet’s air defence, shore bombardment, and surface attack capabilities, the case that these particular platforms were the best and most cost-effective option was strong. In fact, that the navy’s last Vice Chief of the Naval Staff, Rear Admiral R.P. Welland, even went so far as to crow over the summer of 1964 that the navy was finally about to get a program of guided missile destroyers “off the ground.” But Welland’s odd choice of metaphors was not nearly as strange as what happened next. Just as the navy was on the verge of finally acquiring its guided missile destroyers, a decision was made to build four smaller vessels that would repeat the Annapolis class instead.¹ That decision was particularly important as this

¹ Allard to Miller, 20 August 1964, Guided Missile Destroyer, Directorate of History and Heritage (hereafter cited as DHH), Naval Policy Coordinating Committee (hereafter cited as NPCC), 79/246, folder 56.
concept would give birth to what would grow into the DDH 280 Iroquois class destroyer (most of which are still in service today).

With the exception of adding twenty-five feet to accommodate a point defence missile system, these ships, which were erroneously called “Repeat Nipigons,” were actually a copy of the helicopter-carrying Annapolis class, and that made them the fifth variant of the original St. Laurent design from the late 1940s.² At least one scholar has characterized the sudden move from the guided missile destroyers to the less sophisticated and cheaper Repeat Annapolis as an “unresolved” riddle, while yet another argued that this vexing enigma “will no doubt keep naval historians occupied for some time.”³ Indeed, it is not difficult to find theories that try to explain what happened. For instance, in a collaborative effort, two notable historians painted a hypothetical (but highly plausible) scenario in which the Chief of Defence Staff, Air Vice Marshal Frank Miller, told the navy to build a cheaper alternative because of his belief that the defence minister was likely to reject the guided missile destroyer.⁴ Yet another theory was more direct, arguing that the minister had come up with the Repeat Annapolis concept on his own and had specifically instructed the navy that it was the only option available to them.⁵ The one common attribute to all these theories is the notion that an egocentric and dominant defence minister forced the Repeat Annapolis upon a reluctant navy that

² HMCS Nipigon, despite commissioning in 1964, was based on the Restigouche design of the 1950s. In procurement terms, therefore, the Nipigon was an older design. Moreover, and to further confuse matters, the Nipigon was actually part of the Annapolis class which was the fifth variant of the St. Laurent design. The fact that politicians wanted to build a “Repeat” of HMCS Nipigon indicates that the new program was to add some slight modifications to the last vessel of the Annapolis program. Although widely used at the time, calling these vessels the Nipigon class was, in fact, a misnomer.
⁴ Ibid.
unanimously despised the concept. But with the exception of a mysterious notation on a memorandum suggesting that the plan to build guided missile destroyers had been “overtaken by events” no evidence has emerged over the past forty-three years to explain why the navy agreed to consider a Repeat Annapolis program that was so disliked.  

Thanks to recently discovered sources, a documentary trail can now be followed, and its path leads to a remarkable and unexpected perpetrator. More importantly, however, the events surrounding the Repeat Annapolis reveal pivotal insights into the impact that individual staff officers at Naval Headquarters had on the naval decision-making process as well as its force structure.

Force structure is a term used to describe the process through which the navy selects the types of ship required to fulfil its current and future roles. While that process has received some attention within the literature, no one has yet produced a comprehensive study covering naval acquisition over the past century.  

Given that it has taken nearly fifty years and the efforts of numerous historians to get Canadian naval history recognized as an independent field of military history, it is difficult to fault scholars for their cursory treatment of this subject. A brief review of the broader historiography, therefore, helps to put this thesis’ potential contribution to the field into perspective.

The birth of Canadian naval history is often traced to the official histories written by Gilbert Norman Tucker and Joseph Schull in the early 1950s. Unfortunately, few historians followed their lead, and throughout the 1960s and 1970s naval history was

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7 A notable exception to this trend is Peter Haydon, *When Military Plans and Politics Conflict: The Case of Canada’s GP Frigate Program* (Canadian Institute of Strategic Studies, 1991).
once again relegated to the backwaters of general accounts on the Canadian military experience. The turning point came in the early 1980s when Marc Milner, having found many shortcomings with Schull’s book, argued that there was a need for a “proper and more analytical” operational history of the RCN during the Second World War. Paving the way with his *North Atlantic Run* in 1985, a number of scholars stepped forward with their own interpretations of the RCN’s performance in the Battle of the Atlantic.

By the mid-1990s, this flood of interest had turned naval history into a vibrant and robust young field, attracting a new generation of scholars whose work was creating what David Zimmerman has called “the new Canadian naval history.” Created virtually from scratch, therefore, it has only been within the past decade that both the old and new practitioners of naval history have begun to sail into uncharted waters by exploring the

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non-operational aspects of their craft. Moreover, this injection of new blood has
stimulated interest in the RCN’s history both before and after the Second World War.12
This new trend is often exciting for those investigating issues such as the navy’s political,
economic, social, gender, and cultural history (these being the foundation of the “new
Canadian naval history”) because they do so with a virtually blank slate. But being the
first to address one of these naval topics also has its pitfalls; namely there is little
secondary source material from which the scholar can draw insights.

While incorporated into some of the earlier monographs, the reasons why the
navy acquired certain types of ships have almost always been treated as an appendage to
the larger issue of operational effectiveness. By focusing on this latter issue, rather than
the procurement and force structure process itself, naval historians lack a framework for
debate. This can best be illustrated through the way modern historians have responded to
Tucker’s official history. By using naval procurement as a tool to explain how Canada
produced the ships that brought victory at sea, Tucker’s approach effectively turned the
acquisition process into a sterile function of government. Recent studies by Alec
Douglas and Roger Sarty, however, clearly indicate that naval force structure did cause
considerable friction between the navy and the government in 1943 and 1944. This type
of analysis suggests that there was a significant difference between “the kind of navy

12 Roger Sarty, *Tin-Pots and Pirate Ships: Canadian Naval Forces and German Sea Raiders 1880-1918*
(Kingston: McGill-Queen’s Press, 1991). Some excellent examples of the new naval history include:
Richard Gimblett, “Too Many Chiefs and not enough Seamen,” *The Northern Mariner* 10, no. 3 (July
before 1949,” *Canadian Military Journal* 1, no. 2 (summer 2000): 87-94; Serge Bernier, HMCS Ottawa III:
Wrens of the Second War: Their Place in the History of Canadian servicewomen,” *A Nation’s Navy*, 280-96;
Michael Hennessy, “The State as an Innovator: Controlling the Command Technology for Warship
Group, University of Victoria, 1993), 147-78; Joel Sokolsky, “Canada and the Cold War at Sea,” in W.A.B.
asked for by the bureaucrats (both naval and civil)” and the one that the government was “prepared to pay for.”\(^{13}\) While providing a valuable and interesting perspective, it was not the objective of either historian to explore the complexities of procurement and force structure during the war. Instead, their goal was to question the operational wisdom of acquiring larger warships, rather than smaller anti-submarine escorts, at a time when the RCN was fighting a campaign against Germany’s U-boats.\(^ {14}\)

At present there is no single volume that provides a general historical overview of Canadian naval force structure. American and British scholars have shown that such comprehensive surveys are possible, but, of course, these foreign historians were able to draw from a considerable pool of secondary sources.\(^ {15}\) In Canada, however, the literature on naval force structure has been sparse, sporadic and parochial, meaning that a larger monograph will have to wait until historians pay more attention to this important topic.


\(^{14}\) Based on the government’s attempt to scrap the navy as a national institution in the 1930s, the senior naval leadership was afraid that their political masters might once again try to wipe the RCN’s small ship anti-submarine fleet off the slate after the war. Tucker, *The Naval Service of Canada*, 21-104; Alec Douglas, “Conflict and Innovation in the Royal Canadian Navy 1919-1945,” in *Naval Warfare in the Twentieth century*, ed. G. Jordan (New York: Crane Russack, 1977); Roger Sarty, “The Ghosts of Fisher and Jellicoe: The Royal Canadian Navy and the Quebec Conferences,” 143-70.

Despite the lack of a proper historiography, there are some individuals who have broken with the operational paradigm by looking at the acquisition of specific types of ships such as the Flower class corvette as well as the Tribal and St. Laurent class destroyers. Although no one has yet produced a Canadian version of D.K. Brown’s groundbreaking work, *Rebuilding the Royal Navy*, which looked at British naval designs since 1945, these ship studies have nevertheless yielded significant insight into the reasons why Canada has acquired certain types of warships. This issue is particularly relevant to this dissertation because it leads to an important question: if the navy truly needed guided missile destroyers like the General Purpose Frigate in 1964, then what was the rationale behind the Repeat Annapolis? Answering that question not only represents the key to the Annapolis riddle, it also reveals how the notion that the navy overwhelmingly supported the General Purpose Frigate is a myth.

Interpretations within the literature have assumed that the navy believed Hellyer scrapped the General Purpose Frigate simply to assert his authority as the new defence minister, explaining why this decision is often used as the seminal event that triggered his hostile relationship with the senior naval staff. Given certain trends in Canadian civil-military relations, it is understandable why so many historians were quick to believe that Hellyer forced the Repeat Annapolis design upon a reluctant navy. Ever since George

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Stanley published his book, *Canada’s Soldiers*, army historians have often borrowed his subtitle *A Military History of an Unmilitary People* to emphasize the dialectical relationship between Canadian society, parliament and the military. This concept has a deeper meaning for naval historians who use events, such as the government’s attempt to disband the navy in the 1930s, to illustrate that Canadians are even more so an “unnaval people.”[^19] Indeed, the history of Canadian civil-naval relations is filled with accounts where the government, responding to the nation’s perceived mood, drastically cut budgets and introduced policies that were unpopular with the navy’s senior leaders. In most cases the navy accepted (albeit grudgingly) these decisions. But some historians argue that there were other examples where the senior commanders simply ignored orders from their civilian masters, identifying that “the political history of the Canadian navy has been mainly one of survival against political indifference, if not outright disdain.”[^20]

This is particularly evident in the naval procurement and force structure process.

A hostile political environment, in combination with the expense associated with warship production, has not made the admiral’s task of selling various fleet proposals to the government an enviable one. Although described in the context of the US army air forces’s procurement experience, historian Irving Brinton Holly, best described the challenges facing the senior officer who:


[^19]: Zimmerman, “New Dimensions in Canadian Naval History,” 266; Zimmerman’s tongue in check reference is clearly a clever adaptation of the phrase “an unmilitary people” which reinforces his desire to further separate naval and military history as distinct fields in Canada. George Stanley, *Canada’s soldiers: The history of an unmilitary people* (Toronto: Macmillan, 1974), 417; Similar themes can be found in Desmond Morton, *A Military History of Canada* (Toronto: McClelland & Steward, 1999) and Jack Granatstein, *A Nation Forged in Fire* (Toronto: Lester & Opren Dennys, 1989).

[^20]: Zimmerman, “New Dimensions in Canadian Naval History,” 264. One of the best examples of the navy being perceived of ignoring government policy – and one of direct consequence to this dissertation - can be found in the Cuban Missile Crisis. For more information see: Peter Haydon, *The RCN and the Cuban Missile Crisis* (Toronto: Canadian Institute of Strategic Studies, 1993).
…must develop political sagacity of the first order; congressmen are not always free to pursue a straight-line course but must heed to the sometimes irrational and usually contradictory dictates of their constituents or they will no longer represent them. …they must learn to recognize the character of political necessity and learn to accommodate it as best they can… Politicians are under continual pressure to come up with easy solutions, quick expedients, and flashy panaceas that promise national security without presenting the voters a high tax bill. As they come to understand this, military officers can expect to operate with increasing effectiveness on the Hill.21

Over the past century, the Canadian navy’s senior commanders have all learned the fine art of the “procurement game,” and in general they have played it well. In numerous instances they have shown great restraint and sacrificed their “dream ship” to ensure that the government built some type of platform in its place. But there were also cases where they were willing to break the rules by using unorthodox, and some would even say unscrupulous, tactics to acquire the larger and more expensive ships required for the balanced fleet that most scholars believe the senior naval staff truly wanted.22

There is an unmistakable consensus within the literature that the RCN’s senior leadership have consistently shown a bias towards creating a large and “balanced” blue-water navy of aircraft carriers, cruisers, destroyers and submarines capable of performing numerous tasks such as anti-surface warfare, air defence, shore bombardment, and

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21 Holly, Buying aircraft: Materiel Procurement for the Army Air Forces, 570.
22 While there are many others, one example that aptly illustrates this point can be found in Michael Whitby’s article on the Tribal class destroyer, “Instruments of Security: The Royal Canadian Navy’s Procurement of the Tribal-Class Destroyers, 1938-1943,” 7-10. Arguing that that Navy’s ambitions for a balanced fleet began with the acquisition of the British designed Tribal Class in 1940, Whitby has observed that the then Chief of the Naval Staff, Rear Admiral P.W. Nelles, purposefully asked the government to build these ships in Canada because he recognized that there was no “better way to ensure the survival of a navy than to have a shipbuilding industry constructing the very warships selected as the principle pillars of the post-war fleet.” Supporting this view, Roger Sarty believes that this was one of Nelles’s greatest legacies, as his actions helped create a powerful shipbuilding lobby that came to expect “large ship contracts” from the government in the future. Roger Sarty, “Admiral Percy W Nelles: Diligent Guardian of the Vision, 1934-43,” Michael Whitby, Richard Gimblett and Peter Haydon eds. The Admirals, (Toronto: Dundurn Press, 2006), 69-95. Other examples of the navy’s aggressive procurement tactics can be found in Dean Chappelle, “Building a Bigger Stick: The Construction of Tribal Class Destroyer in Canada, 1940-1948,” 3-5, 12 Sam Davis, “The St. Laurent Decision: Genesis of a Canadian Fleet,” in RCN in Transition, 1910-1985, 187-208; Sam Davis, “Cancellation of the General Purpose Frigate,” 70.
It is also generally accepted that the navy made four distinctive and aggressive pushes for that balanced force: during the Dreadnought Crisis of 1909, the Jellicoe report of 1919, Pacific war planning in 1943, as well as the 1961 Brock report. This last attempt is particularly relevant to this dissertation since it is believed (erroneously) that it was the Brock Report that spawned the General Purpose Frigate. Calling for a fleet of General Purpose Frigates, submarines and heliporters (the latter were actually helicopter carrying destroyers), Brock’s fleet is almost uniformly interpreted as an “attempt to stem the tide towards an ASW-specialized fleet.” As Shawn Cafferky has explained, stemming that tide was the product of a decade-long struggle between the navy and government:

During the war, when ASW was seen as a second-class role, with small, second-class ships, the RCN had attempted to use wartime expansion to achieve its long-held dream of a balanced fleet. Post-war realities and Canadian government policy forced the navy to focus, once again, on anti-submarine (A/S) operations. This, in turn, led to the navy’s acquisition of small specialized warships to carry out that role.

According to this view, therefore, the government’s reaction to a growing Soviet submarine threat led to a decision to build a slate of specialized ships (the St. Laurent, Restigouche and Mackenzie classes) throughout the 1950s and early 1960s. By extension, this logic would suggest that the cancellation of the General Purpose Frigates

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25 As will be seen in the next chapter the idea for the General Purpose Frigate actually came from Rear Admiral Pat Tisdall in August 1960, and as a result it was a viable concept well before Brock’s committee put pen to paper.
represented the government’s attempt to stomp out the navy’s efforts to reverse this trend towards total anti-submarine warfare specialization. Michael Hennessey’s groundbreaking dissertation on Canadian naval policy in the post war period went even farther with this interpretation, arguing that the specialized anti-submarine role after 1963 was an “imposed identity” forced upon the navy by none other than Hellyer himself.  

Such views suggests that Hellyer’s selection of the Repeat Annapolis represented the ultimate rejection of the RCN’s desire for a multi-purpose fleet that could both hunt Soviet submarines as well as support United Nations’s reaction forces to limited war situations in the Third World. And it is for that reason that the specialized Repeat Annapolis, along with the General Purpose Frigate’s cancellation, are seen as symbols in the perceived clash between the defence minister and his senior naval advisors over the navy’s force structure and future capabilities. In fact, more than one scholar has suggested that naval leaders later authorized changes to the Repeat Annapolis concept that allowed the design to grow into “a thinly disguised General Purpose Frigate.” In turn, this notion has fuelled a belief within the literature that “the navy did press on with the ship it wanted [the General Purpose Frigate] regardless of the original plan [the Repeat Annapolis].”

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29 JW Arseneault, “The DDH 280 Program: A Case Study of Governmental Expenditure Decision-Making,” in Canada’s Defence Industrial Base, ed David Haglund (Kingston: RP Fyre, 1988), 132; Milner, Canada’s Navy, 259, 265; Hennessy, “The Rise and Fall of a Canadian Maritime Policy, 1939-1965,” 416; Douglas Bland, The Administration of Defence Policy in Canada: 1947-1985 (Kingston: Ronald P Fyre and Company, 1987), 125. This view that the navy built the cancelled GPFs was first proposed by the Management Review Group. For more info see: Management Review Group, The DDH 280 Case, Staff Report E, May 1972, DHH, 84/32. J. Killick interview with the author, 12 June 2002, Ottawa. Mr. Killick, a Treasury Board official who was in charge of the MRG, admitted to the author that the investigators had no solid evidence to support this conclusion. When asked why it was included in the report he stated that “one just has to look at pictures of the ships (GPF and DDH 280)... that was enough evidence for me.”
constructing the cancelled General Purpose Frigate is a complicated story and well beyond the scope of this dissertation. Yet the premise upon which this myth was built, namely that the navy was united behind the General Purpose Frigate program, is fundamentally flawed. As a result, this dissertation will challenge this assumption and show how the birth of the Repeat Annapolis was actually the product of conflicting opinions and struggles from within the navy itself. Understanding the self-inflicted damage resulting from these conflicts is crucial, particularly since the force structure that emerged from this chaotic period would influence the composition of the Canadian navy for the next forty years.

In questioning the balanced fleet paradigm, this thesis will expand upon a premise first proposed by Richard Gimblett who has also challenged the notion that Canadian naval planners have displayed a “single-minded” determination to acquire a big-ship navy. Instead, Gimblett correctly presumes that senior Canadian naval officers have selected ships based on “a most reasoned analysis of what the country needed at that particular time, what the service felt confident of providing, and what politicians would sanction.”30 This was exactly what Vice Admiral H.S. Rayner was trying to do throughout his four years as Chief of the Naval Staff, but his force structure was sidetracked by an internal naval debate over whether the navy should be a specialized anti-submarine or a more versatile general purpose force.

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30 Richard Gimblett is one of the few historians on record to challenge the prevailing view that the RCN’s senior chiefs have blindly tried to acquire a balanced fleet. Instead, he convincingly argues that the naval leadership has historically understood what the country needed. Although this paper will not attempt to place the DDH 280 into a larger strategic context, it shares Gimblett’s revisionist interpretation that the senior staff tried to acquire ships based on a rational conception of the nation’s actual maritime needs. For more information see: Richard H Gimblett, “A Century of Canadian Naval Force Development: A Reinterpretation,” 277-283.
A close examination of the RCN’s force structure between 1957 and 1965, as well as the General Purpose Frigate’s place in this planning, reveals that the senior naval staff was far from united over the direction that the navy should take. At the core of this debate was the issue of whether the RCN should have forces that could participate in UN efforts to contain limited wars in the Third World or focus on a conventional NATO-Warsaw Pact conflict in Europe. The level of discourse over this debate was considerable, and since “versatility” would become such a catch phrase it is important to define exactly what this word meant to the navy in its 1960s context. As described in a contemporary document, it was a concept where:

Versatility and general purpose are generic terms which require definition since their meanings are subject to wide interpretation. Versatility is the quality of being able to turn readily from one task to another. A general purpose maritime force possesses a wide range of capabilities. Versatility will be provided through the multi-role capability of individual operating units and through selective employment, in varying combinations, of fixed systems, aircraft, surface ships, subsurface vehicles, and communications.31

The question of how much versatility the navy should possess was not an easy one to answer. Indeed, there were two schools of thought on the matter. On the one hand, the need to respond to multiple tasks seemed apparent at a time when increased conflicts in the Third World were threatening global security. On the other, the threat posed by Soviet nuclear submarines was severe and suggested that every cent of the navy’s budget should be spent on anti-submarine warfare. The paradox, therefore, was that the financial limitations imposed by the political level meant that giving the navy one capability often came at the expense of another. For some, therefore, the RCN’s choice with the funds available was to do either one task well or several tasks poorly, while others feared that a

31 Canadian Forces Force Development Objective, nd [circa 1965], DHH, 76/51, folder 5.
specialized fleet would leave the navy in a position where it could not respond to other potential threats.

This debate over capabilities was reflected in both the General Purpose Frigate as well as the Repeat Annapolis. Intended to replace the ageing Second World War Tribal class destroyers, the General Purpose Frigate was first, and foremost, a guided missile destroyer (DDG) that was designed to protect itself and other naval assets from the Soviet air threat. In an attempt to make it a more versatile ship, the General Purpose Frigate was also to possess anti-submarine, shore bombardment and even troop lift as secondary functions. Reflecting the larger debate over versatility, some individuals openly questioned whether the General Purpose Frigate was trying to do too much with too little. For instance, to make room for guided missiles, troops and a bombardment gun, the design was unable to carry certain weapons and sensors that were considered indispensable to track and hunt Soviet nuclear submarines. On the other hand, the Repeat Annapolis’ emphasis on anti-submarine warfare equipment came at the expense of a more versatile weapons package, leaving many officers worried that a less-capable navy would be more vulnerable to government cuts. The climax of this capability debate actually took place in the eleven months prior to the decision to build the Repeat Annapolis. It was a time of considerable chaos and uncertainty, yet the factors that shaped the RCN’s force structure after the General Purpose Frigate’s cancellation are not well understood.

Little has been written about the internal friction that existed at Naval Headquarters over the RCN’s force structure in the 1960s. In fact, political scientist J.W. Arseneault’s article, “The DDH 280 Program: A Case Study of Government Expenditure
Decision-Making,” is one of the only works that tried to understand the forces that were rubbing against each other at the staff level. While Arseneault should be applauded for being first on the scene, his brief analysis requires revision. For instance, Arseneault argues that the discussion over the ship replacement program led to the creation of two competing camps within the RCN. The first group, who he tagged with the moniker “the incrementalists,” were the ones who wanted to acquire the first-rate anti-submarine warfare vessels that would allow the RCN to specialize in that type of warfare. Next, he identified the second group as the “versatiles,” which represented individuals who believed in the more versatile platforms for limited war operations in the Third World. According to Arseneault, therefore, the indecision over ship design and force structure in the 1960s boiled down to the fact that:

The versatiles probably took every opportunity to increase the versatility of the fleet as a whole, particularly with regard to air defence, transportation, landing and support of the Army. …The versatiles consisted of most of the elite in the Naval hierarchy, such as the Chief of Naval Staff, most of the Naval Board, a 1961 Ad Hoc Committee on Naval Objectives, and the Director of Naval Ship Requirements. The incrementalists, on the other hand, included at least one member of the Naval Board and a few unknown others who were among the silent majority. These elitists [the versatiles]… set out to maximize their own self-interests as they perceived them, in quest of a larger Navy with an all-round purpose. 33

The problem with this type of analysis is that it assumes that the squabbling at Naval Headquarters was based exclusively on the question of capabilities.

32 General Purpose Frigate Sketch Design, 1962, DHH, 73/757.
33 JW Arseneault, “The DDH 280 Program: A Case Study of Government Expenditure Decision-Making,” 120-121. Commodore Fraser Fraser-Harris, who was the Assistance Chief of the Naval (Air and Warfare) in the early 1960s, post war accounts make clear why it is dangerous for political scientists to try to attach neatly defined labels to supposedly identifiable groups. Using “versatility” to justify the need for carrier naval air, the ACNS (A&W) would have been the dominant member of “versatile” camp, and yet Fraser-Harris’ private correspondence places the men on Arseneault’s “versatile” list – namely Rayner, Brock and Pullen –firmly in the “incrementalist” anti-submarine warfare camp.
Recently declassified sources refine this interpretation and reveal that there were various ship classes - such as destroyers, aircraft carriers, nuclear submarines, or even the more exotic hydrofoil - that took on the aura of a “pet project” for staff officers who got attached, often emotionally so, to their preferred choice. These champions, or “advocates,” actively pushed their concept in an attempt to ensure that the RCN acquired it. And that made these advocates – who were using the issue of capabilities to justify the existence, as well as ensure the survival of, their branch of the service – the true source of friction. The key to understanding this crisis in the acquisition program, therefore, rests with advocates rather than the debate over capabilities. As a result, this dissertation suggests that the internal bickering at the staff level – emanating from advocates who wanted the navy to acquire either more aircraft carriers or nuclear submarines or something else, for example – was both commonplace and indicative of what one senior officer called a “seething” and “dangerously fragmented” staff environment.34

While there was overlap among these groups – a supporter of the carrier would have gladly welcomed the procurement of more destroyers to protect it at sea – the stakes among the advocates were often high. For example, the chief naval aviation advocate, Commodore A.B. Fraser Fraser-Harris, understood all too well that failure to acquire a replacement for the RCN’s lone aircraft carrier, HMCS Bonaventure, would easily spell the end of his branch of the service. Competition between these individuals could therefore be fierce, particularly when the navy faced drastic budget cuts. As a result, it was not uncommon for the advocates of one concept to disparage another in an attempt to score points for their own platform. This was exactly what happened to the General Purpose Frigates when the Liberals took over in April 1963.

34 Douglas to Davis, 28 August 1986, DHH, Davis Papers, 2001/36, file 15, “Correspondence.”
Hellyer’s decision to reassess this program eventually led to suspicions that it was on the verge of cancellation. As this dissertation will demonstrate, thanks to a concentrated effort from Rayner the minister was seriously considering a scaled down program of two to four General Purpose Frigates over the summer of 1963. This, in turn, prompted Commander E.G. Gigg to directly sabotage these ships. His reason for doing so was strangely logical; the General Purpose Frigate’s cancellation would free up money for the nuclear submarines that he wanted the navy to acquire. Other advocates were not nearly so bold. Those who were actively campaigning for a carrier replacement were, for example, less than enthusiastic when it came to producing their elements of the staff work that the Chief of the Naval Staff needed to save the dying General Purpose Frigate program. Hellyer was in the process of re-evaluating the nation’s defence priorities and his apparent willingness to explore giving Canada an ability to respond to limited war situations, in addition to its established anti-submarine role, allowed the naval aviation advocates to cast their eyes on a bigger prize. Unlike the General Purpose Frigate, which had tried to meet this need with a 5-inch bombardment gun and an ability to carry 200 soldiers, the Iwo Jima aircraft carrier was a true dual purpose ship capable of supporting anti-submarine helicopters along with tactical support aircraft and troops. And much like the nuclear submarine advocates, the General Purpose Frigate’s cancellation conveniently opened the door for the carrier proponents to make a pitch to acquire a possible program of Canadian Iwo Jimas. Needless to say, it was a highly charged environment that was further electrified by a change in government.

Expensive social programs promised during the election made extensive reductions to the military’s budget inevitable. The government was re-evaluating
Canada’s defence policy, and some of the potential roles for the navy would benefit certain ship classes over others. These two factors created a perfect storm and cutthroat environment among the various advocates, which led to the chaos and confusion over force structure throughout 1963 and early 1964. Simply put, conflict would arise when the navy could only afford certain platforms, making financial cutbacks the defining factor that would cause the various advocates to clash in the hopes they got the necessary funds for their platform from an ever-shrinking defence dollar. And that meant they would only support the acquisition of other types of ships providing those did not come at the expense of their own. As it would turn out, therefore, naming the DDH 280 the Iroquois (also known as the Tribal) class inadvertently captured how the navy suffered from a “tribal” mentality in which warring groups of officers advocating various ship concepts battled each other for supremacy over the RCN’s force structure. Rather than defining the navy’s roles based on financial ceilings and finding the best ship types to fulfill those objectives (which represents the ideal way to form a force structure), the advocates reversed this paradigm without regard to the consequences it had on the navy as a whole.

An important study by Allan English and John Westrop identifies that the characteristics that helped foster advocacy in the navy were not unique to that service. Indeed, English and Westrop have found that the Canadian air force did not consist of one single service culture but instead was divided into sub-communities in which officers displayed loyalties to a particular occupation or aircraft type. As result, fighter pilots were just as likely to push for the acquisition of that type of aircraft when they got to the
staff level as maritime patrol aircraft pilots and navigators were to advocate theirs.  

Recognizing that equipment and occupational advocacy was not unique to the navy is crucial because it suggests that this was a Forces-wide phenomenon. This dissertation, however, will keep a tight focus on the navy’s force structure in the late 1950s and early 1960s because this period provides such a strong illustration of the impact that advocacy can have on policy.

Ship advocates have existed throughout the RCN’s history and they have played an essential part in helping the navy acquire specific platforms, but the General Purpose Frigate stands as an illustration of the dangers they can pose. The last word on what programs would be championed to the minister should have belonged to the navy’s most senior officer, the Chief of the Naval Staff, Vice Admiral H.S. Rayner. However, various ship advocates not only robbed Rayner of this opportunity, but they also helped lay the groundwork for the General Purpose Frigate’s cancellation in the hopes that the money from this failed program would be reinvested into their own. The fact that the officer who led the drive to acquire a replacement carrier, as well as the one who wanted a nuclear submarine program, were both willing to do so reveals important insights into the impact that individuals can have in complex organizations such as the navy. Focusing on the part that specific officers played in shaping the RCN’s force structure has implications for the wider literature because, as historian Marc Milner has observed, “if there is a gap in the current state of the historiography, it would be on the role of individuals.”

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Although each ship champion clique was composed of a small, yet determined, number of followers, each group was generally led by a single dominant personality who served as their chief advocate. Whether it was Commodore Fraser Fraser-Harris pushing for a carrier to replace *Bonaventure* or Commander Ed Gigg’s attempt to get the navy to acquire nuclear submarines, these individuals were powerful forces at Naval Headquarters where they carried a remarkable degree of sway. In fact, they were able to challenge the prevailing views of some of the navy’s most senior officers, such as Rayner, Rear Admiral J.V. Brock, and Rear Admiral W.M. Landymore, who (while willing to acquire carriers and nuclear submarines if funds were available) all believed that destroyers should be the budget-limited navy’s priority. Explaining how people such as Fraser-Harris and Gigg (among others) were able to extend influence beyond their rank level will receive a fair degree of attention in this dissertation, the more so since it will assess how dominant personalities impacted the force structure process.

There are two final factors that will be explored extensively, because they not only influenced the advocates but also complicated the force structure process as well. The first of these involves the issue of technology. Both the General Purpose Frigate as well as the Repeat Annapolis represented attempts to come to terms with what American historian Norman Freidman has labelled the “Post-war Naval Revolution.” With an explosion of innovative technologies changing the nature of naval warfare, this revolution ushered in a new era in ship construction. Thanks to the emergence of Soviet supersonic aircraft, guided missiles and fast nuclear-powered submarines, naval designers were left with few options but to build bigger and more expensive ships that were packed with the highly technical weapons, detection and propulsion systems necessary to defeat them.
Faced with looming budget cuts, however, some officers argued that acquiring all these technologies was simply beyond the Canadian navy’s resources. And that not only fueled the debate whether the navy should build specialized or dual-purpose vessels, but it also provided further ammunition for the advocates to advance their platforms.37 (The argument that the navy needed an aircraft carrier with jetfighters to combat Soviet maritime aircraft was certainly enticing fodder for the naval aviation advocates.) Such technologies greatly complicated what was already a complex situation, and as a result the topic is an essential issue that contributed to the force structure crisis of the 1960s.

Operations at sea, which were the second factor that impacted the force structure debate, were equally as complex. While it was clear to many that there was a need for ships that could respond to limited war situations, operational experience at sea increasingly was identifying that the navy did not have the resources it needed to deal with the threat posed by the Soviet submarine fleet. Understanding the tactics and technology required to counter this threat is crucial because of the impact that they had on Vice Admiral Rayner’s vision of the future. Caught between the operational reality that the navy had to specialize in anti-submarine warfare on the one hand, and changes in the strategic environment that placed a greater weight on limited war situations on the other, Rayner came up with a brilliant force structure that worked a small degree of versatility into a specialized force. It was not the ideal solution for the navy, but it was one that would allow it to make a contribution to any contingency. Unfortunately, various advocates would challenge this plan because it did not include the platforms that

37 For instance, aircraft carrier advocates were quick to observe that specialized anti-submarine vessels would have little chance of prosecuting nuclear submarines without the necessary air defence to protect themselves from Soviet aircraft. Nuclear submarine and destroyer champions had their own arguments -
they wanted the navy to acquire. And thanks to that interference, the navy’s force structure was thrown into chaos and confusion.

The idea that relatively junior staff officers could cause so much disruption in a highly ordered military structure is a difficult concept for some to grasp. Indeed, the navy’s command organization at Naval Headquarters was clearly defined. At the base of this hierarchy was the Policy and Plans Coordinating Committee (PPCC), which organized information for the officers on the Naval Staff who devised policy based on the direction provided by the Naval Board. That policy would then be returned to the Naval Board (which was presided over by the Chief of the Naval Staff) for approval, amendment or rejection. Once approved, it was up to the Chief of the Naval Staff to use his links to the defence minister, as well as the other service chiefs on the Chiefs of Staff Committee, to sell these policies. Believing that an understanding of naval policy begins at this latter level, historians tend to focus on the interaction between senior naval leaders and their political masters in their quest to understand various policy decisions. It is this “high-level” approach, which, by focusing on Vice Admiral Rayner’s relationship with the minister, led to the conclusion that the navy was not only bitter about the General Purpose Frigate’s cancellation but also resented “Hellyer’s” decision to build a slate of Repeat Annapolis class instead.\footnote{Sam Davis, “The St. Laurent Decision,” 187-208; Sam Davis, “Cancellation of the General Purpose Frigate: Lessons from a quarter century ago,” 70. One should greet Davis’s conclusions on these two particular projects with a degree of skepticism. Before becoming a professor at Queen’s University, he was a naval officer who was directly involved with the St. Laurens and was later put in charge of the GPF acquisition. “S Mathwin Davis bibliographical information,” DHH, BIOG G.} Yet the assumption that either the political or military leadership is always in control has its drawbacks, particularly since it does not take into
account the impact that lower levels of the decision making process (such as the bureaucracy and staff officers) can have on a given policy, project or force structure.

The popularity of the “rational actor” model is another reason historians tend to focus on admirals and ministers in their search to understand key decisions. This model persuades scholars to concentrate on the core of the decision-making process; namely the senior leaders or leadership cliques at the highest military and political levels. As such, it assumes that all governmental decisions are based on calculated and rational choices made by the ruling elite.39 Born from political scientists, this method has enjoyed a wide degree of success as a number of scholars have used it as a means to link Canada’s naval strategy to its defence policy.40 But the rational actor model is too parochial when it comes to exploring complicated processes such as force structure. Essentially, it is a good tool to assess the direct relationship between ministers and admirals, but does not provide much guidance for situations that involve many levels of the naval and civilian bureaucracy.

There are, of course, other models from political science that would appear to be more suitable candidates for the analysis of the navy’s force structure. The organizational process model – which suggests that senior leaders only make final decisions after various organizations provide them with structure, advice, problem identification, and information – seems to possess much relevance to the procurement process. So, too, does the bureaucratic politics model which argues that governmental actions are the product of

the “pulling and hauling” between a large number of actors and groups. 41 The problem
with both of these models – much like the rational actor – is that they still envision an
environment that is ultimately shaped by the minister and top admirals who run the
service. Instead, this thesis will demonstrate that the key to exploring the force structure
crisis rests with an understanding of the role that the navy’s tertiary levels of senior
command (commander to commodore) had on shaping the RCN’s force structure. And
that requires a somewhat unique methodology that has rarely been applied to the
decision-making process. By employing a “bottom-up” or military staff officer approach,
this dissertation investigates the navy’s force structure crisis in the mid-1960s by
following decisions from key individuals within the staff level up to the Chief of the
Naval Staff and defence minister. The strength of this approach is that it identifies the
cancellation of the General Purpose Frigate and development of the Repeat Annapolis as
cases where extreme conflict between the minister and service chiefs were actually the
product of tensions among specific individuals at the bureaucratic and staff levels.

While this approach is new, it has been inspired by American scholars John
Sumida and David Rosenberg who have suggested that historians need to reevaluate how
they view navies by taking a closer look at issues such as finance, bureaucracy and
technology. 42 The methodological approach in this dissertation, however, represents an
adaptation of Sumida and Rosenberg’s principle. Believing that too much emphasis is
placed on senior leadership the argument here is that most historians have missed the
impact of the bureaucracy because they tend to start and stop their analysis at the apex of

41 Allison, The Essence of Decision, 146, 156, 162.
42 John T. Sumida and David Rosenberg, “Machines, Men, Manufacturing and Money: The Study of
Navies as Complex Organizations and the Transformation of Twentieth Century Naval History,” in Doing
command. Therefore, by reversing the direction of previous methods, the goal of this new approach is to convince historians that there are some cases where they should begin their research with bureaucrats (as well as the tertiary staff level of command), and follow the decision-making process up to the senior levels.

Such notions are not entirely foreign to Canadian military historians. Jack Granatstein’s *The Ottawa Men: The Civil Service Mandarins*, Desmond Morton’s *Ministers and Generals: Politics and the Canadian Militia*, Stephen Harris’s *Canadian Brass: The Making of a Professional Army*, and even this author’s own published works, all stand as illustrations of a desire to understand the impact of bureaucracy and staff officer level. But while each of these examples tried to assess the impact that either a Deputy Minister or Executive Assistant had on a politician, the supporters of the new naval history would take the study of bureaucracy even further. As Rosenberg and Sumida’s own studies have shown, scholars must be prepared to conduct a deep excavation of the bureaucracy if they want to hit a “historical gold mine.” For example, after studying files from Great Britain’s Dreadnought-era, Sumida was able to show that it was naval bureaucrats, rather than Admiral Jackie Fisher, the First Sea Lord, who were the true supporters of this revolutionary class of battleship. Likewise, Andrew Gordon has successfully challenged the notion that British retrenchment policies were the sole

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reason why the Royal Navy witnessed a period of decline during the inter-war period; instead, by focusing on the lower levels of the procurement bureaucracy, he discovered that miscommunication, turf wars, and overlapping responsibilities between various government departments greatly handicapped Great Britain’s ability to produce warships. This experience would be repeated in Canada and was largely responsible for the force structure crisis of 1963-64. Although its employment was somewhat incidental this “bottom up” or bureaucratic/staff officer method has already proven fruitful for the larger naval academic community. However, it has not yet been applied in the Canadian context.

Explaining how the Repeat Annapolis beat out its competitors requires the researcher to probe the various complex levels, organizations, and interactions among the government, bureaucracy, and military. Using narrative format to explore the empirical evidence, this thesis will begin with the RCN’s force structure in the late 1950s and early 1960s to show how the practice of advocacy among various staff officers helped to torpedo Rayner’s future plans for the navy. It will then discuss the chaos of the force structure crisis and the seemingly random events leading up to the decision to build the Repeat Annapolis. In the process of doing so it will show that the elimination of the advocates’ influence was a key factor that brought order to the RCN’s acquisition program.

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While theory often helps with the conceptualization and organization of dissertations in general, this particular thesis recognizes that attempts to integrate such frameworks where they do not belong can pose certain dangers. As naval historian Kenneth Booth once observed “history without rich theory fits reality only where documents allow it to touch.”\textsuperscript{45} There is much truth to this statement, but academics can also become so dependent upon methodological approaches that they start to believe that theory without rich documents fits reality. This type of devotion to frameworks is particularly evident amongst Canadian defence policy analysts who are often forced to assess events without the luxury of primary sources. Without an empirical study, therefore, the force structure crisis of 1963-64 will never be placed into its proper perspective, and the bureaucracy as well as staff level of command will continue to be treated as a monolithic body. However, by following the precept that the randomness of bureaucracy can be clarified through the natural course of a narrative, this thesis’ analysis will flow from the documentation rather than a specific model. By doing so, it will hopefully contribute to a larger understanding of defence administration, because as Allan English has observed, “there is some literature on Canadian civil-military relations, but very little empirical evidence has been published on this topic.”\textsuperscript{46} In the end, therefore, the most important approach is to let the evidence speak for itself. And that evidence will show that the key factor explaining how the Repeat Annapolis beat out all other competitors to become the centerpiece of the RCN’s force structure was not a vindictive minister. Instead, it was the result of a bitter internal struggle among

\textsuperscript{45} Kenneth Booth, \textit{Navies and Foreign Policy} (London: Croom Helm Ltd., 1977), 146.
\textsuperscript{46} English, \textit{Understanding Military Culture: A Canadian Perspective}, (Kingston: McGill-Queens University, 2004), iv.
competing advocates at the staff level, complicated by changes in the political and strategic environment, as well as certain key operational and technical developments.
Chapter 2 “Small, Cheap and Many.”

The need to formulate a coherent ship replacement program was one of the greatest challenges that faced Vice Admiral Harry “Hard Over” DeWolf during his tenure as Chief of the Naval Staff between 1956 and 1960. A large portion of his fleet consisted of wartime Tribal class destroyers and Prestonian frigates, which, while updated, were nonetheless vintage ships that desperately needed replacement. Designing fleets to meet future naval requirements and potential roles was a difficult task. DeWolf was not one to shy away from such challenges and it was through his firm leadership that the RCN had a ship replacement program in place by the time he left the navy in July 1960. Believing that it was better to do one specialized job well rather than several tasks poorly, the vessels selected for this program identified that DeWolf was designing a purely anti-submarine warfare force. It was a bold decision as the failure to replace the Tribals with another general-purpose type ship meant that the RCN would no longer be able to contribute effectively to limited war situations. For the Chief of the Naval Staff it was simply a matter of alliance commitments mixed with economics: the RCN had to provide a fixed number of ships to NATO, but they had to do so on a dwindling budget. Rather than chewing up resources on larger multi-purpose vessels, the navy embarked on a “small, cheap and many” philosophy which was a term to describe the acquisition of a fleet of specialized ASW ships.

Not everyone agreed with the finer points of this policy and DeWolf’s vision of the future began to change within days of his turning the navy over to Vice Admiral H.S. Rayner. Revolutionary developments in naval technology, a change in the strategic environment that placed greater emphasis on limited war operations, and the influence of
officers who disagreed with DeWolf, all led to the creation of a new force structure. It, too, would be primarily an ASW force, but unlike DeWolf’s vision, this future fleet was designed to reacquire the small degree of versatility that the Tribal class had provided. Describing the evolution of this program is extremely important because it lays the essential foundation that explains how later destabilizing influences created a fertile environment within which ship advocates could grow.

The ship replacement program was a high priority for the Naval Board. A NATO operational doctrine, known as MC 70, called for the RCN to provide one aircraft carrier and 29 escorts to the alliance in the event of general war with the Soviet Union. In addition to its NATO commitment, the RCN was also expected to provide 14 ships to the Canada-United States Regional Planning Group (CUSRPG), and that meant the navy had to maintain a standing force of 43 escorts to fulfill its combined alliance obligations. To do so, it was recognized that the navy required new ships immediately or it would face block obsolescence when the Prestonians and Tribals reached the end of their useful lives in the mid - to late 1960s. The ongoing construction program of seven St. Laurent and seven Restigouche class destroyers was not enough to meet the anticipated demand. As a result, in 1956 the Chiefs of Staff Committee – a group whose membership consisted of the military’s most senior officers – recognized that the only way the RCN could maintain its alliance objectives was to extend the new construction program (which was set at a rate of two ships per year) into the late 1960s. Debates over the RCN’s replacement program continued throughout the year but achieved little more than a plan to continue the Restigouche program to include six “repeat Restigouche” (these eventually became the four ships of the Mackenzie class and two of the Annapolis class).
That left the Naval Board with twenty-three additional ships that would have to be built by the end of 1968.1 And it is within this planning that the navy’s troubles with force structure began.

The plan to build six Repeat Restigouches after HMCS Chaudiere’s anticipated commissioning in late 1959 was meant to give the RCN some breathing room to design or purchase its next generation of warships. Naval Headquarters was experiencing tremendous difficulty coming up with a vessel that could meet the new threats facing the RCN. Supersonic fighters, missiles, and nuclear submarines all required different countermeasures. For instance, guided missile systems were one potential way for the destroyer of the future to deal with supersonic aircraft, while shipborne helicopters and rocket-assisted torpedoes were among the most promising counters to the nuclear submarine. The key problem for the RCN was that the current hull design used for the St. Laurent and Restigouche classes was not large enough to accommodate all these weapon systems. A difficult choice had to be made. As identified at the 9 January 1957 Naval Board meeting, the RCN could meet the area air anti-aircraft and anti-submarine threats by fitting weapon systems into either “one class of larger and more expensive ships than the Restigouche,” or it could design “two new classes of specialized ship.”2 And it was this choice between building large dual-purpose ships or smaller specialized ones that slowly evolved into an extremely divisive debate at Naval Headquarters, so much so, in fact, that it would not be resolved until the decision to acquire the Repeat Annapolis was made in the fall of 1964.

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1 Tisdall, “Long Term Programme for construction and period of employment for A/S Ships,” 22 August 1958, Directorate of History and Heritage (hereafter cited as DHH), Naval Policy and Coordinating Committee (hereafter cited as NPCC), 79/246, file 100.
There was little doubt about where Rear Admiral Pat Tisdall stood on this issue when he became Vice Chief of the Naval Staff in January 1958. A supporter of the dual purpose concept, Tisdall ordered the Air and Warfare Directorate, which was responsible for defining operational requirements, as well as the engineers at the Naval Constructors-in-Chief (who turned those requirements into a viable design) to develop a fast (30 knots) anti-aircraft and anti-submarine ship. For the latter role, this ship, which became known as the surface anti-submarine vessel, was to carry two helicopters, variable depth and hull-mounted sonars as well as a long-range weapon delivery system. To be a true dual-purpose ship, however, it also required a medium range area-air missile (such as the American Tartar system), which had the capability to defend a group of ships from air attack. Fitting all these anti-submarine and anti-aircraft weapons into one hull made it large (4,000 tons) as well as potentially expensive, and this was not what DeWolf had wanted for his navy. As a result, while the staff requirement for this ship sailed easily through the two advisory bodies chaired by Tisdall, namely the Naval Staff and Policy and Plans Coordinating Committee, they were quickly dismissed when put before DeWolf and the Naval Board on 16 April 1958.

The Naval Board, or more precisely DeWolf, was suspicious. Claims that this design was the product of numerous “compromises to reduce size and cost” did not ring true. Instead, DeWolf appeared to have recognized that the surface anti-submarine vessel was a dangerous concept that would quickly grow into a bigger and more

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2 Naval Board meeting, 9 January 1957, Royal Canadian Navy Historical Section (hereafter cited as RCNHS) fonds, DHH, 81/520/1000-100/2, Box 25, file 1.

3 Staff Requirement Surface Anti Submarine Vessel. 8 April 1958, DHH, NPCC fonds, 79/246, file 101. Although there was no mention of either a gun or surface to surface missile weapon in the original requirement the design was (presumably) to be fitted with some type of weapon because of the stated secondary task of destroying enemy ships.

4 Naval Staff Minutes, 11 April 1958, DHH, RCNHS fonds, 81/520/1000-100/3, Box 38 A, file 1.
expensive ship than what was being presented to the Naval Board. For instance, many of
the ship’s weapon systems, such as the Tartar anti-aircraft missile as well as the ASROC
rocket assisted torpedo, were still under development and any teething troubles could
easily drive the cost of the program up. Moreover, the growth potential of this vessel
suggested that some weapon systems had only been temporarily deleted in an effort to
make the design more palatable to the Chief of the Naval Staff.\textsuperscript{5} While the requirement
for two helicopters was reduced to one and the provision for a long-range weapon system
was omitted entirely, the design nevertheless left room for the future fitting of an
“additional A/S helicopter” and “long range A/S weapon launcher.” Using growth
potential to hide actual costs was not an uncommon ploy at the staff level. The tactic was
a rather simple one: get the program approved by reducing costs and then use the
design’s growth potential to add capabilities later. DeWolf, however, saw through the
attempt and rejected the surface anti-submarine vessel on the grounds that “the greatly
increased size and cost of the proposed vessel would be hard to justify.” In fact, the
Naval Board was so suspicious that they actually placed the potential costs of the surface
anti-submarine vessel “in the same category as a nuclear powered submarine.”\textsuperscript{6}

DeWolf began to lay out his future replacement program over the summer of
1958. Aside from the six Repeat Restigouches as well as a much-needed supply and
support ship, this proto-program was rounded out with a call for “two new design of A/S
[anti-submarine] vessel in 1960-61.”\textsuperscript{7} Planning for the first of these two anti-submarine
vessels began almost immediately. DeWolf had wanted a cheaper, smaller, and

\textsuperscript{5} Malcolm Muir, Black Shoes and Blue Waters, (Washington: Naval Historical Center, 1996), 105.
\textsuperscript{6} Naval Board, 16 April 1958, DHH, RCNHS fonds, 81/520/ 1000-100/3, Box 25, file 3.
specialized ship, and on 25 September Tisdall proved that he had listened. Putting aside his preference for a dual-purpose capability, Tisdall gave the staff until 1 January 1959 to prepare the requirements for a specialized ASW vessel that was not to exceed a top speed of 26 knots and was to have a displacement kept “within reasonable limits.” As far as weapons and sensors were concerned, Tisdall observed that the design was to possess variable depth sonar, a helicopter, long-range weapon delivery system, and a “Green Light” type of missile. While there were some similarities to the surface anti-submarine vessel, this new requirement was not a true dual-purpose ship. Unlike the Tartar’s area air capability, Green Light was a British close-range point defence missile system that could protect the parent unit only.8

The ASW fast frigate faced changes from the moment work on the design began. Believing that it was possible to get much closer to the “small and cheap” concept that the Chief of the Naval Staff wanted, it was suggested that the cost of the ASW fast frigate could be reduced considerably by sacrificing speed. Cutting its top speed down to 21.5 from 26.5 knots created a new variant – nicknamed the ASW “austerity” frigate – which would be powered by a cheaper diesel-electric engine rather than a more expensive steam one. Although it was to carry the same weapon and sensor package as the ASW fast frigate (variable depth sonar, long range weapon delivery system, three helicopters and Green Light type missile), the significant differences in power plants and speeds

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7 PPCC Meeting, 14 April 1958, DHH, NPCC fonds, 79/246, folder 3; Record of CDC Decision, 117 meeting, 28 April 1958, DHH, NPCC fonds, 79/246, file 101; Naval Board meeting, 10 September 1958, DHH, RCNHS fonds, 81/520/1000-100/2, Box 25, file 4.
8 Green Light was a derivative of the Malkara anti-tank weapon; Tisdall to ACNS (A&W), Proposals on bringing fleet to maximum A/S Capability, 25 September 1958, Library and Archives Canada (hereafter cited as LAC), Record Group (hereafter cited as RG) 24, Accession 1983-84/167, Box 4029, file 8885-12; Edwards to ACNS (A&W), 21 January 1959, DHH, NPCC fonds, 79/246, folder 55. This file makes it clear that the ASW Fast Frigate was the response to Tisdall’s 25 September.
effectively split the original design in two. As the Assistant Chief of the Naval Staff (Air and Warfare), Commodore J.V. Brock, would later explain, the ASW fast frigate was in reality a destroyer design, and the attempt to develop a cheap and smaller variant only succeeded in opening up Pandora’s Box:

…it was now apparent that rising costs of ship building would put the price of a ship with the characteristics envisioned by VCNS (Tisdall) in his directive NSS 8000-35 dated 25 September 1958 considerably in excess of the amount now being paid for Repeat RESTIGOUCHE Class and, therefore, it appeared desirable to present higher authority with a greater variety of costed ships of differing capabilities and sizes.10

Yet, while costs provide a reason why the ASW austerity frigate became a competitor to the ASW fast frigate, it does not explain why two more expensive designs were also thrown into the fray.

At $47,750,000, and $55,000,000 respectively, the ASW destroyer Escort and General Purpose Destroyer (not to be confused with the yet to be designed General Purpose Frigate) were the antithesis of either the $30,000,000 ASW fast frigate or the $19,750,000 austerity frigate. Rather than being cost-effective alternatives, both the ASW destroyer escort and the General Purpose Destroyer were introduced as solutions to potential capability gaps in the fleet. Certainly, that was the rationale given for submitting the unsolicited ASW destroyer escort design to the Naval Board for consideration:

As the policy on air defence for fleet has not been resolved, it was felt that Naval Board would like to consider a design which combines ASW effectiveness, and a more reasonable AA [anti-air] capability. To achieve maximum economy in cost,

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9 Tisdall to CNTS, 10 October 1958, DHH, NPCC fonds, 79/246, file 101; Proposed Ships’ characteristics, 12 January 1959, DHH, NPCC fonds, 79/246, file 101.

10 Minutes of a meeting to discuss the ship characteristics for an ASW Frigate, 27 November 1958, LAC, RG 24, Accession 1983-84/167, Box 4027, file 8885-FFE/A. Brock described the ships as follows: 1) “inexpensive specialized A/S frigate” (ASW Frigate) 2) “DE with the characteristics called for by VCNS” (ASW Fast Frigate) 3) “ASW destroyer to succeed the Repeat Restigouche (ASW DE) 4) General Purpose Destroyer (GPD).
the over-all size of the design submitted… has been reduced to a minimum to allow for the accommodation of the weapon system required, and yet meet the ship characteristics for speed (26.5) and endurance (7000 nm). While this ship, an ASW DESTROYER ESCORT, is capable of operating only two A/S helicopters, all other effective ASW systems have been included, and a twin TARTAR type mounting with 42 missiles.\textsuperscript{11}

While it was the staff’s job to present the Naval Board with options, there was an unmistakable sense that some officers were less than enthusiastic about DeWolf’s move towards specializing in ASW. In fact, closer examination of the ASW destroyer escort reveals that it was merely a slower incarnation of the dual-purpose surface anti-submarine vessel that DeWolf and the Naval Board had earlier rejected as too expensive. By re-introducing this concept, the officers who supported the combined anti-air and anti-submarine platform were expressing their concern that both ASW frigate concepts were neglecting the technical advances being made in Soviet supersonic aircraft. The development of Soviet jet bombers, such as the Tu-16 Badger and Il-28 Beagle, had made it obvious that any ASW surface forces assigned to NATO would have to have some type of anti-air defence. Moreover, destabilizing events in the Third World suggested that Canada’s United Nations obligations might require the RCN to respond to limited war situations where they would be vulnerable to air attack. It was a convincing argument, and as a result the requirements for the RCN’s next construction program were altered to include consideration for a vessel that could protect groups of ships from air attack.\textsuperscript{12}

And that made the ASW destroyer escort worthy of consideration.

This change to the requirements did not go far enough for the Director of Naval Plans and Operations, Captain J.A. Charles, who argued the RCN was unprepared for

\textsuperscript{11} Proposed Ships’ characteristics, 12 January 1959, DHH, NPCC fonds, 79/246, file 101.
\textsuperscript{12} New surface AS Ship Staff Requirements, 20 October 1958, LAC, RG 24, Accession 1983-84/167, vol. 4027, file 8885-FFE/A.
potential limited war situations. Such missions, which would fall under Canada’s obligation to the United Nations, would require a general purpose vessel that could not only respond to both air and submarine threats, but also was capable of shore bombardment, troop support and anti-surface ship operations. It was the desire to contribute to these operations that produced the large 4,860-ton General Purpose Destroyer. Yet the advent of the General Purpose Destroyer was not the only sign that some were nervous about DeWolf’s interest in ASW specialization. A long term planning memo was equally cautious. The fact that twenty-three vessels had to be built by 1968 to maintain force goals had placed tremendous pressure on the RCN to begin a program in 1960. That left little time to debate the ramifications of turning the RCN into exclusively an ASW force, which prompted fears that a sudden change in the strategic environment could easily leave a fleet of ASW frigates obsolete by the time they were laid down.

An important memo on the influence of strategy on naval designs not only supported that conclusion but also seemed to provide the justification for questioning the apparent move towards total or super specialization. This forward-thinking document had picked up on subtle changes in the United States suggesting that some members of President Dwight D Eisenhower’s administration wanted an alternative to the strategy of

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15 Tisdall, Long Term Programme for construction and period of employment for A/S Ships, 22 August 1958, DHH, NPCConds, 79/246, file 100; Tisdall to ACNS (A&W), Proposals on bringing fleet to maximum A/S Capability, 25 September 1958, LAC, RG 24, Accession 1983-84/167, Box 4029, file 8885-12. The navy was looking at various ways of improving fleet efficiency. For instance there were calls for the modernization of HMCS Sioux and Crusader (VDS, SQS 503, helicopters and Mk 43 torpedoes), the frigates to be fitted as helicopter carriers (with one to three HSS Sea Kings helicopters) as well as the possibility of the St. Laurents getting VDS or VDS and helicopters.
massive retaliation. This concept (which was based on the principle that the destructive nuclear power of Strategic Air Command could deter Soviet aggression) was facing growing criticism. Arguing that the strategy gave the United States air force too much influence, numerous critics accused Strategic Air Command of acquiring more aircraft than what was really required to deter war. Others saw weakness with the strategy itself. Situations such as the Suez crisis, troubles in the Near East and Lebanon as well as civil wars in Asia provided strong evidence that the United States would continually have to contend with destabilizing events and limited wars. Massive retaliation did little to resolve these situations not to mention the fact that the inability to diffuse limited war situations actually increased the threat of nuclear war. Since the Americans were preparing for such scenarios, it was reasoned that the RCN should do the same.

Limited wars, according to this memo, were not the only reason why the Strategic Air Command’s dominance over massive retaliation was “rapidly drawing to a close.” The development of nuclear submarines carrying nuclear-armed missiles had trumped both Strategic Air Command’s bombers as well as land based missiles as the most lethal geopolitical weapon, and the RCN had to be ready for the revolutionary changes that it would bring when the Soviets inevitably developed their own nuclear powered boats:

It would seem that the new era will arrive quite soon wherein the present method of employing surface vessels for anti-submarine purposes is almost useless. The only effective vessel to counteract the nuclear submarine seems to be the nuclear submarine, combined with shore based maritime air. Thus the RCN is faced with the unpalatable probability that surface vessels including A/S [anti-submarine] [aircraft]carriers may very well be a thing of the past insofar as capabilities to

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16 Anonymous, Some thoughts on the influence of strategy on naval construction, 8 September 1958, DHH, NPCC fonds, 79/ 246, file 100.
18 The Zulu class was the Soviet’s first missile carrying diesel boat and was commissioned on 19 September 1955. K-19, a Hotel class, was their first nuclear powered missile boat, commissioned on 30 April 1961.
destroy the true submarine is concerned. We, therefore, may very well be forced to arrive at a conclusion that the purely anti-submarine force must be comprised of nuclear submarines, in combination with shore based maritime air…

Such startling observations were the product of the belief that the surface ship was simply too slow to deal with the nuclear submarine and its underwater speeds of 35 to 40 knots. Only the teaming up of friendly nuclear submarines with shore-based maritime patrol aircraft could keep up with this new threat, and because of that the memo predicted the RCN would soon face a “hard decision” of whether or not to build surface ASW vessels after the sixth repeat Restigouche was completed. Rather than spelling the death knell for destroyers, frigates, and carriers in the RCN, a new role was envisioned for the future in which “the surface vessels would only be profitably employed in preventative wars, i.e. – wars such as the Korean War or UN [United Nations] police actions of limited scope.” As a result, it was recommended that the RCN should take positive and effective “action to revise our policy in keeping with the threat” by developing a new construction program in two parts. The first would consist of nuclear submarines and air force maritime patrol aircraft to deal with the anti-submarine threat, while the second would entail a surface fleet that would be geared towards limited wars.

The RCN was at a crossroads and that prompted the Vice Chief of the Naval Staff into action. In mid-November the ship characteristics panel, which had been investigating the development of the two ASW frigate designs, was specially instructed to advance the characteristics for the ASW destroyer escort and the General Purpose

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19 Anonymous, Some thoughts on the influence of strategy on naval construction, 8 September 1958, DHH, NPCC fonds, 79/246, file 100.
20 Ibid.
Destroyer. Advocating ships that differed from the Chief of the Naval Staff’s view required further justification, which Tisdall did while laying down a design policy for the ship characteristics panel. The purpose of the RCN, he explained, was to provide for the security of Canada and the best way to do that was through the nation’s anti-submarine alliance commitments to NATO and the Canada-United States Regional Planning Group. As important as those commitments were, however, it was emphasized that Canada’s UN role would require a flexible navy that, depending on the need, would have to be ready to perform numerous tasks. Since it was agreed that friendly submarines were the best platform to carry out the RCN’s primary task of destroying Soviet submarines, Tisdall instructed naval planners that they were to keep certain guidelines in mind when composing surface ship characteristics:

…the RCN must be prepared to carry out the following secondary tasks:
(a) providing early warning of attack launched over, on, or under the sea;
(b) Protection and control of merchant shipping;
(c) Protection of harbours from maritime threats;
(d) Carry out operations that may arise in consequence of Canada’s membership in NATO and the United Nations.

…The A/S submarine is… limited in its capability to carry out the secondary tasks. Until submarines are available the surface A/S vessel must be capable of carrying out the primary task. However, in the future it should complement the submarine as well as being capable of fulfilling the secondary tasks.22

Tisdall’s message was clear. Building the slower ASW frigate would be a mistake given that the anti-submarine submarine and maritime patrol aircraft team was believed to be a vastly superior way to hunt enemy submarines. While future surface ships would also contribute to anti-submarine warfare, their main purpose would be to respond to limited war operations and that made the General Purpose Destroyer the better alternative.

21 Minutes of the special meeting of the ship characteristics panel, 12 November 1958, DHH, NPCC fonds, 79/246, File 101. The DNPO (Charles) believed that the use of the word austerity was in fact a misnomer and suggested that some other title be found for this class of ship.
DeWolf undoubtedly appreciated the arguments for retaining some degree of versatility in the fleet but he was a realist. Motivated by a larger understanding of the government’s attitude towards military spending, DeWolf recognized that his civilian masters would never give the navy enough money to build both a top-notch ASW force as well as a general-purpose fleet. Cuts in military expenditures supported DeWolf’s position. The $100 million that the newly elected Conservative government immediately slashed from $1.76 billion defence budget certainly sent a definite message; a point that was again hammered home in the following year when additional reductions lowered that figure to $1.4 billion.\(^{23}\) DeWolf was truly in a conundrum. The Chief of the Naval Staff was going to have to find someway to build an effective ASW force, while at the same time contending with a shrinking defence dollar. Historian Michael Whitby has argued that DeWolf met this challenge through a combination of “practical navalism” and an “autocratic” style that allowed him to supply “effective leadership and [a] realistic vision at the precise moment they were needed.”\(^{24}\) DeWolf’s actions towards nuclear submarines and aircraft carriers illustrate this point. For example, DeWolf fully accepted the principle that the nuclear submarine was the best anti-submarine platform, and he actively pursued the possible acquisition of the American Skipjack class for the RCN early in his tenure as Chief of the Naval Staff. As much as he wanted these nuclear attack submarines, however, he quickly realized that committing Canada to such an expensive platform would likely leave little cash for any other ships. Planning for the possible acquisition of nuclear boats would continue provided that “funds can be made available,” but given the political climate he increasingly began to eye the more cost-

\(^{22}\) Tisdall to ACNS (P), 17 November 1958, NPCC fonds, 79/246, file 101.

\(^{23}\) Marc Milner, *Canada’s Navy*, 222.
effective and practical option, which came in the form of the American Barbel conventional submarine.  

The same was true for aircraft carriers. Some naval aviators at Naval Headquarters wanted the RCN to keep HMCS Magnificent as a commando carrier when her replacement, HMCS Bonaventure, entered service in 1957, while others argued that navy needed a larger general purpose carrier (presumably an American Essex class) so that Bonaventure could be dedicated exclusively to the anti-submarine role. DeWolf was a supporter of the naval aviation branch, but he was well aware of the expense attached to these platforms. Shaking off intense pressure from the Supreme Allied Commander Atlantic (SACLANT) for the RCN to acquire a second carrier, DeWolf concluded the RCN could only afford Bonaventure and her complement of Banshee fighters and Tracker anti-submarine aircraft.  

Dwindling budgets not only affected DeWolf’s thinking towards submarines and aircraft carriers but surface ships as well. Determined to get maximum use from the money he did receive, the Chief of the Naval Staff was attracted to the ASW austerity frigate because it would leave him with enough money to create a conventional submarine service for the RCN. It was for that reason DeWolf likely had little trouble choosing between the four ship concepts that the staff had designed. The extreme costs of the General Purpose Destroyer made it an easy target for elimination, and the addition of two knots as well as another helicopter did little to ease suspicions that the ASW

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25 DeWolf to the minister, 18 November 1959, DHH, NPCC fonds, 79/246, file 98.
destroyer escort was a clone of the rejected surface anti-submarine vessel. Yet the selection of the austerity frigate over the ASW fast frigate must have seemed like an odd choice given the criticism dogging all surface ships; namely that they were not fast enough to keep up with nuclear submarines. That raised the important question of why the RCN was bothering to build ASW surface ships at all?

Some officers were clearly uncomfortable with what represented a radical departure in the RCN’s approach to surface ship construction. Gone was the philosophy of “fewer ships… but better ships” that had produced the St. Laurent and Restigouche classes, replaced by a “small, cheap and many” concept that would favour designs similar to the austerity frigate. Yet despite the criticisms, the logic behind this concept was sound. Wanting to “increase unit numbers by reducing unit costs,” it was believed that a large force of smaller and cheaper vessels could counter the nuclear submarine’s speed advantage through an ability to monitor vast areas of ocean. “Too few ships at sea would not give the overall surveillance required to detect the modern submarine,” explained a key staff assessment, adding that “we are [also] all well aware that the Alliance is have difficulty in producing sufficient escort ships.” Cheaper ships would make it easier for the RCN to meet its SACLANT force goals, explaining why DeWolf saw the austerity frigate as a more attractive option to its fast frigate cousin. Calculations had shown that each knot of speed cost approximately $1 million and faster designs, therefore, would limit the total number of new ships that Canada could afford to build.

29 Royal Canadian Navy ASW Frigate, 29 April 1960, DHH, NPCC fonds, 79/246, folder 52
For instance reducing speed by five knots had cut $5 million from each frigate, and over the course of a ten-ship program the ASW austerity frigate would save the RCN a much needed $50 million. Moreover, like the corvettes and frigates of the Second World War, the simplicity of the austerity frigate would allow it to be mass-produced in times of national emergency.\(^{30}\)

Not everyone was satisfied with these justifications for the program. Even if it were accepted that a larger number of slower escorts would increase the RCN’s surveillance capability, there still remained the question of how these platforms would destroy the faster submarines. The Naval Board was putting tremendous faith in the long-range reach of the austerity frigate’s three helicopters, explaining that they were placing the tactical advantage of speed in the weapon delivery system rather than the ship’s machinery. Thanks to the helicopter, the five-knot differential between the austerity and fast frigate was not that crucial. Moreover, the austerity frigates were already two knots faster than the Prestonians they were replacing, and therefore were “still sufficient for escort duties with the carrier.”\(^{31}\)

The 19-knot Prestonians, however, were never a satisfactory escort for Bonaventure, which ran the risk of leaving them in her wake when operating at a top speed of 24.5 knots. Of course, how the 21.5-knot austerity frigate was expected to fair much better was not explained; and it can only be assumed that the Naval Board was willing to live with the fact that the carrier would not be able to operate at full speed for sustained periods when being escorted by the austerity frigate. Therein lay the rub. No

\(^{30}\) Ibid.

matter how the Naval Board justified its decision, the austerity frigate was far from the
ideal ASW vessel. It represented a sacrifice that DeWolf was willing to make to save
money for the creation of a Canadian submarine service.32 Since its fate was so closely
linked to that larger ambition there were few opponents who were willing to challenge
DeWolf on the ASW frigate. Criticisms were few and far between once DeWolf had
made up his mind, and subtle attempts to modify the design were equally unsuccessful.
Direction on this matter was firm: the ASW frigate was neither to grow in size or cost.33
Maintaining such control over the project ensured that the ASW frigate was not subjected
to significant changes throughout 1959, and it was only when the design began to receive
political backing that some staff officers finally voiced their objections.

In early 1960 the minister of national of defence endorsed DeWolf’s plan to build
six ASW frigates with the possibility of another four being laid down in later years if
funds were available.34 Faced with that reality, and still unhappy with the design’s slow
speed, the Vice Chief of the Naval Staff told the Naval Constructor in Chief that he
wanted to know the financial and operational implications of increasing the speed of the
ASW frigate to 24 knots.35 The response was not encouraging. Since 21 knots was as
fast as the diesel engines could go, the Naval Constructor in Chief’s office found that the
only way to boost the austerity frigate’s speed was to fit gas turbines to the design. This
was a dangerous proposition, and the Naval Constructor was quick to point out the
cascade affect that changing the design in this fashion would have:

33 A/CNTS (Winnett) to CNTS, 7 May 1959, LAC, RG 24, Accession 1983-84/167, Box 3777, 8200-
FFE/A. For instance, the proposal to fit larger helicopters was quickly rejected because “any significance in
helicopter size would increase the size of the vessel and consequently the cost.”
34 MND, Memorandum for Cabinet Defence Committee, RCN Ship Replacement Program, 20 January
1960, DHH, NPCC fonds, 79/246, file 98.
35 Tisdall to NCC, 22 February 1960, LAC, RG 24 Accession 83-84/167, Box 4027, file 8885-FFE/A.
Banked gas turbines would then provide 13,000 SHP [shaft horse power] and the diesel would provide 5,500. In this way the endurance range at 15 knots would remain at 7,000 miles but naturally the consumption at maximum speed would increase and it is doubtful whether we would achieve 1,000 miles range full power. Another penalty for introducing banked gas turbines would be larger uptakes and a reduction in hanger space available. This would definitely limit the number of helicopters that could be carried to 2.36

Tisdall was nonetheless willing to take the risk, telling DeWolf that “I would recommend that we stick to the presently designed New A/SW Frigates to do 23.4 knots clean and deep.” True to form, DeWolf refused to even explore what he saw as a slippery slope, instantly determining that the altered ASW frigate was “questionable as to practicality.”37

DeWolf was right. Tinkering with one aspect of a design could easily lead to unanticipated outcomes with other systems, resulting in a larger and more expensive ship. The simple fact of the matter was that there was only so much room in a design’s hull. As a result, the RCN had two choices when they wanted to add capabilities to an existing design; they could either take something out or enlarge the concept to accommodate the new requirement. This was a lesson that the RCN would have to learn and then relearn, as a number of future designs would balloon beyond their original characteristics because of a desire to include further weapons or sensor systems. The ASW frigate was no different. Presented to the Naval Board on 3 February 1960, the “Future Requirement Planning Guide” suggested that the RCN had to have some weapons to respond to limited war situations, and by doing so it initiated a campaign to alter the ASW frigates’ characteristics.

The planning guide never left any doubt that the RCN’s primary obligation was to anti-submarine warfare, which it claimed the navy would meet through “an effective

36 Notes on ASW Frigate, nd [February 1960], DHH, NPCC fonds, 79/246, File 100.
37 Tisdall to DeWolf, 1 March 1960, LAC, RG 24, Accession 83-84/167, Box 3549, file 8000-35.
combination of ships, aircraft, submarines and shore stations.” Both the ASW frigates and the proposed submarine service were suitable for the Western alliance’s stated goals of deterring Soviet aggression and maintaining “sufficient military strength to carry on and win a general war.” The problem was that the more successful the deterrent forces were, the more likely it was that the Soviets would encourage limited wars in the Third World as a means of spreading communism.\(^{38}\) And it was for this reason that the planning guide paid considerable attention to the adoption of conventional forces for UN-sponsored police actions. For the chairman of the ship characteristics panel, Captain G. Edwards, this triggered a renewed concern about the fact that the RCN was building a fleet that could only perform ASW operations:

> While the [ASW frigate] programme… appears to meet the dual requirements of both replacement of over-age vessels and maintenance of force goals, it may be open to question as to whether or not the RCN should limit its future capability entirely to this class of ship.\(^{39}\)

Nor was he the only one to express such doubts, and with the ASW frigate in its “advanced planning stages” there was little time left for those individuals with concerns to affect change.

Captain Charles, whose Directorate of Naval Planning played a key role in developing the planning guide, not only fully agreed with that opinion, but he also saw Edwards as a potential ally. Highlighted by tours in HMCS Restigouche during the Second World War, and command of HMCS Crescent in the late 1940s, Charles had spent most of his sea time in destroyers and therefore was not impressed with the ASW frigate. Even more significant was Charles’ post-war service in the Tribal Class


\(^{39}\) G.C. Edwards to DN Plans, 26 February 1960, DHH, NPCC fonds, 79/246, folder 52
destroyer HMCS *Haida*, which he commanded with the title Commander Destroyers Far East during the Korean War.\textsuperscript{40} This background explains Charles’ bias. The idea that the RCN would lose its ability to respond to these global situations by its failure to replace the Tribals was obviously too much for the Korean War veteran to handle. As a result, he turned to Edwards. As chairman of the ship characteristics panel, Edwards was in an ideal position to influence the ASW frigate design, which, incidentally, was exactly what Charles wanted him to do. Using the planning guide as justification for his contacting Edwards directly, Charles argued that “the ASW frigate do [sic] not reflect the Navy’s responsibility for supporting UN action in a conventional form of warfare.” He then went even further by implying that that Edwards should unilaterally change the ASW frigate’s secondary tasks to include UN operations. It was a remarkable request. Protecting Canadian troops ashore would require some type of offensive surface capability and the immediate preference, which was for a surface-to-surface missile system, would result in substantial changes to the design.\textsuperscript{41}

Charles’ suggestion sparked a flurry of activity. Finding it odd that such extensive alterations were being proposed in the “final design stage,” Lieutenant Commander L.J.C. Walker cautiously advised Edwards that Charles’ ideas did not seem to be stemming from any “policy decision.” Only the Chief of the Naval Staff could provide this type of direction, and yet by all indications he was still pushing the cost-effective and specialized design. Despite obvious reservations that something odd was happening, Walker finally conceded that “we may be wrong in only considering missiles

in this connection. Possibly, the requirement (UN Police Action) could be met by a conventional gun mounting, possibly on interchangeable basis with the ‘Green Light.’" 42 Others were not so sure. Providing an excellent illustration of how proposed changes could easily snowball into larger designs, the Director of Surface and Air Warfare, Captain E.S. Macdermid, argued that replacing the Green Light missile system would leave the ASW frigate vulnerable to air attack. His idea was to give the design a gun for the bombardment role in addition to its point defence missiles. 43 Since the current hull could not accommodate both these weapon systems Macdermid’s plan would have led to a larger ASW vessel that was capable of some limited war functions.

Other changes that had originally been eliminated to reduce costs also began to creep back for reconsideration. With the Naval Board having approved the current incarnation of the ASW frigate on 27 April 1959, it was obvious to Edwards that the suggested alterations were not in line with the Chief of the Naval Staff’s thinking and would have “far reaching design and financial implications.” Despite personal reservations about the ASW frigate’s specialized role, Edwards would not play along. The Chief of the Naval Staff, himself, had set a strict limit on the design’s size and cost, and as a result Edwards left no doubt that any attempt to procure a gun for the program would have to come at the expense of some other equipment. Nor was he happy with the sense that DeWolf was unaware of this planning, telling Charles that: “Before I, as chairman, can process such a change to Ship Characteristics, it would be necessary for

41 DNP (Charles) to chairman, Ships Characteristic Panel, Staff Requirements – ASW Frigate, 8 April 1960, LAC, RG 24, Accession 83-84/167, Vol. 4027, file 8885-FFE/A.
42 L.J.C. Walker to D/ACNS (A&W), 14 April 1960, LAC, RG 24, Accession 83-84/167, Vol. 4027, file 8885-FFE/A.
43 E.S. MacDermid (Director of Surface and Air Warfare) to Chairman, Ship Characteristics Panel, 13 May 1960, LAC, RG 24, Accession 83-84/167, Vol. 4027, file 8885-FFE/A.
[you] to obtain the concurrence of VCNS and CNS for this basic change in policy.”

Effectively ending this short campaign to alter the ASW frigate, Charles suddenly backed off by agreeing that it would be “impractical” to alter the characteristics of the first ASW frigates “at this time.” But Charles did not give up altogether, adding the caveat that the next batch of four frigates could have a weapon’s package “dictated by future requirements and technological progress.” Charles’ prophetic words were closer to becoming reality than he realized. In late May the ASW frigate was ranked as “priority number one” on a twenty-item procurement wish list, and yet within three short months new requirements would relegate it to virtual obscurity.

In part, this twist in the ASW frigate’s fate was the product of DeWolf’s retirement and subsequent replacement by Vice Admiral Herbert Sharples Rayner on 1 August 1960. Rayner, a man with a reputation for his high scruples and integrity, had inherited a navy that was heading in a clear direction. Aside from the six Repeat Restigouches already approved by the government, DeWolf had laid the groundwork for the acquisition of a supply ship and six to ten ASW frigates as well as the establishment of a Canadian submarine service. At his first Naval Board meeting as Chief of the Naval Staff, Rayner suggested little was going to change as his predecessor was “turning over the ‘ship’ in good shape and on the proper course.” Rayner’s early actions supported this statement. Those who were anxious to see the RCN acquire a submarine service

44 Brock to NCC, 13 May 1960, LAC, RG 24, Accession 1983-84/167, Box 4028, file 8885-1, vol.4; Chairman, Ship Characteristics Panel (Edwards) to DN Plans (Charles), 26 May 1960, LAC, RG 24, Accession 83-84/167, Vol. 4027, file 8885-FFE/A; Naval Board Meeting, 27 April 1960, DHH, RCNHS fonds, 81/520/1000-100/2, Box 25, File 5.
46 Naval Board 25 May 1960, DHH, RCNHS fonds, 81/520/1000-100/2, Box 25, file 5.
47 Peter Haydon, “Vice Admiral Herbert S Rayner: The last Chief of the Naval Staff,” in The Admirals, 250-252.
48 Naval Board Meeting, 10 August 1960, DHH, RCNHS fonds, 81/520/1000-100/2, Box 25, file 5.
were happy to hear that this project would remain a top priority under Rayner. The men of the RCN’s minesweeping branch were equally encouraged because the new Chief of the Naval Staff wanted to keep the “art of minesweeping alive.” Nor had things changed for the naval aviators whose ambitions to expand their branch seemed equally unlikely under Rayner as they had been with DeWolf. Rayner, like his predecessor, was well aware of the financial pinch that was hitting the navy. With twenty-two percent of the navy’s budget already supporting naval aviation Rayner had no intention of giving this branch even more money. Like DeWolf, Rayner was not interested in either acquiring a second carrier or replacing Bonaventure’s Banshees with another fighter when they reached the end of their operational usefulness in 1962.49

In time, Rayner’s position on the latter issue would mellow somewhat, but it was clear that the new Chief of the Naval Staff intended to follow in DeWolf’s footsteps. He was, however, considering a small alteration to DeWolf’s plan. Rayner never questioned DeWolf’s commitment to ASW, but rather it was the fact that this future fleet could not effectively contribute to any other task that bothered the new Chief of the Naval Staff, explaining why he told the Naval Board that he wanted “a modern and progressive service ready to meet any emergency.”50 That was encouraging news for Charles who was in the process of leaving Naval Headquarters to take command of the destroyer HMCS Assiniboine and the Second Escort Squadron. Like Charles, the vast majority of Rayner’s sea time had been on destroyers, and he, too, wanted the RCN to maintain the small degree of versatility that the Tribal Class destroyer had provided. Rayner had had little exposure to the ASW frigate while serving in his previous appointment as the Flag

49 Naval Board meeting, 22 July 1960, DHH, RCNHS fonds, 81/520/1000-100/2, Box 25, file 5.
50 Naval Board Meeting, 10 August 1960, DHH, RCNHS fonds, 81/520/1000-100/2, Box 25, file 5.
Officer Pacific Coast, but it was not what he considered the ideal surface ship for the RCN. In fact, according to Captain S.M. Davis, who himself had just arrived at Naval Headquarters to assume the Deputy Naval Constructor-in-Chief position, the Chief of the Naval Staff displayed an immediate dislike towards the program by “somewhat ruefully” observing that too much speed had been sacrificed in interest of economy. Yet while Rayner may have had reservations he neither cancelled the program nor impeded its progress. Instead, it was developments on the international stage that increasingly placed the ASW frigate on the backburner.

Within three weeks of Rayner becoming Chief of the Naval Staff, the United Nations made an urgent request to the Canadian government to help stabilize a worsening situation in the Congo. The outbreak of violence, sparked by Congo’s independence from Belgium caused much concern because of fears that the Soviets or Americans might intervene. Despite Prime Minister Diefenbaker’s original hesitation about committing Canadian troops, the necessity of this UN mission was not lost on his Cabinet where it was observed that avoiding superpower involvement was key to “preventing what would probably have been a very tense and difficult situation.” Moreover, while the planned military contribution was relatively small, Canada nonetheless received a great deal of attention for supporting the United Nations and its ability to defuse the Congo crisis. Although there was no need for the RCN to assist with this particular mission, the fact that he had become Chief of the Naval Staff in the middle of a crisis originating in the Third World was not lost on Rayner. Officers such as Charles had warned the RCN to

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51 Davis, Fourth Case Study: The General Purpose Frigate, DHH, Davis fonds, 2001/36, 204 – 207.
prepare for a possible UN role, and the Congo proved a powerful vindication of this position. Moreover, with the government basking in the recognition paid to Canada’s part in that crisis, there was no reason to doubt that this trend of contributing to UN sponsored missions would continue.

Rayner was right to take an active interest in the government’s reaction to the Congo. With the navy currently planning for a purely ASW fleet, the Chief of the Naval Staff had to gauge the probability of the RCN being asked to participate in a future UN operation. While the governing Conservatives suggested that the likelihood of naval involvement in such missions was high, the opposition Liberals went even further. A speech by the defence critic (and future defence minister), Paul Hellyer, in the House of Commons provided Rayner with valuable insight into the navy’s possible future under a Liberal regime. Hellyer’s remarks were staggering. The navy was totally geared towards anti-submarine warfare, and according to Hellyer that was a grave mistake. It was only a matter of time before the Soviets would have nuclear submarines, which would make “real defence impossible, the navy’s anti-submarine role will be like any other form of defence, only partial and inadequate as far as the protection of the Canadian nation.”

That conclusion then led to a recommendation for the Conservatives to immediately scrap the six Repeat Restigouches for a program of troop and supply carriers:

These could be used as bases for launching and supporting land operations in areas inaccessible to long range transport aircraft. These ships would increase the flexibility of Canada’s mobile tactical forces and would add considerably to our capability to react to United Nations requests involving international police action. Last night the minister spoke of mobility, transport mobility; but surely forces which do not have sea support miss in one essential respect the all-round type of tactical transport and support which might, under some circumstances, be required.53

It was the clearest statement yet from Hellyer on what a Liberal victory in the polls would mean to the RCN, and it was one that only managed to further complicate Rayner’s first days as Chief of the Naval Staff.

The fact that both the Conservatives and Liberals were advocating a greater UN role should have made it easy for Rayner to alter the ship replacement program to accommodate limited war situations. The problem was that the two parties did not share a common view on the nature of naval forces to be employed for these tasks. While Hellyer was advocating a navy that was primarily a UN reaction force with ASW as a secondary role, the Conservative defence minister, George Pearkes, believed these priorities should be reversed. “I do not know how combat troop carriers are going to protect the shores of this land against submarines” Pearkes told the Commons, continuing with “I should think that combat troop carriers might themselves be very vulnerable to attack by submarines.”54 Rayner supported the government’s view. A small measure of versatility would therefore be worked into the specialized ASW force that the RCN was already building.

Naval Headquarters was quick to recognize the impact that the Congo crisis had had on their political masters, and on 8 August 1960, the Vice Chief of the Naval Staff, wrote to the Chief of Naval Technical Services about the future of the shipbuilding program. The current plans to build six ASW submarines and six ASW frigates by 1968 were not to be interrupted. Instead, Tisdall instructed technical services that there might be a requirement for a UN “commando carrier” once the last ASW frigate was completed. Tisdall’s next comment was the most significant. Marking the birth of the concept that would evolve into the General Purpose Frigate, the Vice Chief of the Naval
Staff then observed that the commando carrier “would require support and escort by at least four fast ships… capable of providing gun and missile fire, some A/S [anti-submarine] capabilities….” Tisdall undoubtedly was hoping that the navy would revisit the earlier General Purpose Destroyer design, but since this concept was too big and expensive he was forced to settle for a smaller and less capable General Purpose Frigate. Although this general-purpose force was intended for the fleet that would come after the submarines and ASW frigates, Tisdall nevertheless gave the technical staff specific orders not to share details of this planning with others.55

Explaining why these officers were issued such a gag order is not easy, particularly since they were encouraged to avoid written opinions and were instead to “discuss with me verbally regarding action to be taken.”56 One reason Tisdall may have wanted to keep a lid on this planning was that the RCN was merely exploring options based on their reading of the political and strategic environment. It was important to prepare for possible eventualities, but perhaps Tisdall knew that some staff officers could easily misinterpret such preparations. If that was Tisdall’s thinking it did not take long before his instincts proved correct. At least one staff officer was already looking forward to the acquisition of assault carriers and guided missile destroyers, because he believed responding to police actions was the “only sane course of action” as well as better for morale “than our obsession with the submarine threat.”57 In reality, Rayner was fixating on the submarine threat and he would not have supported this type of rhetoric. The

54 Ibid.
55 Tisdall to CNTS, 8 August 1960, LAC, RG 24, Accession 1983-84/167, Box 4028, file 8885-1 v.4.
56 (Minute notes on 8 August 1960), ACNS (P) (Piers) to DN Plans and DN Ops, 10 August 1960, LAC, RG 24, Accession 1983-84/167, Box 3549, file 8000-35 vol.4. The quotation actually comes from Piers who was acting on Tisdall’s orders.
current ASW fleet was only getting older and the pressure for Rayner to get political approval for the replacement program was intense. A small measure of versatility would be worked into future fleet planning, but the Chief of the Naval Staff knew that the RCN could not afford to get side tracked with notions of a general-purpose fleet at this time.

This raises another possible reason why Tisdall was so careful in exploring ships that could respond to limited war situations. While the Vice Chief of the Naval Staff supported the navy’s ASW orientation, it was obvious that he disagreed with the singular emphasis that DeWolf had placed on this particular role. Tisdall did not dare challenge DeWolf’s commanding presence and so he only half-heartedly pursued a general-purpose force under his reign. Rayner was another matter. Circumstantial evidence suggests that their relationship developed into an unstable one that was complicated by the extreme difference in their personalities. As a devout Christian, the restrained Rayner was the antithesis of the purportedly hard-drinking Tisdall. More to the point, however, some contend that Tisdall had difficulty taking direction from a man who had once been his junior. It should not be surprising therefore that Tisdall – likely buoyed by events in the Congo – began to campaign for more general-purpose ships. Nevertheless, he still had to exercise a degree of caution. Rayner’s top priority was to get governmental approval for the submarines, and any calls for general-purpose fleets at this particular time could easily threaten that program by confusing the politicians as to what the navy’s true needs were. This was particularly so since there were growing signs that the Conservatives were starting to doubt the wisdom of Canada acquiring its own submarine service.

58 I am grateful to Commodore Graham Bridgman for sharing this information. According to Bridgman Tisdall not only drank too much but was frequently sick in his cabin before going up to the bridge. However, it is important to note there that is no other evidence that Tisdall drank in excess.
Ever since the submarines were last discussed at the Cabinet Defence Committee meeting of 25 March 1960, the RCN had been busy preparing a report that examined all the implications of the acquisition as well as the establishment of a Canadian submarine service. This report, which was finished in June, had identified the American Barbel and British Oberon class submarines as the best alternatives to meet the RCN’s requirement. Although the performance, habitability, and general arrangement of the Barbel were better than the Oberon, neither type was deemed the clear winner. Arguments could be made for both submarines. On the one hand, Oberons bought directly from the United Kingdom were much cheaper, and that would undoubtedly make them the more attractive option to a cost-conscious government. On the other, standardized production techniques between Canadian and American companies meant that the Barbels could be built under license by domestic shipbuilders. There was also the fact that British equipment would create logistical problems for the RCN whose supplies were increasingly coming from the United States.59

While the report itself was balanced, not everyone agreed with this approach. Anonymous hand-written comments added after the report’s completion clearly indicate that at least one officer was unhappy with the fact that the Oberon had been proposed as an alternative. Rather than giving options, this officer felt the report needed to be more forceful and recommend that the navy select the Barbel. The Naval Board agreed, and at its 20 July 1960 meeting it was decided to submit a new proposal to the Cabinet Defence Committee that called for Barbel submarines “which represent a most efficient development of the conventional submarine and provides maximum suitability for RCN

requirements and Canadian construction.” In the short-term, this logic convinced the Chairman of the Chiefs of Staff Committee, Air Marshal Frank Miller, who – acting on the Naval Board’s advice – told the defence minister that the Barbel was the better alternative and that the navy should get permission for a six-boat program commencing in 1961.⁶⁰

Whether it was Barbels or Oberons, the idea of acquiring submarines enjoyed a remarkable amount of support within the military as a whole. Comments from the air force were particularly encouraging. For instance, the Acting Vice Chief of the Air Staff, Air Commodore M.D. Lister, not only saw “considerable merit” in the submarines, but also furthered the navy’s case by observing that SACLANT was placing greater emphasis on pairing submarines up with aircraft for anti-submarine barrier operations. Such comments were a little self-serving – the aircraft involved in these barriers belonged to the air force – but they suited the navy’s purpose well. The army, while not nearly so accommodating as the air force, was at least leaving the program alone.⁶¹ Most importantly, Pearkes was a supporter of the acquisition, telling the Prime Minister that “Personally I am in favour of the proposal for obtaining these submarines as I feel that the only way to maintain an anti-submarine force is to provide sufficient training….⁶² The defence minister had made an important point. While there was an operational need for friendly submarines to hunt their Soviet counterparts, the RCN also required its own boats to train surface units and aircraft. Loan arrangements for the three “A boats” of the

⁶⁰ Miller (CCOS) to Minister, 16 August 1960, DHH, NPCC Papers, 79/246, file 98. The Conventional Submarine Survey Committee consisted of Commander R St.G. Stephens (Chairman), Commander W.B. Christie, Lieutenant Commander H.R. Clutterbuck, Lieutenant Commander D.M. MacLennan, and Lieutenant R.C. Orme. Naval Board Meeting, 20 July 1960, DHH, RCNHS fonds, 81/520/1000-100/2, Box 25, file 5.

⁶¹ A/C M.D. Lister (Acting VCAS) to CAS, 16 August 1960, LAC, RG 24 Accession 1983-84/049, Box 131, file 098-113.
Royal Navy’s 6th Submarine Squadron – which provided invaluable training on the East Coast by acting as hostile forces during exercises and manoeuvres – could not last forever. In fact, recent suggestions that the Admiralty might withdraw from this agreement only added further evidence that Canada had to have its own submarines.63

The problem for Rayner was that the Prime Minister and some of his cabinet did not see things in the same light. The Chief of the Naval Staff was worried. During a private conservation with Tisdall on the morning of 13 September, he admitted that the current ship replacement program might fail because Cabinet had an irrational “prejudice” against submarines as a weapon of the “wicked.” Thanks to the allied propaganda machine, images of evil German U-boats indiscriminately sinking merchant ships throughout the course of two world wars had conspired to give the submarine a bad reputation. The idea of Canada possessing a weapon that was synonymous with aggression rubbed some Cabinet members the wrong way. Telling Rayner that “this view may be insurmountable,” Tisdall agreed that the submarine program was in trouble. It would be foolish for the RCN not to have a back-up plan, and that gave Tisdall a chance to propose an alternative fleet that was more to his liking.64

Tisdall’s fleet represented a departure from the one that Rayner was currently pursuing. Although he had previously supported the addition of submarines – going as far as stating his preference for the Barbel over the Oberon – Tisdall’s predilection for destroyers was once again brought to the surface.65 His initial comments to Rayner said it all. “Perhaps we should put it to the Minister,” Tisdall boldly asserted, “that a shift in

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62 Pearkes to Diefenbaker, 17 August 1960, DHH, NPCC Papers, 79/246, file 98.
63 CCOS Minutes, 22 August 1960, DHH, Raymont fonds, 73/1223, Box 63, file 1310 C.
emphasis away from purely ASW operations and towards support of UN may be politically desirable insofar as the Navy is concerned.” Bearing an eerie similarity to the fleet he had proposed after Hellyer’s speech to the Commons, Tisdall recommended that *Bonaventure* be reconfigured into a commando carrier and that the RCN embark on a program of six new General Purpose Frigates. This force would have the capacity to respond to any UN commitment, while the six St. Laurents, seven Restigouches, and six Mackenzies would serve as ASW ships for SACLANT. Two repair ships as well as one tanker would support these blue water forces leaving ten minesweepers and seven frigates for training and littoral duties. Such a fleet, Tisdall argued, would allow enough funds for the acquisition of three new submarines, which, along with HMCS *Grilse* on the West Coast, would help make the surface fleet more proficient in ASW. This was Tisdall’s ideal force structure and it was very similar to the one that Rayner would eventually adopt. But in September 1960 Tisdall was afraid of overplaying his hand. The Chief of the Naval Staff was devoted to acquiring a sizeable submarine force and although he had reservations about the ASW frigate he nonetheless saw them as a quick solution to the looming problem of block obsolescence. As a result, Tisdall did not want to push his luck too far, meekly advising Rayner that: “perhaps you would like to consider this seriously and if you feel you would like to do it, I would arrange for the presentation of a paper showing detailed building costs.”

Tisdall had good reason to be optimistic. Events at the political level once again gave his position a boost. On 26 September, Diefenbaker delivered a speech to the

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64 Tisdall to Rayner, 13 September 1960, RCN Ship replacement program, 13 September 1960, DHH, NPCC Papers, 79/246, file 100; Tisdall to Rayner, 23 September 1960, DHH, NPCC Papers, 79/246, file 175.
65 Tisdall to DeWolf, 1 March 1960, LAC, RG 24, Accession 83-84/167, Box 3549, file 8000-35
United Nations General Assembly that he regarded as the “highlight of his international
career.” Soviet Premier Nikita Khrushchev had recently made statements that were
highly critical of the UN secretary general’s handling of the Congo crisis as well as “the
colonial practices of the West” and Diefenbaker was the first leader to get a chance to
rebut him. Diefenbaker’s defence of the West was masterful, but it was his suggestion
that the UN create a rapid reaction, international peace force that was good news for
Tisdall’s general-purpose aspirations. After all, how could the navy ignore this message,
particularly since Cabinet had agreed that “for all practical purposes a portion of
Canada’s military forces was earmarked for service in such a force.” This was a
reference to the Conservative’s 1958 decision to establish a Canadian UN Stand By Force
that could be quickly deployed to just such emergencies. In fact, this 1,000-man force –
which in July 1960 consisted of the 2nd Battalion of the Royal Regiment – did receive
orders to prepare for a possible deployment to the Congo. At that time, Tisdall had used
such preparations to argue that in addition to air lifting this force the government could
use the escort maintenance ship HMCS Cape Scott to carry some troops and stores to the
Congo. Yet despite these signs that the RCN might have to respond to limited war
situations, the Chief of the Naval Staff was not ready to make a pitch for general-purpose
ships.

66 Tisdall to Rayner, RCN Ship replacement program, 13 September 1960, DHH, NPCC Papers, 79/246, file 100.
67 Robinson, Diefenbaker’s World, 151-156; John F Hilliker, “The Politicians and the ‘Pearsonalities’: The
Diefenbaker Government and the Conduct of Canadian External Relations,” in Canadian Foreign Policy:
Historical Readings, edited by J.L. Granatstein (Toronto: Copp Clark Pitman Ltd, 1993), 229. Cabinet
68 Sean Maloney, Canada and UN Peacekeeping: Cold War by others means (St. Catherines, ON: Vanwell,
2002), 88. Tisdall, 28 July 1960, DHH, NPCC papers, 79/246, folder 62. I would like to thank Ken
Reynolds for sharing this information on the RCN’s preparations for the Congo with me.
Rayner wanted to give the RCN a more versatile capability, but Tisdall was attempting to advance the Chief of the Naval Staff’s schedule by placing the general-purpose frigates ahead of the submarines. Rayner was not receptive to this idea. Things did not look good for the submarines but the Chief of the Naval Staff recognized that the situation was far from hopeless. He was right. Correspondence between Defence Cabinet insiders revealed that there was actually a “consensus of opinion” supporting the creation of a submarine service. The problem was that the Prime Minister and some key ministers were nervous and would need persuading. Simply put, it was neither the right time to push for a decision nor a good idea to show indecision by advancing new platforms such as the General Purpose Frigate or commando carrier.\(^69\) While it was annoying to see the Cabinet dithering over the submarines, Rayner’s best option was to be patient and alleviate his political masters’ concerns the best he could.

Rayner had to meet three conditions before the Cabinet Defence Committee would agree to make a decision on building Barbels in Canada. First, they wanted a guarantee that SACLANT would consider submarines an acceptable alternative to escort ships for the RCN’s force goals. Second, it was suggested that other allied submarines be explored to assess their suitability to meet the RCN’s requirement. And finally, the RCN was to prepare a paper intended for public consumption explaining why the nation needed submarines.\(^70\) The nature of these demands indicated that some politicians were afraid of how Canadians would receive the submarines while others were mistrustful of the navy itself. In either case it was clear that Rayner had his work cut out for him.

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Rayner wasted no time in meeting these conditions. He had a good idea that SACLANT, Admiral R.L. Dennison, USN, would accept the submarines for his forces. Shortly before stepping down as Chief of the Naval Staff, DeWolf had specifically told Rayner that Dennison actually required anti-submarine submarines more than surface escorts. After observing that he was most “anxious to commence our own submarine building program,” Rayner simply explained to SACLANT that he needed help in assuring the Canadian government that these vessels would be accepted “on a one-for-one basis as replacements for worn out A/S escorts.” Nor would it be difficult to show that the navy had been right in their original decision to single out the Barbels and Oberons as the top two contenders for the submarine program. A staff study comparing conventional submarines in other allied navies (which consisted of the French Daphne, Dutch Dolfijn, Danish Delfinen, and West German type 23) left no doubt that they were inadequate for the RCN’s needs. Rayner’s staff also found it easy to write the summary justifying submarines to the Canadian public. The navy made no effort to try to remake the submarine’s image. It was an evil weapon in the hands of an “aggressor.” And it was for that exact reason that Canada would not only have so much to fear from nuclear powered and armed Soviet submarines, but it also explained why the RCN had to have submarines of its own to protect the country from this extreme threat. All of Canada’s allies had come to accept the value of “defensive” submarines and it would be reckless and negligent if Canada did not do the same.72

71 Rayner to Dennison, 15 September 1960, DHH, Rayner Papers, 99/31-IB-34.
72 Draft memo for Cabinet Defence Committee, 8 November 1960, DHH, NPCC Papers, 79/246, file 175. Of course, the fact that the American’s George Washington class was currently the only nuclear propelled and armed submarine was not mentioned.
Such arguments may have made a convincing case for Canada acquiring submarines in general, but the new minister of national defence, Douglas Harkness, was not certain that the Barbel was a better option than the Oberon to meet Canada’s particular needs. Soon after becoming minister on 10 October, Harkness made an unsolicited suggestion to Rayner that he should consider “a programme of constructing OBERON Class submarine in the UK… together with the possibility of building at the same time, some surface A/S vessels in Canada.” Rayner was in a difficult position. He wanted the Barbels, but he could not risk dampening the new minister’s obvious interest in the Oberons as well as his willingness to jump-start the ship replacement program. Carefully probing the situation, Rayner – wanting to see how much Harkness was willing to spend – advised the minister that the RCN could get six Oberons and four ASW frigates for $164 million. Although Rayner continued to plug the Barbel as the “superior submarine” it was clear that he realized that the minister was not impressed with its cost:

In summary, the proposal to obtain OBERON type submarines from the UK whilst building A/S frigates in Canada is most attractive from the financial point of view, and would provide the RCN with more A/S vessels, albeit with a somewhat reduced A/S capability… six BARBEL type submarines would by 1968, make the most effective long term anti submarine contribution to NATO and the RCN, but as an alternative, six OBERON type boats built in UK and four ASW Frigates would be a valuable contribution to Canadian A/S Forces.

Rayner was wisely hedging his bets. If accepting the less capable Oberon was the price for establishing a Canadian submarine service it was one that he was more than willing to pay.

74 Rayner to Harkness, 27 October 1960, DHH, Rayner Papers, 99/31-IB-34.
The fact that the minister had specifically mentioned the ASW frigate was also encouraging, but Rayner wanted to take advantage of this opportunity. It was easier said than done. While the design was virtually complete, troubles with the main machinery ensured that it was not in a state where it could be handed over to a shipbuilder. Unlike DeWolf, Rayner had been more accommodating to the idea of changing the design. Proving his predecessor’s instincts correct, Rayner’s flexibility had come back to haunt him. The attempt to increase the ASW frigate’s speed through the unique combination of diesel engines with gas turbine boost was turning out to be more complicated than first believed. Worse yet, this renewed interest in the design, combined with the fact that it was already experiencing delays, lead to another campaign to pursue a more versatile armament package.

Extensive study had shown that fitting a 3-inch-50 twin mount or a 57 mm gun was “out of the question for the ASW frigate in its present configuration.” The only surface to surface weapon that could possibly replace the Sea-cat, which was the point defence missile currently being considered for the design, was the smaller 40-mm L70 Bofors gun. The problem was that substituting a gun for the Sea-cat would leave the design vulnerable to air attack. Little had changed since April 1960 when the staff last looked at changing the weapon system. No matter how they cut it, the ASW frigate was simply trading one capability off for another. Rayner wondered whether his staff was looking at this problem from the right angle, and asked them to consider if the Sea-cat could double as a surface to surface weapon. Tisdall believed that this might be possible, but it would require further study that would only delay the design further. Rayner

75 Commodore F. Freeborn NCC to CNTS, Ship Characteristics – Staff Requirements, 23 December 1960, LAC, RG 24, Accession 1983-84/167, Box 4031, file 8885-300 vol. 2.
agreed, telling Commodore Brock that “I believe that any surface ship we build should have a surface to surface capability as well as a limited surface to air capability.” The Chief of the Naval Staff’s comments were “most interesting” to the officers who had been working on Tisdall’s 8 August request for a General Purpose Frigate. It was impossible to work a surface to surface capability into the design without enlarging the ASW frigate’s size. But the General Purpose Frigate that they were developing for Tisdall would come much closer to giving Rayner what he wanted.

Although Rayner was not prepared to give up on the ASW frigate, external events involving Canada’s key allies once again forced the Chief of the Naval Staff to re-evaluate the logic of constructing specialized ASW ships. The election of John Kennedy in November 1960 signalled that important change involving American strategic concepts was on its way. Pre-election comments suggested that Kennedy was going to move America away from its reliance on massive retaliation. Fidel Castro’s 1959 communist revolution in Cuba and the Congo crisis the following year had once again exposed the need for a more flexible doctrine that could respond to limited war situations. The idea that America was relying exclusively on its nuclear arsenal to keep the Soviets in check scared Kennedy and his defence secretary, Robert McNamara, because as historian George Baer has observed, it left “no room for controlled response and negotiated pauses.” To alleviate those concerns, Kennedy and McNamara would develop a new doctrine, known as flexible response, which placed greater emphasis on the ability of

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76 NPCC meeting, 9 December 1960, DHH, NPCC fonds, 79/246, folder 52.
77 Brock (ACNS A&W) to VCNS, 7 December 1960, DHH, NPCC fonds, 79/246, folder 52; Rayner minute note, 20 December 1960, LAC, RG 24, Accession 1983-84/167, vol. 4027, file 8885-FFE/A.
78 Baer, One Hundred Years of Sea Power, 375.
conventional forces to defuse global crises. Other allies, such as Britain, were also increasing their ability to respond to limited war and peacekeeping situations. Exactly how much these events influenced Rayner is unclear, but there is no doubt that a request from SACLANT asking the RCN to include guided missile destroyers in its force structure played a significant role in changing his attitude towards the ASW frigate.

The guided missile destroyer (DDG) was a relatively new concept. The first guided missile destroyer was started in 1955 when the USS Gyatt, a Gearing class escort, was sent to the shipyards to have a medium range missile system fitted. Completed in 1957 and reclassified as DDG 1, the Gyatt underwent three years of testing and evaluation work. Gyatt was not a particularly successful design, but the knowledge gained from this experience was invaluable to the USN’s first true guided missile design, the Charles F. Adams class, which was commissioned on 10 September 1960. The Adams’ ability to deal with jet aircraft and cruise missiles while at the same time performing other escort duties made it a much more popular concept compared to the USN’s specialized ASW escorts. In many ways, it was even revolutionary, making the 1916-ton, 21.5 knot Claud Jones class (which was much like the other specialized ASW warships the USN was building in the 1950s) virtually obsolete as they came off the slips.

With characteristics similar to the RCN’s ASW austerity frigate, the Claud Jones was an uninspired design but it did have one redeeming quality: it was cheap and could be mass-produced in times of emergency. SACLANT, however, was not looking for these types of ships from the RCN, and given the fate of the unsuccessful Claud Jones class (which lasted barely fifteen years before being transferred to the Indonesian navy in 1973) it was

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80 Grove, Vanguard to Trident, 245.
fortunate, perhaps, that Dennison turned Rayner’s attention away from the ASW austerity frigate.\footnote{Muir, \textit{Black Shoes and Blue Waters}, 80, 87-89.}

Having calculated his anticipated 1966 force goals, SACLANT informed Canada that the RCN would need to add nine submarines and eight guided missile destroyers to the NATO command.\footnote{DNP to ACNS (P), 20 January 1961, DHH, Joint Staff fonds, 2002/17, file 119, folder 2.} Given that the RCN had neither submarines nor guided missile destroyers in its current fleet, Dennison was, in reality, committing Canada to a new force structure. At least one modern scholar has greeted this request with suspicion, arguing that the Naval Staff got SACLANT to propose a fleet that they themselves wanted.\footnote{Michael Hennessy, “Fleet Replacement and the Crisis of Identity,” 149.} The idea of Canadian officers using SACLANT in this manner might sound far-fetched but it did have a precedent. The call from SACLANT for the RCN to acquire a second aircraft carrier in November 1958 was undoubtedly the product of a Canadian naval aviation officer who used his position with the NATO command to his advantage. Incidents of this nature suggest that SACLANT’s request had originated from within the RCN, the more so since there were officers at Naval Headquarters, such as Tisdall and Charles, who were actively pushing for a guided missile destroyer capability (which the General Purpose Frigate would have provided). It is equally difficult to ignore the fact that Canadian staff studies produced prior to Dennison’s request just happened to argue that the RCN needed nine submarines rather than the six Rayner was currently pursuing. Yet, while it is almost certain that Canadian officers serving with SACLANT were telling Dennison about developments in Ottawa (as was their duty), a closer examination of the events surrounding the request strongly suggests that there was little or no collusion.
Dennison wanted guided missile destroyers and submarines from all the allies and not just the Canadians. It was through the process of assessing his new force goals that SACLANT discovered his command desperately required “37 nuclear (POLARIS) submarines, 38 nuclear submarines of other types, 193 guided missile destroyers” and additional maritime patrol aircraft. This leaves little doubt that it was SACLANT, and not the backdoor machinations of Canadian naval officers, that led to the request for Canada to acquire more submarines and guided missile destroyers. While it is clear that Dennison was not being used as a pawn for the Naval Staff’s ambitions, it is possible that he tailored the RCN’s figures based on what some Canadian officers at his headquarters reported their nation could supply. For instance, although the totals assigned to each country was based on a complex formula, the fact that Dennison asked Canada to provide conventional rather than nuclear submarines strongly suggests that he modified his demands to meet Canadian conditions. While this would also explain how SACLANT’s submarine allocation exactly matched the RCN’s own requirements, Rayner nonetheless wanted to know how his officers had arrived at this figure. As the Vice Chief explained:

I understand that you wish to know how it was established that we should require a total of 9 submarines. In January 1958 Sea/Air Warfare Committee were concerned by a shortage of submarines for the training of surface ships and aircraft. As a result, a paper was prepared which (worked out on a basis of the maximum hours at sea, one submarine can do per annum) showed a shortage of 9.74 submarines over the 3 provided by the Sixth Submarine Squadron… Our agreed SACLANT force goal is 43 escorts, which is a fairly flexible figure depending on the mood of the Government at the moment. When it came to a question of force goals being met by submarines on an equal basis with surface ships, it was considered by the former CNS [DeWolf] and myself that we should not have more than 1/5 of the total fleet in submarines. …the figure of 9, which is close to 1/5 of the force goal, would be about right to begin with.84

84 Tisdall to Rayner, 7 November 1960, DHH, NPCC Papers, 79/246, file 175.
Like the submarines, there is also strong evidence that SACLANT reduced the number of guided missile destroyers assigned to the RCN because of “Canada’s preference to remain a predominantly A/S [anti-submarine] force.”

SACLANT’s figures – which were the product of a 22 September 1960 decision by the North Atlantic Council to re-evaluate the Alliance’s needs – were also significant because they were far above anything that either the air force or army were asked to do. The fact that Dennison was focusing on two specific ship types (and in such overwhelming numbers) was an obvious indication that he was trying to correct particular capability gaps in the fleet. While the need for more anti-submarine submarines was acute, the requirement for air defence ships was worse. The development of long-range Soviet jet aircraft, cruise missiles, and other new technologies had put SACLANT in an awkward position. His fleet was suddenly vulnerable to air attack and it was a threat that could only be met through the combination of friendly fighters and surface ships armed with guided missiles. Dennison was aware of the RCN’s decision not to replace *Bonaventure’s* Banshees with another fighter, and it was for that reason he began to pressure the RCN to consider guided missile destroyers well before he transmitted his new force goals to Ottawa in January 1961.

In some measure the development of the guided missile destroyer was a phenomenon that all blue water navies had to address. Larger fleets, like the British, French, and American, could afford both carried-based fighters and guided missile ships. Smaller navies, however, found it difficult to support the two capabilities and that often led to intense debates over air defence. The Royal Australian Navy (RAN) faced this

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86 DNP to ACNS (P), 24 November 1960, DHH, Joint Staff fonds, 2002/17, file 148.
exact challenge in 1960. According to historian Alastair Cooper, the RAN, like the RCN, was “discovering a peculiar sensitivity” to rapid developments in naval technology. They, too, had a Majestic class aircraft carrier, and were exploring ways to either replace or supplement its air defence capability. Their initial conclusion – which was to build twelve guided missile destroyers that could provide the full measure of surface, air, and sub-surface protection – echoed the recent consideration being paid to the General Purpose Frigate in the RCN. But the true significance of these similarities is that they show that the RCN was not alone in its attempt to deal with the new air threat. In fact, the parallels went beyond just surface units, as the Australians further mimicked the Canadian experience through their exploration of acquiring the A-4 Skyhawk attack fighter.

As early as 1957 it was widely accepted that the A-4 was the most likely candidate to replace Bonaventure’s Banshees. While DeWolf had subsequently decided not to maintain the RCN’s fighter wings after 1962, a staff study that was presented to the Naval Board on 18 January 1961 sought to re-examine that decision. Entitled “An Appreciation on Future Requirements for Air Defence in the RCN,” this document found that the RCN had to deal with the impact that Soviet reconnaissance planes would have on NATO’s ASW effectiveness, as well as the threat of direct attack to surface ships from bomb and missile-carrying aircraft. There was also a requirement for police actions as Soviet-supplied Third World air forces could create an air threat that would be just as dangerous. Numerous recommendations were made, including the possible acquisition of

guided missile destroyers, but it was the idea of retro-fitting point defence missile systems into existing ships as well as procuring carrier-based fighters that caught the Naval Board’s immediate attention. 88

By claiming that it was “unsound” to limit operations to areas where the air threat was low, the report was actually telling Rayner that his predecessor’s policy of relying on allies to provide for the RCN’s air defence needs was seriously flawed. But Rayner’s willingness to explore this argument actually proved DeWolf’s instincts correct. A lack of funds had forced DeWolf to make some tough and unpopular choices, and he was aware that there were aviation enthusiasts at headquarters who would be disappointed that he had placed the air defence needs of the fleet on the backburner. Such officers had a narrow view of the RCN and would advocate the acquisition of more carriers and A-4 fighters no matter how much the navy’s budget was cut. Although he probably admired their devotion, DeWolf knew that there was only one way to deal with these officers. He had to remain firm and not buckle to their pressure. Unlike DeWolf, however, Rayner effectively opened the floodgates the moment he agreed to re-examine the issue. The same was true for the ASW frigate. SACLANT’s request for air defence ships had given Rayner good reason to explore other options, but such wavering further encouraged individuals, like Tisdall, who wanted the RCN to acquire guided missile destroyers sooner rather than latter.

SACLANT’s force goals, which were presented to the Chiefs of Staff Committee in mid January 1961, were not popular with the chairman Air Marshal Frank Miller who told his chiefs that it was “unreasonable” to increase the size of the RCN by 8 guided

88 Naval Board Meeting, 18 January 1961, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 1; “An Appreciation on Future Requirements for Air Defence in the RCN,” 6 January 1961, DHH, Rayner Papers,
missile destroyers and 9 submarines. Moreover, since SACLANT had not provided any type of explanation along with the request, Miller did not understand why the RCN was suddenly being asked to add a new type of warship to its arsenal. “Canada has an anti-submarine navy,” Miller observed, and further expounding on his position he “felt we would be participating in striking fleet activities if we were to provide guided missile destroyers.” Rayner was fully committed to the RCN remaining an ASW force, but he explained Dennison’s argument to Miller: no navy could perform this task well without protection from air threats. In fact, Dennison’s case was so persuasive that Rayner was now “of the opinion that a new destroyer class would be required shortly in the RCN, combining both the anti-submarine and air defence functions.” And with that the ASW frigate started to slip into obscurity.

There is little doubt that it was Dennison’s request for guided missile destroyers that had the greatest impact on Rayner’s attitude towards the ASW frigate. As a man of integrity it was important to Rayner that the RCN live up to its alliance obligations, and in time the Chief of the Naval Staff would develop an almost obsessive desire to keep Canada’s promises to SACLANT. Messages from NATO that “the mutual security of the nations of the alliance and perhaps their very existence demands that all member nations provide the required forces and equipment” appealed to Rayner’s sense of duty. With an almost religious fervour, Rayner passed his first test of faith to SACLANT through his willingness to sacrifice the ASW frigate. In many ways it is hard to blame Rayner for making this decision. Between the Congo, Tisdall’s influence, SACLANT’s needs, and

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99/31-II-19, Box 7.
89 CCOS Meeting, 19 January 1961, DHH, Raymont Papers, 73/1223, Box 63, file 1310E.
90 Joint Staff Memo, 26 October 1960, DHH, Joint Staff fonds, 2002/17, file 147, folder 2; NATO Paris to External, 30 November 1960, DHH, Joint Staff fonds, 2002/17, file 148.
the recent Air Defence Study, Rayner was being bombarded by the message that it was
time to consider a new ship concept. As was explained at the 18 January 1961 Naval
Board meeting:

The advisability of planning the building of such a specialized ship at the present
time was questioned. The RCN had concentrated for some years on specialized
anti-submarine ships. The view of the possible acquisition of anti-submarine
submarines and the fact that the Tribal class destroyers were rapidly ageing, it
would appear that there was a requirement for a ship capable of acting in support
of the RCN’s commitment to the United Nations.91

With the ASW frigate all but cancelled, Tisdall quickly directed the Naval Board’s
attention to the group he had working on the characteristics for a General Purpose
Frigate. While this team had not yet developed a firm sketch, the Naval Board was
informed that they were developing an anti-aircraft platform with surface and sub-surface
capabilities which was to cost no more than $ 30 million.

The ASW frigate had had a surprising degree of support from the Naval Policy
Co-ordinating Committee as well as Naval Staff levels, and as a result not everyone was
happy with the move towards developing a General Purpose Frigate.92 Most objected to
the concept on practical grounds. Earlier comments on the Dutch Navy’s work on the
“NATO Frigate,” which was a parallel design to the General Purpose Frigate, bears this
out.93 The RCN had kept close tabs on the NATO Frigate throughout 1960 because it
was “felt that certain aspects of this concept would be of considerable value in the
determination of our own requirements.” The consensus at that time, however, was that
this design was totally impractical. According to the Naval Constructor in Chief’s

91 Naval Board meeting, 18 January 1961, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 1.
92 Sam Davis, Fourth Study: The General Purpose Frigate, nd, DHH, Davis fonds, 2001/36, 209-211
93 Memorandum, 30 October 1959, LAC RG 24, Accession 83-84/167, Box 4031, file 8885-300, vol. 2.
The characteristics of the NATO frigates were: 5000 NM at 18 knots, 3300 tons, helicopter flight deck and
hanger to operate one ASW weapon delivery helicopter, combined steam and gas turbine propulsion, at
calculations, fitting a weapons package to accommodate the anti-aircraft, anti-surface, and anti-submarine roles would actually require a 4,860-ton design rather than the 3,300 tons assigned to either the NATO frigate or the initial concepts of the Canadian General Purpose Frigate. Given the similarity between the two designs, comments about the NATO Frigate – such as those claiming it was “merely a ‘fancy’ set of characteristics without regard to feasibility” or would lead to a “very good but very expensive ship” – would ironically apply to the new Canadian General Purpose Frigate. 94 Others were critical of the multi-purpose concept itself, arguing that “the feasibility of meeting all contingencies in one hull appears debatable, particularly from the financial point of view.” 95

Officers who believed that the RCN’s future lay in flying large ASW Helicopters off destroyers were particularly suspicious of the General Purpose Frigate’s ability to meet all the RCN’s “contingencies.” The marriage of the heavy helicopter to the destroyer escort (establishing the DDH type) was a revolutionary development in ASW operations, and it was one in which the RCN was playing a leading role. 96 After the successful completion of feasibility trials on HMCS Buckingham and HMCS Ottawa, the RCN – recognizing the tremendous potential of this concept – began a conversion program that would see the entire St. Laurent class fitted with a hangar, flight deck and

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94 L. Atwood (DNI) to Colonel Cathcart, NATO Steering Group, 28 April 1960; G.C. Edwards to DNI, 3 March 1960; J.S. Vigder (DOR) to D/ACNS (A&W), 29 February 1960; G.C. Edwards to NCC, 18 December 1959, LAC, RG 24, Accession 83-84/167, Box 4031, file 8885-300, vol. 2
95 LCdr L. Walker (Secretary Ship Characteristics Panel) to D/ACNS (A&W), 24 February 1960, J.H. MacLean (Director of Action Information and Navigation), 29 December 1959, LAC, RG 24, Accession 83-84/167, Box 4031, file 8885-300, vol. 2.
96 For more information on the development of the DDH concept see: Sean Cafferky, *Uncharted Waters: A History of the Canadian Helicopter-carrying Destroyer* (Halifax, Centre for Foreign Policy Studies, Dalhousie University, 2005).
aviation facilities. More vocal advocates of the DDH concept were not satisfied. In their view, the RCN needed to build as many DDHs as possible and a program of guided missile destroyers would do little to further this aim. This was true. The only way to accommodate a gun, as well as short and medium range missile systems in a 3,300 ton General Purpose Frigate was to keep the helicopter requirement to a bare minimum. Equipped only with a small utility helicopter, the General Purpose Frigate could never perform the functions of a true DDH. Nor could the RCN simply add the latter facilities to the General Purpose Frigate – which would involve fitting a large hangar and landing deck to accommodate the heavy CHSS-2 Sea King Helicopter – because it would turn the frigate into an unacceptable cruiser design of 10,000 tons.97

A cruiser was actually the type of vessel that the RCN should have been pursuing to meet its anti-aircraft, anti-surface, and anti-submarine needs, but few naval officers believed that their political masters would ever support such a large vessel. This left the RCN with two options when it came to providing the fleet with guided missile and heavy helicopter capabilities: it could either build General Purpose Frigates or more DDHs. Unhappy that the RCN had abandoned the helicopter carrying ASW austerity frigate, a group of DDH supporters quickly submitted a new set of characteristics in an attempt to pre-empt the General Purpose Frigate. Although it would have a 5-inch-54 gun added, this new platform was remarkably similar to the ASW Fast Frigate as it called for a ship with a close range Mauler missile system for self-defence and a hanger to accommodate two CHSS-2 Sea King helicopters.98 The Director of Naval Ship Requirements, Captain

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97 Extract from First Sea Lord’s Letter 21 December 1960, DHH, NPCC fonds, 79/246, File 100. Attempts in the United Kingdom to develop a DDH with air-area missile systems and shore bombardment capabilities had resulted in large cruiser designs of some 10,000 tons.
98 Sam Davis, Fourth Study: The General Purpose Frigate, DHH, Davis fonds, 2001/36, 209-211
A.B. Fraser Fraser-Harris, was worried. The General Purpose Frigate was in its formative stages and it was already experiencing internal opposition. His solution to quashing this resistance was brilliant. The RCN would go ahead with the General Purpose Frigate to meet its requirement for a guided missiles destroyer, but to satisfy the DDH proponents a follow-on program of “helicopter ships” would also be developed. Both designs would be based on the Restigouche hull, but it was envisioned that the helicopter ships – or heliporters as they became known – would carry nine Sea Kings in place of the general purpose frigates’ medium range missile system and gun. The importance of this difference separating the two designs cannot be overstated. Neither could be built within the confines of the Restigouche’s hull, and in time both would grow substantially.

Fraser-Harris wasted no time in building a consensus for a plan to build two consecutive programs of General Purpose Frigates followed by Heliporters. The Director of Naval Ship Requirement’s argument was simple but effective. Without both ship-types the RCN would not be able to satisfactorily meet either its primary ASW mission or the emerging requirement to respond to limited war situations and air threats. In many ways, the General Purpose Frigates and Heliporters shared a symbiotic relationship that split the capabilities usually assigned to a cruiser into two smaller ships. While the General Purpose Frigate was primarily an anti-aircraft ship that could hunt submarines, the Heliporters would be an ASW vessel that could use its helicopters to ferry troops ashore. Although Tisdall had serious reservations about either concept fitting into a Restigouche hull, Fraser-Harris’s argument was accepted as warranting further study –

99 DNSR (Fraser-Harris) to NCC, 31 January 1961, LAC, RG 24, Accession 1983-84/167, Box 4028, file 8885-1 vol.4; Sam Davis, Fourth Study: The General Purpose Frigate, DHH, Davis fonds, 2001/36, 209-
explaining why the Naval Constructor’s office was “now lending its energies to the
sketch of a General Purpose Frigate and a Helicopter Ship.” 100 But the real test came
when Fraser-Harris was to brief the Naval Board on his ideas at the 21 April 1961
meeting.

Fraser-Harris was anxious. He had a unique opportunity to shape the RCN’s
future force structure, and, perhaps because of that, one officer who accompanied him
remembered “being forced to wait while [Fraser-Harris] (in somewhat unusual fashion)
paid a nervous trip to the washroom in preparation for his ordeal.” 101 Despite these
jitters, Fraser-Harris did a good job with the General Purpose Frigate. However, he went
too far with the Heliporter. The current plans to convert the St. Laurent class into DDHs
would place a small number of helicopters into a large number of ships, and as a result
Fraser-Harris argued that the RCN actually needed a “helicopter carrier” to support these
smaller units. By lengthening a Restigouche hull to 420 feet, he explained further, this
platform could not only carry nine Sea King helicopters, but also could act as a mother
ship with proper maintenance facilities “for other aircraft in the escort force.” Yet in
proposing such a ship, Fraser-Harris revealed that he actually wanted the Heliporter to be
a small flattop aircraft carrier rather than a helicopter-carrying frigate. Rayner balked.
His goal was to get political approval for a realistic ship replacement program as quickly
as possible. This was not going to be an easy task, explaining why the Naval Board
concluded that “to introduce the helicopter carrier would further complicate the
combination of ships required, and was not considered justified at this time.” In the end it was decided that the navy would push ahead with the General Purpose Frigate while detailed planning for the Heliporter frigate would be temporarily put on hold.\textsuperscript{102}

Rayner was wise not to ask for too many ships at the same time. As was evidenced in his 8 May 1961 memo on the “Naval Shipbuilding Policy,” the Chief of the Naval Staff already believed that he had his work cut out for him. This memo, which sought to explain the RCN’s new requirements to the minister and Chairman Chiefs of Staff, represented Rayner’s first attempt to sell the virtues of the General Purpose Frigates. His pitch represented a re-iteration of the points circulating around Naval Headquarters, namely, that SACLANT had specifically asked for guided missile destroyers and that ASW operations would suffer if the RCN could not respond to air threats. But the Chief of the Naval Staff also had a new argument. Rayner wanted his navy to be “a balanced anti-submarine force,” and he provided a formula through which this was to be achieved:

It is difficult to define in the varying circumstances that occur in sea warfare, the exact proportion of the various types of ship required in such a force. In the light of experience, however, it is considered that a reasonable balanced force for effective A/S operations in 1970 should be in the proportion of $3/5$ anti-submarine surface vessels, $1/5$ anti-submarine submarines and $1/5$ general purpose ships.\textsuperscript{103}

While this formula was logical, in some measure it was the product of convenience.\textsuperscript{104} Based on its NATO commitments, the RCN was expected to provide a fleet of 43 ships and applying the formula to this total produced a figure that matched the RCN’s requirement for 9 submarines and SACLANT’s request for 8 General Purpose Frigates.

\textsuperscript{102} Naval Board Meeting, 21 April 1961, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 1.
\textsuperscript{103} Rayner to Harkness, 8 May 1961, DHH, NPCC Papers, 79/246, file 100.
As for the remaining three-fifths of the fleet, the 7 St. Laurents, 7 Restigouche, and 6 Mackenzies left the RCN 6 ships short of the ideal number of 26 anti-submarine escorts, and that represented a gap that it was intended for the Heliporters to eventually fill.

While Rayner felt that this program of 9 submarines, 8 General Purpose Frigates and 6 anti-submarine escorts (heliporter frigates) was realistic, he did provide the minister with options:

Alternative A – Lay down and complete 6 Barbels Class Submarines by 1967, and then
Lay down and complete 6 General Purpose Frigates by 1970.

Alternative B – Acquire from the United Kingdom 3 Oberon Submarines by 1965
and lay down in Canada 6 General Purpose Frigates by 1966 and
On completion of the General Purpose Frigates, commence a building programme
of 6 Barbels to be complete by 1970.105

It was significant that that Rayner had returned to Tisdall’s original call for 6 General Purpose Frigates rather than the 8 that SACLANT wanted. So, too, was the fact that he included the same Oberons that Harkness had suggested be considered back in October 1960. Asking for so many ships at one time was going to make the new ship replacement program a hard sell and Rayner knew it. By presenting options and showing a willingness to be flexible, the Chief of the Naval Staff was laying the groundwork for negotiations that would not only involve the minister but also the other service chiefs as well.

Rayner has often been portrayed as a wooden and puritanical sort of figure who carried a bible under one arm and a telescope under the other, but a closer look at the way he handled the ship replacement program suggests that the Chief of the Naval Staff was a clever, congenial, and skilled negotiator. Comments from Rayner’s performance reports

104 Piers to Rayner, 20 June 1961, DHH, Joint Staff fonds, 2002/17, vol.1, folder 1. It is interesting to note that Piers found these figures were “roughly in proportion to SACLANT’s 1966 proposals.”
further bear this out and depict a man who was well suited to present the navy’s case. Although often characterized as “rather shy and retiring” in his younger years, later accounts found that Rayner simply had a “quiet and unassuming manner” that masked a “strong and resolute character” who was “single-mindedly devoted to the furtherance of the welfare of the Service. He thinks clearly and all his decisions are well thought out.” An ability to be “diplomatic” and “social” in his dealings with seniors, along with a “straightforward outlook,” gave Rayner a reputation of being an honest broker who “upholds the highest ideals of the Service.”\textsuperscript{106} These traits – which bought Rayner the political capital and credibility to negotiate from a position of strength – would come in handy, particularly since the memo on the Naval Shipbuilding policy had failed to convince the other service chiefs of the need for General Purpose Frigates.

That memo had not explained the navy’s case well. Senior officers in the air force were not impressed, and most shared Air Vice Marshal D.M. Smith’s conclusion that the General Purpose Frigates were “questionable in any ASW atmosphere.” Yet it was more than just the General Purpose Frigates that troubled the air force; Rayner’s entire shipbuilding policy paper simply did not make sense to them. His claims that he wanted to create “a balanced ASW force” seemed flawed because there had been no mention of naval aviation or the need for shore-based maritime patrol aircraft. As far as the air force was concerned, the navy appeared to be swimming against the current tactical trend of teaming up shore-based maritime patrol aircraft with friendly submarines. This was true, but the air force neglected to mention that they had only supported the submarines as a means to help them get more anti-submarine aircraft. The

\textsuperscript{105} Rayner to Harkness, 8 May 1961, DHH, NPCC Papers, 79/246, file 100.
General Purpose Frigates did little to further that aim. As a result, air force criticisms of the navy’s program were remarkably consistent: the submarines were a “sound” choice while the logic behind the Frigates was “pretty weak.”\textsuperscript{107}

The air force also had difficulty accepting the argument that the General Purpose Frigate would make an effective contribution to UN operations. Canada was simply too small to provide versatile naval forces, leading one senior air force officer to proclaim: “in the new general purpose ships being suggested there is no military argument to justify the undertaking by Canada.” The Vice Chief of the Air Staff (Air Vice Marshal Smith) agreed. While admitting that a UN role for the RCN “cannot be ruled out,” Smith suggested that “the probability of such an eventuality is so low as to provide very little substantiation for their programme.”\textsuperscript{108} Ironically, it was the belief that UN missions would be few and far between which accounted for Rayner’s desire to work a small measure of versatility into the RCN’s specialized ASW role through the acquisition of general-purpose frigates. With these ships, Rayner argued, the navy would get two capabilities for the price of one. Yet this logic did not resonate with the air force.

The Chairman of the Chiefs of Staff, on the other hand, had been oversold on the need for general-purpose forces, asking whether it was worth “looking into the future to see whether or not Canada should place less emphasis on specializing as an anti-submarine navy in an endeavour to gain more versatility for the fleet.” This was not what Rayner wanted. His navy was to remain an anti-submarine force and he had worked hard

\textsuperscript{106} Various performance (S206) on Rayner’s Personnel file, LAC, O-61345, (Date of Death (hereafter DOD) 30 May 1976).
\textsuperscript{107} AMTS (Air Vice Marshal J.A. Watson) to CAS, 16 May 1961, LAC, RG 24, Accession 1983-84/049, file 098-113.
to spell out how the general-purpose frigates were merely taking the place of the 1940s-vintage Tribal class destroyers. The navy he was planning was no different than the RCN’s Second World War escort fleet, which was also protected by destroyers capable of anti-aircraft support. The General Purpose Frigate was meant to provide anti-air defence “whilst retaining reasonable A/S efficiency,” indicating that Rayner was keen to see the RCN have more versatility providing that it did not come at the expense of the ASW fleet. The idea was a clever one. The General Purpose Frigate would spend the majority of its career supporting the anti-submarine fleet, but it would also answer the UN requirement should the RCN ever need it. This was not the way Miller was starting to see things. With the General Purpose Frigates’ UN role being pitched as an added bonus, the Chairman of the Chiefs of Staff began to wonder whether it would provide the RCN with enough versatility. That forced Rayner to defend his program from Miller’s sudden enthusiasm, explaining why the Chairman was told that the General Purpose Frigate would make the most useful contribution “should Canada be committed in the future to a United Nations role where naval support was a requirement.”

In some measure it appeared that the navy could not win. The General Purpose Frigate was too versatile for the air force while Miller did not think it was versatile enough, but to make matters worse the army threw a third interpretation into the mix. The Chief of the General Staff, Lieutenant General Samuel Findly Clark, was not prepared to reject the program; however, he was alarmed at the magnitude of its cost. He had a point. SACLANT’s request for the RCN to have its guided missile destroyers and submarines available by 1966 came with a $1.034 billion price tag. It was a ridiculous

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109 Naval Board Meeting, 21 April 1961, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 1.
110 Chiefs of Staff Committee, 18 May 1961, DHH, Raymont fonds, 73/1223, Box 63, file 1310E
amount, and even the navy was fully willing to admit that it was “an entirely unrealistic programme [that] could not be implemented except possibly in an extreme emergency.”\textsuperscript{111} By changing the target date to 1970 Rayner was able to cut the program’s cost dramatically. That was still not enough for Clark. Early estimates indicated that eight General Purpose Frigates would cost $256 million with another $297 million going to the submarines, and for Clark the combined total of the two programs still threatened to “chew up” a good portion of the defence budget.\textsuperscript{112} Yet the fact that Clark was not opposing the proposed program was encouraging. Other comments – such as Air Vice Marshal J.A. Watson’s conclusion that it “is a good shipbuilding programme, but no sound military argument had been advanced for its adoption” – were actually more promising than they first appeared. What they suggested was that the task of selling this fleet would be difficult but not impossible.\textsuperscript{113}

Rayner had foreseen both the criticisms from the other service chiefs as well as Miller’s misreading of the ship replacement program. As early as March 1961 he had come to realize that he would need more than just memos and meetings to win approval for such a large investment in the navy. What he wanted was a comprehensive report that justified the navy’s requirements and position through a thorough exploration of the service’s role in relation to Canadian defence policy. Once this was done, Rayner would then use the report as the centrepiece of his campaign to get final approval for the General Purpose Frigates, submarines, and heliporters. And it was for that reason Commodore Brock would get five senior officers, one civilian, and almost four months to

\textsuperscript{111} CNS to DM, 1 June 1961, DHH, 2002/17, Joint Staff fonds, file 163, vol.1, folder 2
\textsuperscript{112} Lieutenant General Clark (Chief of General Staff) to CCOS, 5 June 1961, DHH, NPCC fonds, 79/246, file 93.
complete this report. The members of Brock’s committee were screened carefully. The four executive and two technical officers assigned to this task were all supported by their staffs at Naval Headquarters, allowing them to draw on a diversity of knowledge and experience. Better yet, these officers already held similar views to the Naval Board which, it was observed, was “in full agreement that the Navy’s anti-submarine role is of continuing primary importance and is also in accord with the concept developing greater versatility in the Fleet wherever this can be done without abrupt changes in policies affecting personnel, ships or equipment.”

Brock was a good choice to head the committee. Already designated as the next Vice Chief of the Naval Staff, Brock would be the one working with Rayner to sell the new replacement program when Pat Tisdall was finally allowed to retire in July 1961. It also helped that he shared Rayner’s outlook of creating an ASW force that was mixed with a measure of versatility. There was one other reason why Brock was chosen over more senior officers to become the Vice Chief. The program was not going to be popular with everyone in the navy. In particular, the naval aviators were bound to be disappointed. Rayner believed that the fleet of six heliporter frigates could fulfil the role currently assigned to Bonaventure, and as a result he had no intention of replacing her with another carrier once she reached the end of her operational life in the mid-1970s.

114 Jeffery Brock, The Thunder and the Sunshine (Toronto: McClelland and Stewart, 1981), 79-80. Although Brock took credit for the idea of the Brock Report the evidence suggests otherwise. Rayner made it clear that he wanted Brock to justify the fleet he was planning to build.
115 Commodore Piers’ Copy, Appendix A, nd, LAC, RG 24, Accession 1983-84/167, Box 151, file 1279-162.
116 Tisdall was going to reach retirement age on 29 October 1961 which meant that he would have started his rehabilitation leave on 18 February 1961. When Rayner first became CNS he asked that Tisdall stay on past his retirement date “to provide the important element of continuity.” Rayner to Minister, 12 August 1960, LAC, P Tisdall Personnel file, file O-73490 (DOD 19 March 1965).
This possibly explains why the naval aviators had absolutely no representation on Brock’s committee. The Chief of the Naval Staff had already decided that the age of the carrier in the RCN was coming to a close and “Brimstone” Brock’s heavy hand was required to ensure the navy spoke with one voice. Brock understood his role well. Rayner was not a bully, but Brock was. And in his own words the “CNS was fully aware of the sense of urgency I felt about improvements for the future and was also aware of the many difficulties in the way of achieving agreement within the navy itself. I imagined this was why he had decided to promote me to the job of Vice Chief.”

Brock did exactly what Rayner wanted him to do. By their sixth planning meeting on 30 May, the committee was already calling for Bonaventure to be paid off at the earliest convenience so as to make room for the six Heliporter frigates. This was the product of the committee’s unanimous support of the “cheap and many” concept which suggested that it was better to have six “helicopter-carrying frigates rather than another aircraft carrier.” Not surprisingly, the only voice of concern came from the lone civilian member of the committee, William Ford, who found that “the whole question of air power in maritime warfare has not received adequate attention.” Carrier aviation was indeed being deliberately targeted, and it was ironic that Brock was helping destroy a branch of the service that he, himself, had worked so hard to build. In fact, as early as

\[^{117}\] There were thirteen officers with more seniority than Brock. Not all were qualified to become CNS and others were soon due for retirement.


\[^{120}\] Minutes of the Sixth Meeting of the Ad Hoc Committee on Naval Objectives, 30 May 1961, LAC, RG 24, Accession 1983-84/167, Box 151, file 1279-160; William L. Ford, Memorandum to Members of Ad Hoc Committee on Naval Objectives, 10 July 1961, LAC, RG 24, Accession 1983-84/167, Box 151, file 1279-162.
February 1950, Brock had actually argued that a second carrier should be acquired because, “the air branch is in danger since it is attacked by some as an infringement of their rightful sphere of operations. One direct attempt to discount the Air Branch had been turned back, but it is almost certain that further attacks will develop.”121 There was more. While serving as the naval member to the Joint Staff in London, Brock had taken a personal interest in the work that was being done to Bonaventure in Belfast prior to her transfer to the RCN in 1957. Despite this apparent support for carrier aviation, Brock would find himself singing an entirely different tune in his report.

This remarkable transformation in Brock’s attitude towards the carrier is not difficult to explain. Within his memoirs Brock suggested that he was never a supporter of the carrier but rather was a firm believer in the anti-submarine helicopter. Up until the late 1950s the carrier was the only platform that could accommodate helicopters. But Brock instantly became a disciple of the DDH once the bear-trap haul-down system – a wire that guided the aircraft to the deck and a concept that Brock claimed as his own – married the helicopter to the destroyer. And when that occurred, Brock suddenly saw the carrier as nothing more than an overpriced landing platform.122 There was also the fact that Brock was simply following orders. Although he had worked hard (mostly through his memoir) to portray himself as the architect of Rayner’s fleet, the reality was that he was merely a servant who was doing as he was told.

On 31 July, Brock and his committee delivered. The report was exactly what Rayner needed. The first five chapters consisted of a general dissertation on the role of sea power in the nuclear age, the problems of Canadian defence, and the role of the RCN.

121 “Naval Developments Carrier Requirements,” 9 February 1950, Appendix A to Naval Staff Meeting, 7 March 1950, DHH, RCNHS fonds, 81/520/1000-100/2.
Condensing a year’s worth of discussion and consideration into 127 pages, the report observed that the RCN had been forced to re-examine its force structure because of changing strategic concepts as well as revolutionary technical developments in naval warfare. More to the point, however, it was explained that “Naval policy derives from Government defence policy” and since the politicians were taking such an interest in limited wars the navy felt it had to do the same. The trick was to explain how this was to be done without making any sacrifices to Canada’s ASW alliance commitments. The report therefore used its last three chapters to spell out the requirements for the ideal fleet:

8 GPF (to replace the Tribals)
6 Barbel class submarines
6 other submarines (possibly nuclear)
12 ASW Frigates carrying helicopters (to replace Bonaventure)
2 Arctic Patrol vessels
2 tankers
Crusader conversion
floating docks
improvement program (VDS and Helicopters) for DDEs
1 submarine depot ship
1 fleet issue ship

It was a totally unrealistic program that would have cost a ridiculous sum. This paper fleet, however, was never meant to sail. Instead, by identifying the ideal force structure Rayner would use the Brock Report as a tool to acquire the fleet that he was actually pursuing. In some measure Brock had produced the smoke and mirrors that suddenly made Rayner’s program (8 GP Frigates, 6 A/S Heliporter frigates, 6 Barbel submarines as
well as a new call for 3 nuclear submarines) look much smaller.\textsuperscript{124} It also gave Rayner
the appearance of being flexible when he pitched this fleet to his political masters.

For many naval historians the Brock Report represented the most blatant
manifestation of the RCN’s long-standing desire to acquire a large, well-balanced, multi-
purposed navy. As a result, Rayner and his senior staff tend to get tarred by an academic
brush that paints them as obstinate, impractical, and politically inexperienced.\textsuperscript{125} Not
only do such interpretations represent a misreading of the report’s purpose, but also
opinions offered at the time by third parties suggest that it was actually successful in
achieving its primary aim. With the possible exception of Brock, no one actually
believed that the fleet outlined in his report would ever get built. As Rayner explained to
Harkness, Brock’s force structure was not a plan but only could be accepted as a guide,
and that the “Naval Board considers that the report can be of great value in promoting an
understanding of the Navy’s purpose and objectives.”\textsuperscript{126} The distinguished defence
research scientist, Dr. R.J. Sutherland, fully agreed:

The basic idea behind the programme is that while maintaining primary emphasis
upon the anti-submarine role the RCN should as opportunity permit develop
greater versatility and flexibility. This involves backing off from more super-
specialized ships such as the Restigouche class… The Report should not be
regarded as providing a “plan” but rather as establishing a general objective
towards which the RCN can work during the next ten years or so… Nevertheless
this Report should prove of the greatest value. It provides the RCN with a general
objective which is logical and sensible. The general concept of developing
greater versatility without making an abrupt shift seems to be extremely sound.\textsuperscript{127}

\textsuperscript{124} Ship Replacement and Improvement Program, September 1961, DHH, Rayner papers, 99/31-IB-35 and
Ship Replacement Improvement, 12 September 1961, LAC, RG 24, Accession 1983-84/167, Box 3549, file
\textsuperscript{125} Milner, Canada’s Navy, 230.
\textsuperscript{126} Commodore Piers’ Copy, Appendix A, nd, LAC, RG 24, Accession 1983-84/167, Box 151, file 1279-
162; Rayner to Minister, 6 November 1961, LAC, RG 24, Accession 1983-84/167, Box 151, file 1279-162.
\textsuperscript{127} R.J. Sutherland, Report of the Ad Hoc committee on Naval Objectives, 16 November 1961, LAC, RG
24, Accession 1983-84/167, Box 151, file 1279-162.
It was clear from Sutherland’s ringing endorsement that he understood exactly what the RCN was trying to do. The navy was not pushing for a true balanced navy – which would have required large fleet carriers, cruisers and a host of other platforms capable of responding to any type of naval warfare or task – but rather it was merely making a slight alteration from its “super-specialized” ASW nature. Other reports from unexpected sources supported this conclusion by arguing that the entire Canadian military had to find a way to work “increased flexibility and versatility in the organization, equipment and training of Canadian forces in being.” As a result, the RCN would largely remain a specialized fleet, but the General Purpose Frigate would help it evolve into a more balanced anti-submarine force. And because of that, Sutherland argued that the General Purpose Frigate “makes about as good sense as can be made.”

This was the exact message that Rayner took to the minister and Chairman Chiefs of Staff when he began his big push for the ship replacement program on 21 September 1961. But while the General Purpose Frigates faced some opposition from the other services, it was the politicians and their reluctance to acquire submarines that would prove Rayner’s toughest challenge. Although he would continue to push for the six Barbels and three nuclear submarines, the Chief of the Naval Staff was unwilling to take an “all or nothing” approach. His goal was to ensure the creation of a submarine service, and as a result Rayner opened himself to criticism from within his own service because of his willingness to consider the cheaper option:

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130 Rayner to CCOS, 21 September 1961, LAC, RG 24, Accession 1983-84/049, Box 131, file 098-113.
It would be possible, though not desirable, to acquire by purchases from the United Kingdom their latest type of conventional submarine, namely the Oberon Class. If for purely financial reasons it became necessary to buy Oberons rather than construct Barbels, it is considered wise to procure only three in order to replace the Sixth Submarine Squadron.  

This was the alternative that Harkness had first proposed the previous October, and it is easy to see how some believed that Rayner’s apparent complicity had effectively condemned both the Barbels and nuclear submarines. After all, few Canadian politicians have been willing to buy a more expensive platform when their senior chiefs would accept the cheaper one. But such interpretations seriously under-estimate the level of scepticism that existed among the senior ranks about whether the Conservatives would actually spend money on submarines. Even Brock was nervous. Despite his report’s strong support for a nuclear submarine program, the Vice Chief of the Naval Staff’s reading of the political winds gave him a sudden shiver and a case of cold feet. It would be best, he advised Rayner, for the navy to temporarily ease off this particular requirement and instead focus entirely on the six Barbels.  

Developments in the United States and Great Britain only served to complicate the decision over whether or not to push a Canadian nuclear submarine program. The Americans were going to focus exclusively on nuclear submarines while the Royal Navy was thinking about following suit, and that left the RCN wondering whether the conventional submarine would even have an operational use after 1970. But the Americans were anxious to see their submarines reproduced north of the border, and so reassured the RCN that its plan for Canadian industry to cut its teeth on a program of

131 Naval Shipbuilding Policy, May 1961; Naval Ship Replacement Program, 30 November 1961, DHH, Rayner papers, 99/31-IB-34.
conventional Barbels followed by Thresher class nuclear submarines was a good one.\textsuperscript{134} What happened next was odd. At the same time that the naval staff prepared for the acquisition of American Barbels, Rayner was asking the British whether they could provide the RCN with Oberons. At least one British officer believed he had the answer, telling a superior: “I think this may have been asked in the hope that we would say we couldn’t produce submarines for them until after ’67, to give the RCN a stronger lever for building Barbels. When I informed the Canadian Naval Board of what we could do on delivery dates, I think they were visibly shaken.”\textsuperscript{135}

Rather than eliminating the Oberons as a contender Rayner appeared to have had more practical reasons for approaching the British. Since establishing a submarine service was one of Rayner’s primary goals he could not ignore the strong signals from the government that it was extremely uncomfortable with the costs of the American submarines. Turning to the British – who had made an offer in 1959 to quickly release either an Oberon or Porpoise (a close sister class) to the RCN – was a stroke of genius because it provided Rayner with a backup plan in case the Barbels or nuclear submarines fell through.\textsuperscript{136} The British were more than accommodating. They pounced on the opportunity, and worked hard to meet the Canadian request. The RCN had suggested that a deal on the Oberons was possible providing one could be made available immediately with another two at some later date. The only way the British could meet this demand was to take an Oberon from their own replacement program and sell it to the

\textsuperscript{133} Notes of a meeting held on 18 July 1961, DHH, Rayner Papers, 99/31-IB-34; O’Brien to NHQ, 9 November 1961, DHH, NPCC Papers, 79/246, file 176.
\textsuperscript{134} CANAVUS to CANAVHED, 142105 September 1961, DHH, 73/814; CANAVUS to CANAVHED, 030055 October 1961, DHH, 73/814; Proposal for the inception of an RCN Submarine Program, 25 September 1961, DHH, NPCC fonds, 79/246, file 176.
\textsuperscript{135} Captain OHM St. J. Steiner, New Construction Programme in the RCN, 2 February 1962, PRO, ADM 1/28085.
Canadians.\textsuperscript{137} Such a tremendous sacrifice would cause “great dislocation” to the Royal Navy’s plans, but according to a key British source the benefits were hard to overlook:

…RCN might require new conventional submarines at an early date and as cheaply as possible. Hence their current interest in the OBERONs. Against the sacrifice of RN interests involved in giving the Canadian request some priority over our own requirements, the following were considered to be the advantage of helping the Canadians now:

a) If an initial order is encouraged, it will strengthen the existing connection between RN and RCN at a time when this is badly needed.

b) Subsequent orders for conventional and, possibly, nuclear submarines are likely to follow if this order is satisfactory met.\textsuperscript{138}

Such advantages were simply too great, and as a result the British began the process of securing the Oberon’s future in the RCN by telling the Canadians that “there was a good possibility” they could accommodate their request. Once political approval was confirmed, the RCN could expect their first Oberon within twelve months, another by 1965 and the final one in 1966.\textsuperscript{139}

It was an offer that Rayner simply could not refuse and his backup plan was suddenly catapulted to the forefront of his thinking. The sooner the Canadian submarine service was established the less vulnerable it would be to unpredictable politicians and changing governments. The Chief of the Naval Staff wasted no time, asking Brock how quickly the RCN could accept and man Oberons if some older ships were immediately paid off. Brock was cautious. His fear that an Oberon acquisition would doom the Barbels was coming true. Presumably the politicians would accept the three Oberons as a suitable substitute for the three British A-boats currently serving with the Sixth

\textsuperscript{136} Brief for First Sea Lord, 29 March 1962, PRO, ADM 1/28085.
\textsuperscript{137} Director of undersurface warfare to Admiralty, 16 November 1961; Head of M II to D of P, November 1961; Head of Military Branch II to D of P, 22 November 1961; M34 to Mr. Tupman, 14 November 1961, PRO, ADM 1/28085.
\textsuperscript{138} Military Branch II to VCNS, 6 December 1961, PRO, ADM 1/28085.
\textsuperscript{139} CANAVBRIT to CANAVHED, 141623 November 1961, DHH, NPCC, 79/246, file 179; CANAVBRIT to CANAVHED, 081619 December 1961, DHH, Rayner Papers, 99/31-IB-34.
submarine squadron. That was the problem. As Brock would explain to the Chief of Naval Personnel, it was important that the Oberons not join the fleet as Sixth submarine squadron replacements because the whole case for the Barbels was being put to the government on the grounds that there was an urgent need for more training submarines. But the British even managed to outmanoeuvre Brock, as their offer to extend the loan of the Sixth submarine squadron to 1968, as well as allowing the three A-boats to count against RCN force goals, sweetened the deal even further. It was a smart move that then allowed Rayner to make a strong argument for the Oberons: these British submarines had suddenly become the “most expedient and economical” way to replace the A-boats by 1968.\footnote{Rayner to Brock minute, 16 November 1961, LAC, RG 24, Accession 1983-84/167, Box 3549, file 8000-35, vol. 4; Brock to CNP, 17 November 1961, DHH, 79/246, file 100; Oberon Class submarines, Question sheet, November 1963, DHH, 73/814.}

The British knew what they were doing. Making offers that the Americans were unwilling to match had transformed the less capable Oberon into the far better deal. Not surprisingly, the RCN’s tone began to change as it was observed that the Oberons “would make a valuable contribution to Canadian A/S Forces.” But Rayner was not willing to give up on the Barbels or nuclear submarines. In an attempt to hedge his bets, the Chief of the Naval Staff came up with a solution that allowed him to take advantage of the British offer on the Oberons without the risking the Barbels. His plan was to divide the acquisition into two. The first phase was to immediately acquire the three Oberons which, since they would not involve the RCN in a major design or procurement effort, could be pursued concurrently with the General Purpose Frigates. Phase Two – consisting of either the Barbels or nuclear submarines – would come later, giving the
government, industry, and the navy more time to fully explore the construction of these complex vessels.141

Rayner’s strategy was logical but it was a calculated risk. Commodore Desmond “Debby” Piers, who was the Assistant Chief of the Naval Staff (Plans) and had worked as a member of Brock’s committee, believed Rayner was flirting with disaster and he said as much to the Chief of the Naval Staff. By failing to take a tough stand on the RCN’s requirements, Piers argued that the government would likely accept “Phase I” while rejecting “Phase II” or, worse yet, would see both phases as a weakening in the navy’s position that could lead to building either submarines or frigates (but not both). Piers had some powerful evidence to back his interpretation up. The 5 December Cabinet Defence Committee meeting, which was chaired by the Prime Minister, suggested that Diefenbaker was suspicious of the navy’s motives and was alarmed by “the high and rising cost of the programmes.” Harkness went even farther by observing that a choice had to be made, the RCN could either build six Barbels in Canada or buy three Oberons from Britain. It was that proposition that scared Piers.

Piers was tired of watching these political games, and he could not understand why the government was questioning this program when all the advice available to them had so clearly explained the navy’s requirements. In his view, it was wrong for the RCN to accept anything less than 8 frigates, 9 submarines and 6 anti-submarine escorts because to do so would “only result in increased demands later.”142 What Piers was saying was true but it was also extremely naïve. Piers was an articulate and congenial officer with a

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shining Second World War record, but his staff experience and savvy was no match when compared to Rayner. The Chief of the Naval Staff understood what Piers did not: the navy had indeed made a strong pitch but it was painfully obvious that Diefenbaker’s government was not going to buy the entire program. It was simply too expensive for a government that had to fulfil election promises on social spending at a time when the country was in a recession. Getting tough with politicians under this type of pressure would only serve to antagonize them. Despite Piers’ protestations, therefore, the ship replacement program was very much a game and it was one that the Chief of the Naval Staff was ready to play. For Rayner it was not a question of winning or losing. Instead, his goal was to get as much of the program approved as possible.

The 31 January 1962 Cabinet Defence Committee meeting clearly indicated that Rayner had his work cut out for him. The good news was that Diefenbaker was finally willing to accept the principle that a new ship replacement program had to be launched. It is uncertain how Rayner felt at that moment, but any sense of euphoria would have been short lived as the bad news soon followed. If the Chief of the Naval Staff was forced to make a choice, the Prime Minister dauntingly asked Rayner, would he take the submarines (Barbels) or the General Purpose Frigates? It was a loaded question and Rayner knew it. His response of “both” did not amuse Diefenbaker who made a point of immediately repeating the question. Rayner got the message. He was facing a situation where the government was preparing to support only one ship program, and Rayner suspected that the General Purpose Frigates were the odds on favourite. It had not come as a surprise. In fact, Piers had heard rumours that “there was some degree of collusion”

between Rayner and Harkness in their replies to Diefenbaker’s question. Whereas Rayner eventually stated that he would choose submarines, the defence minister told Diefenbaker that he wanted General Purpose Frigates. Whether or not Harkness and Rayner had tag-teamed the Prime Minister cannot be confirmed, but this contradictory advice gave Rayner a chance to net both the General Purpose Frigates and Oberons.

Diefenbaker never really intended for Rayner to have a choice between the frigates and Barbels. He had always worried that the submarines would be unpopular with Canadians and, unlike the frigates, they required specialized construction knowledge that few domestic firms could meet. The inability to allocate Barbels to a large number of shipyards meant that the General Purpose Frigates had a greater potential to buy votes across a wider spectrum of Canada. As a result, Diefenbaker’s approach in Defence Council made it obvious that the navy’s aspirations for Barbels were effectively dead. And had it not been for Rayner’s backup plan with the Oberons, the demise of the Barbels likely would have ended the RCN’s current campaign to establish a submarine service. Instead of facing defeat, however, Rayner was able to push aggressively the Oberons and their strengths. It was an easy sell. The Oberons were cheap, they could be built concurrently with the frigates, the defence minister had been pushing their acquisition since October 1960, and finally they also would meet the RCN’s desire to have two submarines earmarked for SACLANT by the end of 1963.144 In the navy’s own words:

2150-40. Piers to Rayner, 7 December 1961, DHH, NPCC fonds, 79/246, file 100.
143 Naval Staff minute, 1 Feb 62, DHH, RCNHS fonds, 81/520/1000-100/3, Box 38A, file 2; Captain O.H.M. St. J. Steiner to Captain E.F. Gueritz, 2 February 1962, PRO, ADM 1/28085; Record of Cabinet Defence Committee, 31 January 1962, LAC, RG 25, vol. 2883, file 2150-40; Draft announcement, 20 March 1962, DHH, NPCC fonds, 79/246, file 100.
144 Carrington to Harkness, 5 February 1962; Harkness to Carrington, 19 February 1962, DHH, Rayner Papers, 99/31-IB-34; CCOS meeting, 22 March 1962, DHH, Raymont Papers, 73/1223, file 1311.
The decision to negotiate for the procurement of three OBERON Class submarines from Great Britain was taken in order to fill an urgent need in the Royal Canadian Navy in the most expedient and economical manner... In order to meet the RCN’s need for early acquisition of submarines, it was necessary to select a class of submarine which was currently building and could be expected to be available at an early date. The only one which came closest to meeting the RCN requirement was the OBERON Class now building in Great Britain.  

Although British salesmanship was not mentioned as a reason behind the acquisition, it, too, was one of the most important factors that explains why the Oberon beat out the Barbels to form part of the RCN’s force structure program.

Throughout this period the British continued to apply their own pressure on the Canadian government and were willing to make deals that the Americans were not. In fact, in early 1962 the Canadian government was contending with “drastic measures” issued by the US Secretary of Defence, Robert McNamara, that were aimed at alleviating their international balance of payments problems. It was quickly recognised that these directives (which stated that all contracts below $10,000 would revert to American companies while McNamara would personally review all those over that amount) would have particular ramifications for Canada. Indeed, this new American policy of “vigorously” resisting foreign defence expenditures as a means to effect savings was not good news for Canada which not only enjoyed special trading arrangements with the US, but also was experiencing a balance of payments with that nation that was currently in Canada’s favour. In fact, this balance was so favourable that the Canadian government was heavily studying “the implications of a harder line on United States

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procurement of military equipment, supplies and services in Canada, particularly insofar as they affect the Canada/United States Production Sharing Programme.” 147

The timing of these American directives and the decision to buy the British Oberons rather than Barbels is hard to overlook. The potential damage that these American directives could have on the Canadian economy was tremendous and that led to internal discussions on the need for the government to enforce a “buy Canadian policy.” 148 This allowed Rayner to play directly into the aggressive salesmanship that the British had been displaying ever since they first introduced the idea of Canada buying Oberons. Identifying that the Chief of Naval Staff possessed a good deal of political and business acumen, he enhanced a potential Oberon deal by suggesting that the government could use the British eagerness to their advantage. 149 Unlike the Americans, who were clearly not interested in purchasing Canadian naval technology, the British were willing to explore a possible bargain that would see them acquire 17,000 PROJECT INSIGHT (which was a technological innovation involving modified mortar projectile fuses) units in exchange for a RCN commitment on the Oberons. McNamara’s directives had sent a clear signal that Americans were unwilling to do much to reduce the costs of the Barbel class, and the fact that the USN had shown little interest in INSIGHT only drove that point home further. As a result one of the key reasons why the RCN acquired Oberons was that the British were willing to make offers that made it that much easier for Rayner to clinch the government’s support.

Rayner’s and his staff’s business savvy was also evident in their efforts to shore up support for the General Purpose Frigates. Unlike the air force’s determined opposition to the program, the army’s lukewarm response left room for the navy to woo them. The General Purpose Frigate’s ability to provide shore-bombardment for ground troops was appealing, but it was not nearly enough to win the army’s enthusiastic backing. To help make the program more digestible the navy conducted a study that concluded the General Purpose Frigate could carry 200 troops and some equipment for a fifteen-day deployment.\(^{150}\) Of course, this was not the only reason the RCN had explored this option. Serving as another powerful illustration of the navy’s attempt to come to terms with the new strategic realities (while at the same time maintaining as strong a commitment as possible to its traditional ASW role), this troop lift capability also represented a response to the emphasis that Canada’s government and NATO partners were placing on limited war situations. And to meet that requirement the navy simply had no other choice but to “accept less than the ideal ASW ship.” How much of a sacrifice the navy was making was debatable, particularly since Brock’s planning group had admitted that “the proposed General Purpose Frigate was accepted as being virtually as good as existing [destroyer-escorts] from the point of view of ASW capability and therefore constituted an addition to RCN capability in this field.”\(^{151}\) Nevertheless, the navy was making concessions – the fact that Sea King helicopters and other important equipment were not included meant it could not be considered “an ideal” ASW platform.

\(^{149}\) See various documents on file PRO, ADM 1/28085; Analysis of Canadian Trials of the proximity fuse for Project Insight, April 1964, PRO, ADM 302/266; Project Insight – Trials Programme, February 1963, PRO, ADM 302/217.

\(^{150}\) Davis to A/CNS (A&W), 26 February 1962, LAC, RG 24, Accession 1983-84/167, Box 3500, file 8000-DDG vol.2.

\(^{151}\) Minutes of the Sixth Meeting of the Ad Hoc Committee on Naval Objectives, 30 May 1961 LAC, RG 24, Accession 1983-84/167, Box 151, file 1279-160.
– and that was the way it was sold to the government and army. As a result, pitching the General Purpose Frigate as a compromise created by a need to respond to limited war missions was smart politics, and it worked. Not long after the navy made its case, reports were received through various channels that “General Walsh was personally in favour of our ideas for the embarkation of troops and equipment… [on the General Purpose Frigate].” Indeed, with the army afraid of Soviet raiding parties landing in Newfoundland and the Queen Charlotte Islands, the idea of a fast frigate that could transport soldiers to “rough underdeveloped areas” of Canada was so attractive that Rayner had concluded that the “CGS firmly supports the GP Frigate as planned.”

Rayner had done well. On 19 March 1962, Cabinet finally gave him a firm commitment that not only included the eight frigates but also permission to pursue three Oberons as well as an agreement to develop proposals for the future construction of nuclear submarines in Canada. A year and a half of struggle and negotiation had finally produced a consensus with the government. While not the fleet that Rayner had set out to acquire, it was a good compromise program that gave the navy more than what Diefenbaker was originally willing to allow. Although it was still primarily an ASW fleet, changes in the strategic environment as well as new technologies and threats also dictated that it have a limited degree of general-purpose capability. How much versatility would be built into this fleet was still open to debate, and unfortunately for the navy the successful conclusion of Rayner’s struggle with his political masters marked the beginning of an intense internal battle within the service. Unlike DeWolf, who

152 Naval Board Meeting, 22 March 1962, DHH; Welland (ACNS A&W) to VCNS, 1 May 1962, LAC, RG 24, Accession 1983-84/167, Box 3500, file 8000-DDG vol. 3; Rayner comment to VCNS, 6 April 1962, LAC, RG 24, Accession 1983-84/167, Box 3500, file 8000-DDG vol. 2.
maintained strict control over the navy, Rayner would lose control of his staff and, as a result, his next two years as Chief of the Naval Staff were chaotic. Submariners unhappy with the Oberons, destroyer advocates that wanted heliporter frigates, and naval aviation supporters without an aircraft carrier replacement, all rebelled against his program. And by the time they were finished Rayner’s Force structure lay in ruins.
Chapter 3 “A Cold Hard Look”

Rayner may not have won guarantees for his six heliporter frigates or secured concrete commitments to the Oberons and nuclear submarines, but he had nonetheless made considerable headway with his ship replacement program. The decision of the government to build eight General Purpose Frigates was a triumph that gave the navy a starting point from which it could expand. Yet the Chief of the Naval Staff was well aware that political promises were easily broken, and as a result he spent much time shoring up support for the General Purpose Frigates. Those ships, however, not only had to be protected from changing political winds, but also internal opponents who were unhappy with the direction that the navy was heading as well as the platforms it was building. Rayner had marginalized certain ship classes – most notably aircraft carriers – and that rubbed a number of advocates the wrong way. Keeping his political masters interested in the General Purpose Frigates while at the same time trying to secure other platforms represented a tremendous challenge, and Rayner could not afford to have the various ship advocates complicating that task. There was also another threat to the program. Some officers felt that the General Purpose Frigate should acquire more innovative weapons as well as sensors. The problem was that these newer technologies would increase the ship’s costs as well as size, and Rayner was worried that his political masters would withdraw their support from the program if it grew beyond their expectations. It was for these exact reasons that Rayner gave Brock the dual jobs of ensuring that the advocates towed the navy’s line while at the same keeping the enthusiasms of the innovators in check. Assessing whether or not the Vice Chief of the
Naval Staff as well as his subordinates succeeded in these roles is the primary aim of this chapter.

Brock had always been suspicious of fellow naval officers who he believed were blinded by their loyalty to particular ship types or technologies. Like Rayner, the Vice Chief of the Naval Staff was also worried that these officers – such as naval aviators arguing for “bigger aircraft carriers with faster fighter aircraft,” or submarine proponents pushing for a large and purely nuclear submarine force – could do much damage to the ship replacement program. Unable to see the “big picture,” these advocates often undercut approved programs in the hopes that it would advance their preferred choice. Separate efforts by the gunnery, anti-submarine, torpedo, as well as other branches to add specific “state of the art” technologies to an established design could be equally as troublesome. As Brock explained, “building a ship of any kind, particularly a man of war, is a prodigious feat of compromise” because there was only so much room with which designers could work. But there were officers willing to let a design grow rather than sacrifice what they considered the ideal equipment, and it was for that reason the Vice Chief “opposed those who were pressing for the very best, with total disregard of the inevitable consequences in size and cost.” Such restraint was particularly important in the early 1960s, as Brock emphasized that the explosion in scientific and technological developments meant that ship concepts were constantly under pressure to accommodate or update new weapons and sensors.¹

In fairness, these officers truly believed they were acting in the navy’s best interest, arguing as they did that efficiency at sea would suffer unless their particular

equipment or ship-type was acquired. The problem was that some individuals were overly enthusiastic, which not only led to “frequent disagreements and passionate arguments among proponents of each,” but also instances where advocates openly challenged their superior’s final decisions. That was the true danger. Signs of internal opposition to the General Purpose Frigates or Oberons would undoubtedly make the Conservatives nervous, explaining why Brock gladly accepted the task of guarding the navy against “the efforts of those whom I considered ‘empire builders’ or overspecialized, self-appointed experts in only their particular and narrow fields of endeavour.” Likewise, the innovators also needed to be placed under similar restraint. Realizing that it was only a matter of time before attempts were made to change the General Purpose Frigate’s specifications and layout, Brock adopted what was best characterized as a “cautious approach” to ship design. New technologies and ship concepts would continue to be explored, but the Vice Chief would carefully scrutinize such efforts and deal firmly with anyone who tried to deviate from the Chief of the Naval Staff’s direction or the current incarnation of the General Purpose Frigate. The cornerstone of the Brock’s cautious approach, therefore, was to prevent ship designs from growing (as well as the navy’s force structure from changing) through effective executive oversight and control.²

Aside from using his intimidating personality to full advantage, Brock also realized that he would require the support of the newly reorganized technical services to enforce the edicts of his cautious approach. This massive re-organization accommodated Brock’s needs perfectly. No longer broken into the Constructor and Engineer branches, the new structure was instead reconstituted into five directorates – Director Generals

² Ibid.
Aircraft (DG Air), Naval Supply (DGNS), Support Facilities (DGSF), Fighting Equipment (DGFE), and Ships (DG Ships) – that all reported to the Chief of Naval Technical Services. But it was actually changes within DG Ships and Director General Fighting Equipment, which were the two directorates most responsible for the General Purpose Frigate as well as ship construction in general, that helped to mitigate the influence of advocates on the design and construction process.

Unlike the previous Constructor-in-Chief – who assigned dedicated teams that stayed with a specific destroyer, minesweeper, or frigate design from its conception to commissioning – the new arrangements divided both DG Ships and Director General Fighting Equipment’s personnel along functional lines. Having found the old system “somewhat awkward” and believing it was “important to get the various professions working in harmony together,” the officers in these two particular branches were instead assigned to one of the three parts of the design process:

- **Sketch Design**: The initial “blank sheet of paper” approach in which requirements, or bright ideas from ourselves or from Naval Staff could be developed into design concepts for initial consideration.
- **Contract Design**: Where the original concept could be developed into a more detailed sets of plans & specifications (often with some unhappiness and desirable concepts appeared to contend with unachievable realities) which could be used for Contract purposes.
- **Submarine & Ship Production**: Which addressed the many problems which arose from the actual ship-building process.

According to Commodore Sam Davis, who had become Director General Ships in April 1961, these changes were successful in reducing (although not eliminating) the prevalence of ship advocacy among his officers. This was good news for Brock. Although Davis was neither impressed with Brock’s bullying nor his methodology, he

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4 Sam Davis, Family Memoir, DHH, CNTHA Fonds, 93/110, 14
did understand the need to keep the advocates under control. And that made Davis one of the Vice Chief of the Naval Staff’s strongest assets.  

Born on 18 April 1919 in Birkenhead, England, Sturton Mathwin “Sam” Davis was an impressive and hard-working individual. Having joined the Royal Navy as a Constructor Lieutenant in August 1940, Davis had a solid wartime record that included service in HMS Rodney during her encounter with the infamous German battleship Bismarck. His postwar civilian job at the firm of Milne, Gilmore, and German in Montreal (where he was hired after immigrating to Canada in 1947) was just as productive, allowing Davis to fine-tune his skills as a naval architect. But it was his time in the permanent force RCN, which he joined in 1955 after spending over five years of continuous postwar service in the reserves, where he earned a nation-wide name as one of the most competent professionals in his field. His reputation as a sailor-scholar was equally distinctive. Davis, who would eventually become a defence policy professor at Queens’ University, was continually sharpening his intellect while in uniform and by the mid-1960s had already earned two Masters degrees and was working on a third.

Davis was the right officer, in the right position, at the right time. Assigned to Naval Headquarters in the summer of 1960 as the Deputy Naval Constructor-in-Chief, Davis was too late to play anything but “a peripheral role” in the St. Laurent, Restigouche and Mackenzies class designs. Delays in getting approval for the ship replacement program ensured that there was insufficient work after the Mackenzies and that had led to a period of decline at technical services. The General Purpose Frigate ended that drought

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5 Sam Davis, Family Memoir, DHH, CNTHA Fonds, 93/110, 10-13; Davis, “RCN Technical Services on the eve of Unification,” DHH, Davis Papers, 2001/36; Davis, “Fourth Case Study: The General Purpose Frigate,” DHH, Davis Papers, 2001/36, 204 – 207
6 See various biography files in S.M. Davis papers, DHH, 2001/36.
and as a result Davis had walked into a situation that desperately required inspired leadership. He did not disappoint. Although he could be flamboyant, the new DG Ships was a strong and dynamic leader whose intellect, wit, sense of humour and intolerance for idleness allowed him to build extremely proficient teams. When dealing with superiors he was often a forceful debater who used his intellectual prowess to freely express his opinions. While this sometimes got him into trouble, it was understood that he would always do what was in DG Ships’ as well as the service’s best interest. And that was exactly what Brock wanted from him.

The General Purpose Frigate may have received the government’s blessing in the spring of 1962, but it had vulnerabilities. Perhaps the most serious was the fact that the Chairman of the Chiefs of Staff Committee, Frank Miller, had his doubts about the entire concept. Not long after the program received its political backing, Miller held a chiefs of staff meeting in which there was “considerable discussion” on the General Purpose Frigates. Miller was tough on the program, observing that he “was of the opinion that this type of ship was designed primarily as protection for fast task forces for which there was no Canadian requirement.” Rayner did his best to fight back. While he agreed that that US had intended their guided missile destroyers to fulfill a fast task force role, the RCN would use its General Purpose Frigates “as part of heterogeneous groups for escort purposes.” Put another way, the General Purpose Frigates would make an important contribution not only to anti-submarine warfare but it also could provide the navy’s escorts forces with protection against air threats.

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7 Davis to CNTS, 19 February 1962, LAC, RG 24, Accession 1983-84/167, Box 3500, file 8000-DDG vol.1; Davis, “Fourth Case Study: The General Purpose Frigate,” DHH, Davis Papers, 2001/36, 204 – 207.
8 Chiefs of Staff Committee meeting, 22 March 1962, DHH, Raymont Papers, 73/1223, file 1311.
Rayner’s arguments did not persuade. Only days later, Miller once again raised concerns about the program when discussing NATO force goals. In his opinion, SACLANT’s requirements for more destroyers and submarines from Canada were “excessive” and left little money for the army brigade and air force division in Europe. More to the point, Miller again questioned whether the General Purpose Frigate’s anti-aircraft capability would lead to a “lessening of their anti-submarine effectiveness and might involve some change in the role of our anti-submarine navy.” Rayner, along with the Brock Report, had clearly failed in their efforts to convince others about the rationale of adding a measure of versatility to an ASW fleet as Miller continued with his criticism by observing:

In essence, he felt there was no new military threat which could justify such increases and that we should continue to maintain Canadian contributions to SACLANT at the present level by replacing worn out tonnage with modern units and increasing our anti-submarine effectiveness by providing some modern submarines in lieu of an equal number of overage surface units.  

Rayner again fired back. After emphasizing that the Soviet missile-carrying submarine represented one of the greatest threats to North America, Rayner argued that he could not agree with Miller’s assessment of the General Purpose Frigate. Its anti-aircraft weapon system would not diminish its anti-submarine capability, the more so since all modern warships needed to defend themselves from air threats.

Miller was not interested. From his vantage, the navy’s program was threatening to chew up an excessively large portion of the military’s overall budget, and as a result he sniped at the General Purpose Frigates every chance he got. Remarkably, the other Chiefs of Staff did not. Given Miller’s attitude, the Chief of Air Staff, Air Marshal Campbell, and the Chief of the General Staff, Lieutenant General Walsh, were being
presented with a wonderful opportunity to kill the General Purpose Frigate before it ever
got to the shipbuilders. But neither the army nor the air force chief was willing to push
the panic button as quickly as Miller was doing. Campbell, in particular, made it known
that he would “back the program if it could be related to the threat,” while Walsh was
convinced that there was a legitimate need to counter the Soviet’s submarine fleet. Yet
that did not necessarily mean that the other Chiefs of Staff would allow the navy to
acquire everything it wanted, and with only so much money to go around Rayner was
told he would have to prioritize among the General Purpose Frigates, submarines and
tanker supply ships.10 One thing was certain, however, the navy needed to get the
General Purpose Frigate in the shipyards as quickly as possible and nothing threatened
that process more than overly enthusiastic advocates who wanted to alter the design to
their liking.

An attempt to move the location of the Tartar system represented Davis’ first real
challenge, and his reaction left little doubt that unwanted changes would not be tolerated.
Davis had great difficulty tracing the origins of this request and could only determine that
“someone” was trying to alter the design to make room “for some other equipment.”
Such a move would have huge implications involving higher costs and extensive delays,
and in Davis’ eyes it was “illustrative of the need for a somewhat firm restraining
presence, if the design is not to get (and remain) out of hand.” A well-timed “outburst”
and expression of “appropriate outrage” quickly ended this particular attempt to tinker
with his design, but despite passing his first test Davis nevertheless discovered that Brock

9 Chiefs of Staff Committee meeting, 6-9 April 1962, DHH, Raymont Papers, 73/1223, file 1311.
10 Ibid.
was going to keep him and his directorate on a short leash.\textsuperscript{11} Davis was not impressed with Brock’s tight reign. In his view the Vice Chief’s use of “chastening words” to enforce his “edicts authoritatively” was just as unnecessary as Brock’s insistence that every proposed change, no matter how minor or trivial, had to first pass through his office before being seen by the Chief of the Naval Staff. But while Davis may not have agreed with Brock’s self-imposed veto or vocabulary, he was supportive of the Vice Chief’s idea of creating an independent project officer.

This position, which was filled by Commander L.J. Hutchins, was responsible for coordinating and “protecting Staff Interests” throughout the design process. Seeing Hutchins as a “good messmate” Davis believed that the “concept of a Naval Warrior ‘Ambassador’ among us was potentially most useful to both sides – particularly if a congenial and sensible individual was involved. And here indeed we were particularly fortunate, for Cdr L.J. Hutchins had all of these qualities and more.” Not everyone agreed. In particular, the new Assistant Chief of Naval Staff (Air & Warfare), Commodore A.B. Fraser Fraser-Harris was annoyed with the appointment and on 12 October 1962 he let Brock know as much. Suggesting that Hutchins was Brock’s point man or “spy,” the Assistant Chief of the Naval Staff (Air & Warfare) argued that it was wrong for a Commander to have the authority to report directly to the Vice Chief and the Chief of Naval Technical Services, Rear Admiral J.B. Caldwell. Instead, Fraser-Harris made an impassioned plea for Hutchins to report to him. Brock refused. A strong supporter of naval aviation, Fraser-Harris was exactly the type of advocate whose influence Brock wanted to mitigate. As a result, Hutchins would remain a “free agent”

whose unfettered access was not only intended to keep tabs on the advocates, but also to help Brock control the costs of the program.12

Despite Brock’s best efforts, however, the cost of the General Purpose Frigate continued to rise. The original estimate of $33 million per ship had already been superceded by a new figure that was $8.95 million higher. Some wanted to blame the Director General Fighting Equipment for these increases, particularly since the Tartar and twin Mauler missile systems were proving more expensive than first anticipated. Davis, however, knew better. While the navy removed one Mauler system from the design to reduce costs, Davis found that the real trouble was that the sales taxes on the program had been miscalculated. More bad news followed, and a nervous Treasury Board announced that it would only accept the costlier General Purpose Frigate providing the decision on the 3 Oberons was taken back to Cabinet for reconsideration. This retrograde step hit Rayner hard. The Chief of the Naval Staff was still pushing for a fleet of 8 General Purpose Frigates, 9 submarines and 2 supply ships, followed by 6 heliporter frigates, but the government’s position on the Oberons suggested that Rayner would have to go back and defend ground that he thought was secure.13 The fact that it was the submarines that were in the greatest danger was particularly problematic for a man who had recently told the Chiefs of Staff Committee that the RCN wanted “submarines, general purpose frigates and tanker supply ships in that order of priority.”14

The officers responsible for establishing the RCN’s fledgling submarine service were equally concerned. Yet, it was not the prospect of losing the Oberons that they

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found worrisome, but rather that the General Purpose Frigate’s rising costs would threaten any hopes of the RCN acquiring nuclear-powered Thresher class submarines. It was these platforms that most submariners truly wanted, and they had good reason to believe that such a program was possible. Not only had Cabinet agreed to explore their potential procurement, but also a study from the 1962 Submarine Survey Committee had given the Threshers particularly high marks. Not wanting to lose the ground that had already been gained, the Submarine Committee also advised that the RCN should continue with the acquisition of the three conventional Oberons as well as making arrangements to keep the three A Boats from the Royal Navy. However, its major conclusions, which reiterated many of the findings from the earlier Nuclear Submarine Survey Team, was that the RCN immediately embark on a program of six Canadian-built Threshers.¹⁵

These findings were greeted with an “ominous silence” from both the Naval Staff and Board. For Davis the explanation was simple: Brock was unhappy. Although the Submarine Survey committee was established under the Vice Chief’s authority, its findings were at odds with the program of six conventional Barbels followed by the three nuclear submarines that he had outlined in his report. In Davis’ opinion, Brock had struck the committee believing that they would provide further justification for his proposed submarine force and was angry when they failed to do so. Yet it was not Brock but rather the new Assistant Chief of the Naval Staff (Air & Warfare) who was actually the greatest critic of the Submarine Survey. Unlike the previous Assistant Chief of the

¹³ Davis, “Fourth Study The General Purpose Frigate,” DHH, Davis Papers, 2001/36, 249-286, 301-302; Chief of Staff committee, 30 August 1962, DHH, Raymont fonds, 73/1223, file 1311.
¹⁴ Chief of Staff committee, 25 October 1962, DHH, Raymont fonds, 73/1223, Box 64, file 1311C.
Naval Staff (Air & Warfare), Commodore R.P. Welland, who had actually served as the chair of the Submarine Survey Committee, Fraser-Harris had grave doubts about making such a heavy investment in submarines. At first he was reluctant to say so. Realizing that the nuclear submarines had some ardent followers who were not going to take his opposition well, Fraser-Harris began his commentary by congratulating the Submarine Survey Committee for producing a “good document.” Although a simple comparison had shown that their recommendations differed significantly from the one the Vice Chief of the Naval Staff had proposed, Fraser-Harris further attempted to soften the blow of his upcoming comments by praising the committee for its consistency with the Brock report. That was as far as the good news would carry; the Assistant Chief of the Naval Staff (Air & Warfare) then proceeded to tell the Naval Policy Coordinating Committee that the Submarine Committee’s report was flawed because it had studied the submarines in isolation. Elaborating further, Fraser-Harris explained that while the Threshers might be the ideal platform for the submarine service, it “was not necessarily the best for the RCN as a whole.” Establishing a theme that would be echoed over the ensuing years, the Naval Policy Coordinating Committee rightly concluded that the nuclear submarines were “clearly beyond the financial capabilities of the RCN.” Davis agreed. Arguing that the report was “throwing caution to the winds,” DG Ships had a hard time

16 In his memoir Davis misidentifies Fraser-Harris as Welland. In reality, Welland had turned over the position to Fraser-Harris on 12 October. Welland, who was the chair of the Submarine Committee, had strongly supported the Threshers. Davis felt that Brock had “got at” Welland because the ACNS (A&W) cautioned against the acquisition at the 6 Nov NPCC. In reality, it was Fraser-Harris who was sitting as ACNS (A&W) at this time.
17 Brock recommended six Barrels followed by nuclear submarines, while the survey called for six nuclear, three Oberons and three A Boats. Presumably Fraser-Harris was commenting on the fact that the committee found the RCN had to have submarines – a message that was consistent with Brock’s Report.
18 NPCC meeting, 6 November 1962, DHH, NPCC Papers, 79/246, Folder 5.
reconciling why the government would suddenly approve a $400 million nuclear submarine program – a figure that he found “somewhat optimistic” – when they were currently threatening to cut the much cheaper Oberons.

Rayner had already come to grips with this paradox. Even if there was some miraculous way to get the government to spend money on nuclear submarines, Rayner realized that the program would likely come at the expense of all others. A ship replacement program that consisted exclusively of nuclear submarines was not what Rayner wanted, and that made the Oberons – which left enough money for the General Purpose Frigates – look even more attractive. Better yet, a visit by the First Sea Lord, Sir Casper John, to Ottawa in early October 1962 further solidified Rayner’s growing commitment to the Oberons. For some officers, like Davis, John’s timing was a little too perfect to treat as co-incidental, particularly since his comments effectively “stole the Submarine Committee’s thunder.” John was both firm and accommodating and his discussion with the Naval Board showed that the British were putting “some teeth” into their Oberon proposal. Not only would they make HMS Ocelot available to the RCN in 1963, but also he observed that the Admiralty was willing to explore Rayner’s request for the British to buy Canadian equipment as a means to offset the costs of the Oberons. Mixed with these remarkable concessions, however, John also applied intense pressure that included a tight deadline for the RCN to accept Ocelot.19

Of course, the Canadians were applying just as much pressure on the British to make the deal. Defence minister Harkness, his fellow Cabinet member and junior defence minister Pierre Sevigny and Rayner, along with the entire Naval Board,

overwhelmed John with their support for the acquisition as he reported back to the
Admiralty:

The purpose of this note is to record my impression of the current state of
thinking of the Canadian Navy Board and Defence Ministers. The Navy Board
welcomes our offer to transfer one OBERON from our production... This would
suit the RCN time-table... Thus the position of the RCN is clear cut – they want
three OBERONS... I found both Mr. Harkness and Mr. Sevigny very robust in
their support for submarines... but as is well known, they are anxious to present a
decision to purchase OBERONS in as favourable a manner as possible to the
Canadian public. ... Suffice it to say that on a Navy to Navy basis the Board of
the Admiralty regards the equipment of the RCN with OBERON submarines a
prize of very considerable importance.20

John’s words show that the Canadians were playing the procurement game just as well, if
not better, than the British. Letters to Great Britain from Harkness and Rayner were
beautifully worded and worthy of the tactics employed by any well-greased sales team.
Although it was not evident to the Admiralty at the time, British records further bear this
out. Carrots from Harkness that he was “very anxious to order the OBERON” were
countered with seemingly back-door provisos from Rayner that a deal would only be
possible if the British would either buy Canadian equipment (such as Project Insight,
variable depth sonar or CL-89 aircraft, among other items) or provide direct support cost
for Canadian forces in Europe. Thanks to Harkness, Sevigny, Rayner and the Naval
Board’s united efforts, the RCN was closer than ever to securing the Oberons on terms
that were favourable to Canada.21 However, according to Davis, this interest in the
Oberon deal had effectively placed the nuclear submariners on the backburner and that
decision was not popular with some staff officers.22 This was a bitter pill to swallow for

20 Casper John to The High Commissioner, 7 October 1962, PRO, ADM 1/ 28085.
21 Rayner to John, 15 October 1962; UK High Commissioner for Canada to British Minister of Defence, 23
October 1962; UK High Commissioner for Canada to British Minister of Defence, 6 November 1962;
Peter Thorneycroft to Ministry of Defence, 14 November 1962; PRO, ADM 1/ 28085.
22 Davis, “Submarine Acquisition in the RCN from Nuclear to Conventional, 1955-1965,” nd., DHH,
the nuclear submarine’s supporters, and once Brock had left as Vice Chief they would challenge the assumptions that lay behind Rayner’s replacement program by pushing for Threshers at the expense of the Oberon. Brewing resentment simmering at the levels just below the Naval Board would help to break the current consensus, but the submarine advocates were not the only ones who would openly contest Rayner’s planned force structure.

Supporters of naval aviation were equally concerned about the future of their platform. No one was openly declaring that the aircraft carrier’s days in the RCN were numbered, but the signs pointing to this conclusion were certainly there. The fact that Rayner’s May 1961 ship replacement policy paper (which it should be remembered outlined the RCN’s future force structure up until the mid 1970s), made no reference to aircraft carriers raised more than a few eyebrows. Even the air force was perplexed. “The fate of Bonaventure and Tracker aircraft should be considered in this paper in the overall concept of ASW operations,” a confused Vice Chief of the Air Staff told his superior, which he followed with “The assumption is that they will not be replaced as they become obsolete, although this is not so stated.”23 The exact reason why the aircraft carrier had not been considered in this paper came two months later when Brock’s Report announced that a replacement for Bonaventure was “beyond our financial resources.” Rather than building a new carrier, the RCN would be combining the capabilities of the Bonaventure and Prestonian class frigates into the Heliporter Frigates.24 Only one conclusion could be drawn from this pronouncement: the relatively short reign of the

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24 The Brock Report, DHH, 120.003 (D 32), 84, 99, 105-106.
flattop aircraft carrier would come to an end sometime in the mid-1970s with

*Bonaventure*’s decommissioning.

That was too much for Fraser-Harris to accept. As the self-appointed leader of the naval aviation advocates, the colourful and eccentric Fraser-Harris had made this branch of the service his life. Born in Nova Scotia, Fraser-Harris had grown up in the United Kingdom and spent his Second World War years flying for the Fleet Air Arm of the Royal Navy, after which time he was “lured away” so as to help the young Canadian naval air service take its first steps. After his transfer to the RCN in February 1946, Fraser-Harris then spent the better part of his career nurturing Canadian Naval Air and watching it mature. Having gone from prop-planes operating from HMCS *Warrior* and then HMCS *Magnificent*, to the roar of full-throttled Banshee jetfighters powering their way off *Bonaventure*, Fraser-Harris was fiercely proud of this branch of the service.25

These experiences ensured that his vision of naval aviation was very different than the one outlined in the Brock Report.

Fraser-Harris saw Brock as a key member of “a clique of small ship sailors” who were determined to relegate the future of naval air to flying helicopters exclusively off destroyer and frigate escorts.26 Brock’s own words indicate that Fraser-Harris was right. “I continue to press forward with enthusiastic sponsorship for helicopters,” Brock admitted in his memoirs, adding “sometimes, I believe, not making myself too popular in the process. I continue to ridicule all those airmen who were concerned with speed for speed’s sake.” Other comments – such as his claim that he “had for some time been a

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keen advocate of the use of helicopters” – clearly identify that Brock was, himself, an advocate. That was an odd contradiction coming from a man who wanted to curtail a practice that he saw as a detriment to the ship design process as well as naval policy in general. Yet the evidence that Brock was an advocate of the helicopter-carrying destroyer (DDH) concept is undeniable. Seeing the Sea King helicopter as the ultimate ASW weapon, the Vice Chief had to fight some “tough” and “decisive” battles to push ahead with a plan that would turn the RCN into a DDH-based navy. With the exception of the General Purpose Frigates, it was his intention for all other surface ships – the St. Laurents, Restigouche, and Mackenzie class conversions as well as the future heliporter frigates – to fly the Sea King, and Brock claimed he had to force a number of officers to accept this idea:

Now look here you fellows, whether you like it or not, I intend to recommend that we extend the range of our anti-submarine operations by carrying at least one helicopter in every new class of ship that we build.

These were strong words from a man who was critical of ship advocacy. For Brock, however, there was no paradox. Although he claimed responsibility for coming up with the helicopter-carrying destroyer (DDH) concept, the truth was that Brock was actually following orders.

Rayner was not the mastermind behind the helicopter-carrying destroyer concept either, but he was such a firm believer in its potential that the Chief of the Naval Staff’s planned force structure left no room for aircraft carriers. His future navy would consist of 26 DDHs (7 St. Laurent, 7 Restigouche, 6 Mackenzies, and 6 heliporter frigates) that

27 Brock, The Thunder and the Sunshine, 81.
28 Ibid, 77-78.
would work closely with the air force’s long-range shore-based maritime patrol aircraft. The General Purpose Frigates and their guided missiles would defend these DDHs from air threats while the submarines would operate on the forward flanks acting as barriers to scout and attack hostile submarines. It is easy to see why the naval carrier advocates disliked this force structure so much: particularly since the aircraft carrier’s helicopters would be dispersed throughout the fleet’s destroyers and frigates; its fighters replaced by the General Purpose Frigate’s missile systems; and its twin engine Trackers made redundant by the maritime patrol aircraft. But remarkably Brock was not entirely happy either.

Rayner’s plan of pairing up the maritime patrol aircraft with the helicopter-carrying destroyer, along with moving the carrier’s Tracker aircraft ashore to operate with the air force’s Argus and Neptunes, was a significant departure from the current preferred tactical doctrine of wedding these aircraft to friendly submarines.\(^{29}\) The naval air advocates disliked the new concept because it rendered the aircraft carrier obsolete, while Brock simply did not see a need for maritime patrol aircraft at all. Illustrating his total faith in the helicopter, the Vice Chief continually argued that the RCN’s aviation requirements for ASW could be met exclusively with Sea King’s operating off destroyers.\(^{30}\) Brock was wrong. While he recognized that the Sea King had a relatively short endurance of 4 hours, Brock claimed that it was possible to always keep a helicopter on station providing the navy had enough of them. The flaw in his plan, however, was that it did not take weather into account. Trials on HMCS Ottawa had

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\(^{30}\) R.J. Sutherland, Report of the Ad Hoc committee on Naval Objectives, 16 November 1961, LAC, RG 24, Accession 1983-84/167, Box 151, file 1279-162; Naval Board meetings, 20, 22, 26, 27 September, 3, 4, 6
suggested that upper safety ranges of destroyer-launched helicopter operations consisted of sea states between 12 to 18 feet, winds between 35 and 45 knots, visibility of $\frac{1}{2}$ to 1 mile, and a ceiling of 200 feet. A five-month weather trial further identified the degree to which environmental factors rendered DDH flight operations impossible:

- JAN – 4 % or more
- APR – 6 % or more
- JUN – 15 % or more for Nova Scotia, 20 % or more for Newfoundland
- OCT – 3-5 %

These figures were too high for DDH proponents to accept Brock’s argument. The fact maritime patrol aircraft came from numerous bases over a wide geographic area ensured they could always get airborne, and that along with their endurance, heavy payload, and ability to fly in adverse weather conditions, convinced most DDH advocates that these aircraft were the best partner for their platform.

Fraser-Harris quickly recognized that the pairing of the maritime patrol aircraft to the DDH represented a threat to the aircraft carrier. Now that he was serving as the Assistant Chief of the Naval Staff (Air & Warfare), Fraser-Harris was determined to do whatever it took to save carrier aviation. His initial plan consisted of two parts. The first was to continue a campaign he had been waging against the air force acquiring additional long-range maritime aircraft, while the second was to alter the Heliporter Frigate to fit his vision of a multi-purposed, flattop carrier capable of operating fixed wing aircraft as well as helicopters. The irony of this situation is hard to overlook. It was Fraser-Harris, after all, who had suggested that the RCN look into heliporter frigates as a means to stave off early opposition to the General Purpose Frigates from DDH proponents back in January

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10, 18 October, 10 November, 12 December 1960, DHH, RCNHS fonds, 81/520/1000-100/2, Box 25, file 5.
31 Landing the CHSS-2 on the DDE, nd [circa 1963], DHH, 71/278.
1961. In reality, Fraser-Harris had been disingenuous at that time. While he fully supported the idea of converting of the St. Laurents, Restigouche and Mackenzies into DDHs, he never agreed with a new helicopter-carrier based on a frigate design. Instead, he had introduced this concept with the full intention of turning it into the flattop platform that he truly wanted, and it did not take long before he began to act.

Fraser-Harris had known for some time that acquiring a replacement carrier for Bonaventure was going to be a hard sell. Aircraft carriers were expensive and that made them unpopular with the army and air force; so much so, that when the characteristics for the short-lived “commando carrier” were ready on 12 December 1960, Fraser Harris argued that the name of the vessel should be changed to the more palatable sounding “support ship.” “This has been done,” Fraser-Harris explained, “not only to get away from the traditional concept of an aircraft carrier, which has unpopular inter-service implications, but also because… she is capable of employment in a variety of roles, not necessarily of a combative nature.” The commando carrier was soon abandoned, but Fraser-Harris’ comments were significant because they represented an early manifestation of a strategy to pitch the aircraft carrier’s multiple role capability as a means to turn the heliporter frigate into a flattop.

The growing debate over providing the fleet with a greater degree of versatility was fertile ground for Fraser-Harris and the naval air patrons. Their argument was simple: the General Purpose Frigate fell far short of the type of versatility the RCN needed to support United Nations operations. Only the aircraft carrier had the size and hardware to make an effective contribution to anti-submarine warfare while providing the

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32 DNSR (Fraser-Harris) to ACNS (A&W), 6 January 1961, LAC, RG 24, Accession 1983-84/167, Box 4028, file 8885-1, v.4; Eric Grove, Vanguard to Trident, 249 - 250.
facilities to carry and land troops properly as well as protect them once they were ashore. Many individuals within the RCN disagreed, but the naval aviation proponents received some unintended support from the army over the summer of 1961. An army memo, which outlined their requirements from the navy “for operations other than a major nuclear war,” set off a volley of activity at Naval Headquarters. Aside from their current one thousand-man “standby force” assigned to potential UN operations, the army – noting that it was being influenced by “international trends” – was also preparing for scenarios in which a large contingent would be sent to Europe to fight a limited war against the Soviets.33

Events in Europe were indeed weighing heavily on the Canadian army’s thinking in 1961. The massive defection of East Germans to West Berlin throughout the 1950s was proving an embarrassing thorn in the Soviet’s side, and their decision to intervene produced a global crisis that confirmed the Kennedy administration’s commitment to flexible response. Rather than threatening nuclear war, Kennedy countered the Soviet’s posturing over Berlin by increasing the US armed forces’ manpower levels, partially mobilizing the forces in being, and finally planning large-scale re-deployments of conventional forces to Europe.34 As an alliance partner, Canada began making similar preparations. Two months into the Berlin crisis, Cabinet was considering the addition of 30,000 personnel to the military’s current manpower ceiling of 120,000, as well as the immediate deployment of 1,100 troops to bring the Canadian European Brigade to full

Other NATO countries also reacted, and the possibility of the Berlin crisis escalating into a conventional limited war allowed Kennedy to pressure Premier Khrushchev without resorting to nuclear threats.

The Berlin crisis of 1961 had convinced the US defence secretary, Robert McNamara, that Europe was the spot where a confrontation with the Soviets would most likely occur, and that had important ramifications for NATO’s naval strategy. While this would require an increase in ASW forces to protect troop convoys, it also gave the aircraft carrier a new lease on life. The previous doctrine of massive retaliation had almost spelt the end of the carrier as ballistic missiles had replaced their strategic role of assisting Strategic Air Command bombers to deliver nuclear weapons to targets deep inside Russia. Now, however, flexible response created a need for carriers to respond to crises in the third world as well as a potential limited war in Europe. With McNamara placing such heavy emphasis on projecting power ashore, both the American and British navy’s “statements on naval policy kept returning to the central importance of amphibious warfare in the new naval strategy.”

Rayner and Brock did not believe the RCN could afford a versatile force that included aircraft carriers, but since their principal allies were taking such a hard look at amphibious warfare it was difficult for them not to do the same. At the very least, the attention the alliance was paying to this topic meant that it warranted some type of exploration by the RCN.

This was good news for Fraser-Harris’ campaign to increase the aircraft carrier’s profile in the RCN. It was obvious to Fraser-Harris that the current ASW fleet could not respond to the demand that limited war situations would place on the RCN, particularly

36 Grove, Vanguard to Trident, p. 249 – 250; George Baer, One Hundred Years of Sea Power, 359-366.
when the army was predicting that a European reaction force would consist of 4500-5000 troops and 1200 vehicles (including 50 tanks). Questions about the merchant marine and air force’s ability to transport such a large force led to speculation that the navy would have to help. As a result, the navy needed ships that not only could respond to limited war situations involving the landing and protection of UN forces, but also that could carry troops or equipment for a large-scale conventional deployment to Europe. Many in the RCN did not believe that flattop carriers were needed to meet this requirement and instead argued that a reduced infantry battalion could be transported on either Bonaventure or the future supply ship, HMCS Provider, in company with the four heliporter frigates. The latter option was particularly attractive as it was further identified that the heliporter frigates could accommodate 200 troops in the hanger and still carry six helicopters for ASW duties. This, along with the General Purpose Frigate’s apparent capability to carry 200 troops, would be sufficient to meet any requirement for limited war situations. But the true significance of these plans was that they represented an attempt to work a limited war capability into an ASW force without the need to acquire aircraft carriers.

The naval aviation advocates were not impressed. The idea that the current design of the heliporter frigate could cope with limited war situations was complicating their plans of turning it into a flattop aircraft carrier. But developments involving British investigations into Vertical Short Take Off and Landing (V/STOL) jet aircraft soon gave their campaign to acquire a flattop a sudden boost. This experimental aircraft, which

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would eventually evolve into the Harrier “jump-jet,” offered the RCN a strike fighter capability that could protect ASW forces from air threats as well as cover troops participating in UN or NATO operations.\textsuperscript{39} Doubts on whether this promising fighter could operate from the heliporter frigate offered the naval air proponents an opportunity, explaining why the Director of Naval Aviation Requirements, Captain VJ Wilgress, asked Davis “for feasibility and probable form of a ship designed to carry VTOL aircraft.”\textsuperscript{40} Although more expensive and larger than the heliporter frigate, the true significance of this study was that it found the flattop to be a potentially acceptable design to meet the RCN’s needs.

A meeting held in December 1961 to discuss the possible configuration of the “six additional RCN Ships to be constructed in 1968-1970” further drove this point home. While the frigate concept – consisting of an 18 to 22 knot vessel to accommodate 15 Sea King type helicopters, long range hull-mounted and variable depth sonars, and finally one Tartar and two Maulers – still dominated the design’s planning, there were signs that a flattop competitor was starting to take shape. In particular, the suggestion to investigate the future installation of a catapult capable of launching 30,000-pound aircraft, which could only be met by an aircraft carrier, was suspicious.\textsuperscript{41} Seven months later, Commodore R.P. Welland was more direct, telling Davis that “the most likely surface ships to be built following the GP Frigate is a 10-14,000 ton flat top helicopter-VTOL-

\textsuperscript{38} Davis (DG Ships) to DNSR, 8 June 1961, Ship-borne Force for UN Operations, LAC, RG 24, Accession 1983-84/167, box 3922, file 8372-1; WM Ogle (A/DSDC) to DG Ships, Canadian Army Requirements for RCN Support 1961-85, 27 June 1961, LAC, RG 24, Accession 1983-84/167, Box 3922, file 8372-1.
\textsuperscript{39} “Hawker P 1127: V/STOL,” Various Correspondence, 1960-1965, PRO, Department of Scientific and Industrial Research (hereafter cited as DSIR), 23/27604.
\textsuperscript{40} DG Ships to DNAR, VTOL Carrier – First Impressions, 28 September 1961, LAC, RG 24, Accession 1983-84/167, Box 3922, file 8372-1.
\textsuperscript{41} Commander J.D. Lowe (A/DNOR) to DG Ships, 15 December 1961, LAC, RG 24, Accession 1983-84/167, Box 3922, file 8372.
fighter carrier.” Welland, who would become a strong patron of naval aviation, went even further by arguing that he had grave doubts about the heliporter frigate. “In my view it is not likely that we would build a destroyer type ship calling for 60,000 HP [horse power]” he instructed Davis, continuing with his ultimate conclusion that the “small aircraft carrier” was the way to go.42

The V/STOL’s ability to operate off a small flattop design was the breakthrough that the naval air advocates needed. DG Ships had been asked to consider a number of larger carriers (including one that was a staggering 53,000 tons), but, thanks to Naval Board guidelines, all were deemed too expensive and big for the RCN to man and operate. The small carrier was different. The incredible potential of V/STOL aircraft to operate from a “10,000 ton helicopter-VTOL fighter carrier” was too great to ignore.43 As a result by the fall of 1962 DG Ships had agreed to begin a serious investigation of a small flattop concept alongside the current manifestation of the 5,000-ton heliporter frigate. While the V/STOL had turned the small flattop into a credible design, Davis was nevertheless nervous. He was aware that the naval aviation advocates were using the V/STOL as a means to sell a small flattop carrier to the senior staff. The problem was that the V/STOL was still in a formative stage of development and he saw many risks in developing a ship based on a speculative technology.44 Time would prove Davis’ instincts correct. The P 1027 and P 1154, which were the prototypes for the Harrier, had teething troubles and were not ready for operational use until July 1969. Concerns about

42 ACNS (A&W) (Welland) to Davis, 19 July 1962, LAC, RG 24, Accession 1983-84/167, Box 3922, file 8372-1.
43 J.G. Jones to DGS 12 September 1962, LAC, RG 24, Accession 1983-84/167, Box 3922, file 8372-1; DG Ships to NEDIT, 14 September 1962, LAC, RG 24, Accession 1983-84/167, Box 3922, file 8372-1.
44 Davis to DNAR, Small Carrier Concept, 5 December 1962, LAC, RG 24, Accession 1983-84/167, Box 3922, file 8372-1.
development did not bother the naval air advocates who saw the excitement and interest in V/STOL concept as the best means to get what they wanted.

Davis’ caution towards the flattop design would have been worrisome to the naval air supporters and would have stood as an illustration of how many officers would need to be convinced of the small carrier’s virtues over the heliporter frigate. Both Wilgress as well as the DG Aircraft, Captain J. Doherty, did their best to fortify their position by elaborating on the “excellent attempts to shed some light on the Small Carrier/ VTOL aircraft concept.” Realizing that his naval aviation colleagues had done a good job of showing how the concept “appears an ideal way to provide high performance aircraft from a relatively small ship,” Wilgress nevertheless believed that they had to go even further. Concerned that important operational considerations were being overlooked, Wilgress emphasized that the Royal Navy and USN saw a need to have aircraft carriers until the end of the century and that this view “would logically apply to other navies as well.” Unlike some naval aviation advocates, however, Wilgress was willing to admit that the RCN had limitations:

For small navies which find from the cost point of view and the ‘all the eggs in one basket’ problem, that large carriers are impractical while the need for carrier aircraft still exists, then the V/STOL aircraft would appear to be the only answer. To summarize, it would appear that V/STOL aircraft provide a means for small navies to have the necessary carrier aviation without aircraft weight penalty plus a greater number of aircraft per carrier.45

Such arguments were convincing to the men at DG Ships. While the heliporter frigate was deemed a suitable platform for multiple helicopter ASW operations, its growth

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potential was low; and that meant “a flat-top is the logical solution” if the RCN wanted to leave the door open to the future acquisition of V/STOL aircraft.46

The Naval aviation advocates had won a considerable victory by garnering attention in the V/STOL. Ironically, in his 1961 Report, Brock had actually tried to use V/STOL as a way to drive the RCN further away from acquiring another aircraft carrier.47 By emphasizing that the V/STOLs was an experimental fighter Brock argued that it was the wrong time to consider the acquisition of a small flattop carrier. The naval aviation advocates had defeated these efforts, and as a result by early 1963 the RCN found itself shopping for a more generic “Heliporter” from which the frigate and flat top concepts had become competitors.48 This was something of a coup by those who wanted to retain the RCN’s aircraft carrier capability. Instead of representing the end of their dream as Brock had intended, these officers had managed to keep their aspirations alive by turning the small carrier into a viable alternative for the Heliporter. Nevertheless, this fluidity in the design was placing a tremendous stress on DG Ships where it was found that the two competing concepts had produced eleven different sketches. Already overworked with the General Purpose Frigates, Davis saw that DG Ships was getting caught in the middle of what he called the growing “‘frigate’ type versus the ‘Flat-top’ type” debate and he told his superiors as much. In his opinion the program was “clearly difficult from the point of view of design workload” and as a result he impressed upon them that it was time to “think very carefully about our overall capability in this

47 Brock Report, DHH, 120.003 (D 32), 99 and Fraser-Harris to Robbie, 25 July 1993, IWM, Fraser-Harris Papers.
regard.” He was right. Direction on this matter was required and he hoped that an upcoming Staff Study on the Heliporters would bring closure to this developing debate. Those expectations, however, were quickly dashed as the Study’s conclusions only succeeded in creating more acrimony.

First released on 29 March 1963, this study narrowed the frigate and flat top concepts down to two designs each. The first frigate design – classified as the DDH (Small) – was a 4,200 ton vessel that could carry 6 helicopters, while the second – designated as the DDH (Large) – represented a ship of 5,000 tons with 8 helicopters. Likewise the flattop concept was split between a 15 helicopter CVH (Small) of 10,000 tons and a larger 18,000 ton CVH (Large) that could accommodate a mixture of rotary and fixed wing aircraft. The main purpose of the study, therefore, was to choose one of these arrangements. Important trials conducted by the United States Navy’s Naval Air Development Center had shown that it required at least 2 airborne HSS-2 Sea King helicopters to hunt a 35-knot Soviet nuclear submarine. Moreover, a vessel needed at least 8 helicopters onboard to keep 2 on station for a seven-day period or 15 to do the same for an indefinite period. The significance of these results was that they allowed the study group to select the “DDH (Large)” and the helicopter aircraft carrier “CVH (Small)” as the top two contenders. After measuring a number of other factors – such as cost, growth potential and future naval tasking – the Staff Study further narrowed the selection by concluding that:

Although the larger vessel (CVH) could be provided at less cost in money and manpower per helicopter carried than the frigate (DDH), operational factors of

flexibility and fleet composition would seem to swing the balance in favour of a larger number of smaller ships carrying fewer helicopters but providing greater detection capability.  

Ostensibly a vindication of the Brock Report and his “cheap and many” concept, the helicopter-carrying destroyer (DDH) had clearly won out over the helicopter aircraft carrier (CVH). In reality, the staff study settled little.  

The belief that the DDH (Large) was the better bargain to improve the fleet’s submarine hunting capability indicated the Staff Study was placing a greater emphasis on anti-submarine warfare. Indeed, the helicopter aircraft carrier (CVH)’s capability to support air defence, troop transport, and ground attack operations for limited war situations received little attention in the report. It was for that reason Fraser-Harris was quick to challenge the assumptions – ones that he claimed were “doubtful or invalid” – upon which the Heliporter Report was based. Those “assumptions,” however, lay at the heart of the Brock Report and so Fraser-Harris was about to attack more than just the Heliporter Frigate concept. Challenging Brock’s powerful personality as well as his future vision of the navy was a risky venture, because as one officer so aptly put it: “Jeff got along better with those who acknowledged his superior intellect and agreed with his point of view.” Yet, in what constituted a brilliant tactical move, Fraser-Harris made a deliberate and specific request that the Heliporter design first be discussed at the Naval Staff level before being presented at the Naval Policy Coordinating Committee where Brock’s authority as Vice Chief was absolute. Giving Fraser-Harris some much needed

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52 R.P. Welland, This will have to do, Private Memoirs, HMCS Bytown Officer Mess Library, Chapter, “Commander of the Fleet,” 28.
maneuvering room, these key Naval Staff meetings allowed him to hammer out his arguments for what was shaping up to be a potentially nasty showdown with Brock.

Standing up to the Vice Chief was a key element of his campaign to save carrier aviation, but in a larger sense Fraser-Harris knew that Brock was merely the mouthpiece for “a particular band of saboteurs [who] took over the destruction of what was becoming an internationally respected branch of the RCN [naval air].” Aside from Brock, the membership of this “small ship” clique, according to Fraser-Harris, also included Captain T.C. Pullen (Director of Naval Ship Requirements), as well as Rear Admiral W.M. Landymore (the Flag Officer Pacific Coast). This list sheds light on why Fraser-Harris was about to use methods that became more desperate and unorthodox as time passed. Fraser-Harris was worried that his dream was being scuttled by men who simply “resented the whole idea” of naval carrier aviation and were stuck in the Second World War mentality that the RCN was an anti-submarine warfare destroyer escort navy only. Even Rayner did not escape his sights, as the Assistant Chief of the Naval Staff (Air & Warfare) later argued that the Chief of the Naval Staff, “[while] giving lip service to aviation, …was basically a small ship man, unimaginative and narrow.” And with that, Fraser-Harris was heading to the Naval Staff with an agenda that would mark the opening battle in a year and a half long conflict that would ultimately end with a design that repeated the Annapolis class DDH. 53

This was the situation facing the RCN in the spring of 1963 as the supporters of naval air – who were the most vocal group – were about to square off against the enlarged DDH. That concept threatened the future of naval carrier aviation and they

53 Fraser-Harris to Robbie, 25 July 1993, IWM, Fraser-Harris Papers; Fraser-Harris to Ralphe, 13 September 1993; Fraser-Harris to Robbie nd, DHH, 93/492, Fraser-Harris Papers.
knew it. Indeed, for Fraser-Harris the two sides of the Heliporter debate were merely mantles floating on top of a much more serious fissure that cut deep into core of the post-war RCN. Opening a broader rupture that he described as an “old gap… between aviators and sailors,” the discussion over the Heliporters represented the early tremors in a larger discourse that was about to blow to the surface with volcanic force. Whether the RCN would abandon naval carrier air and become a DDH-based navy centred on bigger Heliporter Frigates was the true issue facing the RCN. And it was one that would not be settled until *Bonaventure* was decommissioned in 1969 (without replacement) and the DDH 280s became the fleet’s operational centerpieces in the mid-1970s. This future was exactly what Fraser-Harris was trying to avoid in the spring of 1963 when he first tried to alter the Heliporter Staff Study’s conclusions.

Fraser-Harris’ bid to challenge the findings of the Heliporter Staff Study got off to a rocky start. Although it is impossible to determine exactly where each member stood on this issue, the minutes from the 25 April 1963 meeting clearly bear out the deep split within the Naval Staff between those who wanted the DDH concept as opposed to the helicopter aircraft carrier (CVH) supporters. With both sides voicing “very strong” opinions for their concept over the other, this meeting ended in a stalemate in which the Naval Staff remained “of divided opinion as to which was considered preferable, the DDH – Frigate Hull (Large) or the CVH Heliporter – Aircraft Carrier Configured (Small) or (Large).”\(^{54}\) No decision could be reached, and yet this first scrum had taught the Assistant Chief of the Naval Staff (Air & Warfare) a valuable lesson. Unable to win the

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\(^{54}\) Naval Staff Minutes, 25 April 1963, DHH, RCNHS fonds, 81/520/1000/-100/3, Box 38A, file 3. Out of the twelve naval officers attending this meeting it is only possible to list Fraser-Harris, the DNAR, Captain V.J. Wilgress, and the DN COM, Commander W.H. Howe as having come from the “carrier camp” while Pullen and likely Russell represented resistance coming from the DDH supporters.
DDH supporters over to his way of thinking, Fraser-Harris changed tactics by arguing that the Heliporter debate was far from over and because of that the merits of both the helicopter aircraft carrier (CVH) and helicopter carrying destroyer (DDH), should be represented to “higher authority.” In doing so, Fraser-Harris was now using the deadlock that he had just created as a means to justify the need for compromise through amendments to the Staff Study.

A three-week hiatus allowed the Assistant Chief of the Naval Staff (Air & Warfare) much needed time to plan his next move and he obviously gave the matter much thought. On the surface at least, his first option appeared to contain a surprising concession, as Fraser-Harris offered to support the DDH (Large) Heliporter. The price for doing so, however, was the Naval Staff’s endorsement for a policy of replacing Bonaventure with a vessel of equal or greater capability. If that proved impossible, then he would continue to push for the second option of the CVH Heliporter. The creativity of these so-called “solutions” was that in either case the RCN would acquire an aircraft carrier, thereby ensuring the survival of the branch. In reality, however, the Naval Staff was unprepared to go as far as to overturn the Brock Report’s conclusion not to replace Bonaventure. Fraser-Harris would have to fight that battle with Brock on his own, but he nevertheless won a partial victory at the Naval Staff level as it was agreed that the staff study should be amended to give the helicopter aircraft carrier (CVH) greater prominence.

The changes to the staff study were significant. Gone was the strong recommendation to acquire the DDH (Large), replaced by a rather ambiguous conclusion that seemed more of an attempt at appeasement rather than a suggested course of action:
In considering operational factors of flexibility and employment in the Fleet, a large number of Frigate type heliporters [DDH (large)] carrying fewer helicopters, but providing a greater overall detection capability in the Fleet would seem preferable to fewer carrier type heliporters. However, this improved anti-submarine effectiveness must be weighed against the need for replacement in the Fleet of the aircraft capability and versatility presently inherent in BONAVENTURE.\textsuperscript{56}

Other amendments followed, including the omission of an important proviso that the CVH Heliporter was too large and expensive for the RCN. Fraser-Harris knew exactly what he was doing. Ultimately he wanted to see the 16,000 ton Bonaventure replaced with a large fleet carrier – preferably a modified 32,500 ton Essex class escort carrier (CVS) – but it was not the right time to make a pitch for this particular class given that he was already facing an uphill battle with Brock. Instead, he would remain focused on building a case for a Canadianized version of the USN’s Iwo Jima Class – a helicopter-carrying assault ship (LPH) – which represented his top candidate for the CVH concept. Realizing that the 18,000 ton Iwo Jima would be an equally hard sell, the Assistant Chief of the Naval Staff (Air & Warfare) had specifically instructed Davis to “keep it modest” when the DG Ships team was drafting a cost assessment on this class.\textsuperscript{57} Better yet, in a further attempt to make the Iwo Jima more attractive, Fraser-Harris ensured that earlier references to the CVH heliporter being “too expensive” were removed from the Staff Study. And with that Fraser-Harris had got all that he wanted and more. Not only was the CVH heliporter presented as a viable competitor to the DDH (Large) heliporter, but also the staff paper was now reopening a door that Brock had thought shut.

\textsuperscript{55} Naval Staff Minutes, 16 May 1963, DHH, RCNHS fonds, 81/520/1000/-100/3, Box 38A, file3.
\textsuperscript{56} “Amended Staff Study of the Operational Requirements for a Heliporter,” 3 June 1963, DHH, 73/750.
\textsuperscript{57} Davis to DNOR, 20 February 1963, LAC, RG 24, Accession 1983-84/167, Box 4030, File 8885-15 Vol. 1.
It took four separate meetings during the last week of May 1963 for the Naval Policy Coordinating Committee to draw a conclusion on whether to adopt the helicopter-carrying destroyer (DDH) or helicopter aircraft carrier (CVH) concept for the ship replacement program. For his part, Fraser-Harris did a good job in presenting his case. The main thrust of his argument was that the helicopter aircraft carrier (CVH) concept offered the RCN greater versatility and flexibility whereas the selection of the DDH would leave the service with “almost no capability except in A/S Warfare.”

Serving as another example where future capabilities were used as a means to justify an aircraft carrier, Fraser-Harris was asking the Naval Policy Coordinating Committee to look beyond Brock’s balanced anti-submarine warfare fleet. It is important to stress that as Assistant Chief of the Naval Staff (Air & Warfare), Fraser-Harris was not opposed to the RCN’s anti-submarine warfare role or the acquisition of guided missile destroyers to protect that force. He was, after all, one of the General Purpose Frigate’s first supporters as well as one of the strongest proponents of converting the St. Laurent, Restigouche, and Mackenzie class destroyer-escorts into helicopter-carrying destroyers (only the first of the three classes was converted). In fact, Fraser-Harris was a perfect example of the overlap that existed between the groups of ship proponents. And so he was not against acquiring what he considered “small ships” providing that financing them did not sink his future carriers.

Brock saw exactly what Fraser-Harris was trying to do, and despite the Vice Chief’s fearsome reputation he handled the situation with considerable poise. When presented with the Assistant Chief of the Naval Staff (Air & Warfare)’s “compromise” of

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59 Milner, Canada’s Navy: The First Century, 245.
building both the smaller DDH heliporter along with aircraft carriers, Brock quickly pointed to the Medium Term Planning Guide which served as the justification for the proposed anti-submarine warfare fleet. The importance of that document was that it had assigned the replacement of obsolete anti-submarine warfare vessels to meet NATO force goals as the RCN’s top priority, whereas support for versatile limited war operations was relegated to the fourth position on a five-item list.60 Placing the debate into this larger context was a wise move as Brock’s logic was all too easy to follow. The chance that their political masters would approve a program that called for both DDHs as well as expensive aircraft carriers was remote. Brock was right, of course, but it was his next move that effectively took the wind out of Fraser-Harris’ sails. Although the Brock report had questioned the wisdom of replacing Bonaventure, the Vice Chief suddenly acknowledged the value of “fighter defence” and so was willing to support a study on future aircraft carrier procurement. The catch, however, was that this study would be the subject of an independent submission to the Naval Policy Coordinating Committee and therefore separated from the Heliporter debate. For the greater good of the RCN’s current needs, the carriers would have to wait until after government approval for the enlarged DDH had been secured.61

Brock’s sudden willingness to explore the carrier question had caught Fraser-Harris flatfooted. His ultimate goal was to get some type of carrier worked into the current program, but Brock’s promise for a future study on Bonaventure’s replacement had served to outflank the Assistant Chief of the Naval Staff (Air & Warfare). Better yet, the Vice Chief also managed to link the helicopter aircraft carrier (CVH) concept to

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Bonaventure’s potential successor and by so doing left the DDH as the only option for the present Heliporter design. It is extremely unlikely that Brock actually wanted to see Bonaventure replaced since he later admitted that jet aircraft “were of little use to a navy specializing mainly in anti-submarine warfare.” As such, it was an inspired tactic that successfully made Fraser-Harris look like the one who was being inflexible. References in Naval Policy Coordinating Committee minutes that the “ACNS (A&W) felt unable to agree that the consideration of a heliporter programme could be divorced from consideration of the replacement of BONAVENTURE” or that it was “folly to study them in isolation” reeked of desperation. Indeed, Fraser-Harris had good reason to worry as getting the money for a new aircraft carrier would undoubtedly prove a hard sell to a cabinet that would have to shell out half a billion dollars for the heliporter DDH program. As a result, the Assistant Chief (Air & Warfare) was left scrambling after the Naval Policy Coordinating Committee gave its blessing to the DDH concept. The only thing he could do was to act upon Brock’s apparent compromise that the RCN ask for “guidance from the government regarding the future of carrier aviation.” With the helicopter aircraft carrier (CVH) now linked to Bonaventure’s future, Fraser-Harris’ growing desperation was obvious when he penned a note to the Director of Naval Operational Requirements that they needed to obtain this government guidance with “ALL SPEED please.”

The future was not nearly so bleak. Much to Rayner’s and Brock’s chagrin, events in Ottawa – both in DG Ships as well as on Parliament Hill – were about to

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62 Brock, The Thunder and Sunshine, 77.
rekindle this smoldering debate over capabilities, allowing Fraser-Harris and his
supporters to once again make a pitch for a replacement carrier. Although it was never
passed on to the Naval Board, there were rising doubts within DG Ships as to whether the
“DDH (Large)” was actually a realistic design. Earlier studies had rejected the idea that a
frigate-sized hull could accommodate the original requirement for 14 helicopters, and
newer estimates were suggesting that the design was growing “considerably larger than
those previously envisaged for carrying 8 helicopters.” This did not come as a surprise to
Davis. Three months earlier he had worried that the hanger and flight deck areas required
for so many helicopters would likely lead to a ship the size of the French naval vessel,
Jeanne d’Arc. Also capable of carrying eight helicopters, this foreign-built, 10,000 ton
heliporter strongly suggested that DG Ships’ hopes of constructing its own version at half
the size was totally impractical; the more so since the RCN wanted to cram a variable
depth sonar (VDS), and a point defence missile system (PDMS) into their ship concept.64
While the idea of flying 8 Sea Kings off the DDH (Large) may not have been a realistic
concept, it is unlikely that the costly program would have survived once Paul Hellyer
became defence minister in April 1963 (in fact it did not take long before Hellyer’s gaze
was firmly fixed on the General Purpose Frigates).

No one at DG Ships saw the early clues that the Liberal victory spelt trouble for
their beloved General Purpose Frigate. Indeed, Davis was not the least bit concerned
when the minister hinted within a few days of taking office that he would be placing a
“freeze” on all capital acquisition programs. For DG Ships this was the product of a new

to DNOR, 08 February 1963, LAC, RG 24, Accession 1983-84/167, Box 4030, File 8885-15, Vol. 1; DG
Ships to DNSR, 03 April 1963, LAC, RG 24, Accession 1983-84/167, Box 4030, File 8885-15, Vol. 1;
Brief for VCNS, 12 March 1964, DHH, NPCC Papers, 79/246, Folder 58.
government needing time to assess ongoing projects – a process that Davis light-heartedly called the “pause that refreshes.” It was for that reason Davis raised little objection to the prospect of delaying the program even if it were “for some three months.”

Worse yet, no one reacted to an Ottawa Journal report that specifically used the General Purpose Frigates as an example of how the new Defence Minister intended to take “a cold hard look” at current defence programs. At the time Davis and his team did not understand these “serious omens” because, in his words, “we were not bright enough – or possibly too busy getting on with the job – to realize the full impact of these remarks.” They were not alone. Other representatives on the General Purpose Frigate’s Executive Committee – namely those from Department of Defence Production, Finance Department and Treasury Board – were equally aloof, as they too saw the minister’s comments as a bid for time to get familiar with the program. Believing that Hellyer’s order was only temporary, the committee turned to other pressing issues such as the personnel shortages that Davis claimed was plaguing his directorate. With DG Ships 12 men short and Director General Fighting Equipment requiring another 10 technical experts, Davis made a powerful argument that the lack of personnel would have perhaps the greatest “detrimental effect upon the progress of work on the GP Frigate Programme.” As it would turn out, he would not need the extra help. Hellyer had no intention of keeping the General Purpose Frigates and that would not only leave Davis

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without a program but also struggling to keep his best and brightest from abandoning the service.  

Davis’ conclusion that the Naval Board was “more alert than we workers” was unfounded. Like Davis, a number of Board members believed that the minister’s freeze would soon thaw. In fact, his immediate boss, Rear Admiral Caldwell, did not seem too concerned. His big worry was that there were certain long lead-time items that required contracts in May and June 1963 so that the “M date” [start-up date for the program] of June 1964 could be maintained. But with the majority of contracts due in August 1963, Caldwell did not believe that the minister’s planned delay would cause any irreparable damage to the program. Rayner agreed, and only asked that he “be informed when contracts are let or if progress is being delayed through their not being let.” It was the Vice Chief who best illustrates how the Naval Board did not understand the Liberals or their plans for the navy, admitting later in life he only “began to despair” after “the weeks rolled by and our naval program was not yet reinstated.” In fact, Brock had been so unhappy with the previous Conservative government that he had cast his ballot against them.  

But while the Conservative’s defence policy had been a disaster, the 1963 election did not bring the “sunshine” that Brock was seeking. Instead, it represented the “thunder” of a political storm that would soon engulf the General Purpose Frigate.  

Lester Pearson and his Cabinet were out to reform government as well as Canadian society. Social programs, official bilingualism and a fresh foreign policy would lead to significant changes in the way Canadians saw their nation. It was in that

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reformist zeal that Hellyer was determined to make the Canadian military fit this new Liberal image. The new social programs were not cheap and so Hellyer knew that the money to replace aging military equipment would have to come out of existing Department of National Defence resources. And that made the General Purpose Frigate a juicy plum for possible pruning from the military’s budgetary tree.\textsuperscript{69} Pointing to the sweeping conclusions of the Glassco Royal Commission on Government Organization, Hellyer was determined to achieve economies for new equipment - and make a name for himself - through the integration and eventual unification of the navy, army and air force into one service. For some astute observers the General Purpose Frigate program had little chance of surviving in this atmosphere of extreme financial stricture. Of course, the minister had other reasons for questioning the General Purpose Frigates. Rising costs combined with the fact that they were conceived under a Tory regime did not make it a Liberal-friendly program. Better yet, for a minister who was about to introduce revolutionary changes and did not trust military men, it also offered a chance to announce his presence with authority:

As my first step as minister, I resolved not to sign anything of substance for the first thirty days. I was well aware that civil servants and the military try to take advantage of the naivety of new ministers by presenting them with a rash of submissions “requiring urgent approval”. … A natural desire to cooperate can lead to a commitment of money in those early days, and this can limit the minister’s freedom to maneuver [sic] to such an extent that he becomes merely an unwitting passenger, rather than captain of the department ship. To avoid being taken captive I not only held firm but cancelled the general-purpose frigates that Gordon Churchill, my immediate predecessor, had ordered during the election… Perhaps the frigates were the type of vessel we needed, but what if they weren’t?

I didn’t know, and any delay in deciding just meant the question would become irrelevant.  

The problem for the navy was that Hellyer took his time before officially canceling the program and that would lead to conflict and mistrust at Naval Headquarters. 

There were a number of important groups – most notably the shipbuilders – who would be angry at a sudden decision to terminate the General Purpose Frigates. The public would also be suspicious and interpret such a transparent move as a partisan attempt to eventually substitute the Conservative program with a Liberal one. For many, that was exactly what the minister appeared to be doing. If Hellyer was building a case to justify the program’s cancellation, it did not take long before he got his first piece of hard evidence. Only weeks prior to the election, the Defence Supply Naval Shipbuilding Panel had observed that the overall estimate for the General Purpose Frigate was under review. Ready by late April, this estimate indicated an overall increase of $14 million which was the product of a more detailed costing for fighting and mechanical equipment. Having no idea that the program was secretly in trouble, the Defence Supply Naval Shipbuilding Panel simply acknowledged the new estimate and agreed to establish a joint National Defence/Department of Defence Production committee to review its findings. For the minister, the increased cost would help portray the General Purpose Frigate as a money pit. There was more bad news to come. 

It was not until mid-May before either the RCN, National Defence, or Department of Defence Production began to realize that the program was on the financial chopping block.

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70 Paul Hellyer, *Damn the Torpedoes*, (Toronto: McClelland & Steward, 1990), 33.


72 GPF Estimate # 7, DHH, Grant papers, 85/334, File 130; DSNSP meeting, 28 March 1963 and 07 May 1963, DHH, NPCC Papers, 79/246, Folder 16.
block. Unhappy with the “restriction” that he was “forced to place” on the General Purpose Frigate, the Deputy Minister of National Defence, Elgin Armstrong, had made special arrangements with his counterpart in the Department of Defence Production to keep the program going. Stressing that he was “anxious not to introduce any unnecessary delays into the programme,” Armstrong had allowed his staff to continue releasing contract demands “on the understanding, as you agreed, that no actual contractual commitments will be made.” Since they believed the program was only temporarily suspended, neither Deputy Minister saw any problem with letting these smaller commitments continue even if it was slowly obligating the government to the General Purpose Frigates. It was, however, pushing the spirit of the freeze and as such it sparked a strong reaction from the defence minister. Despite missing the earlier indications of trouble, the navy finally realized that something was wrong as Davis reported to Caldwell that:

> Today’s decision by the Minister putting a stop to all Contracts for the present, was passed to NA [Naval Assistant] /CNS who informed CNS. The latter (who did not know) appeared concerned and is, apparently, willing to intercede with the minister if the programme is in jeopardy. Our [DG Ships] feeling on this matter is as expressed at the meetings of the Senior Executive Committee, i.e. we can accept a reasonable pause for reflection – provided that, in some minor instances, contracts can be let for Engineering work to proceed… The above sentiments are particularly relevant to DG Ships.

Davis’s reaction makes clear a number of important points. First, Rayner was caught totally off-guard by this news. Hellyer’s apparent unwillingness to share his future plans for the RCN led the Chief of the Naval Staff to instantly mistrust his political master. Second, the freeze on the program – a term that was soon changed to a more official

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sounding “moratorium” – was complete and represented a real threat to the General Purpose Frigate. And third, Davis’ observation that Rayner was “willing to intercede” indicated that the Chief of the Naval Staff was going to fight to keep the General Purpose Frigates. At its next meeting the Naval Board made a point of emphasizing that there was “no acceptable alternative to the General Purpose Frigate.”

The members of the Naval Board were not the only ones circling the proverbial wagons around the General Purpose Frigate. On the orders of the Assistant Deputy Minister of Defence Production, W.H. Huck, Shipbuilding Branch quickly mobilized and prepared a number of powerful arguments against scrapping the program. They hit where Hellyer was most vulnerable, and that suggested the Department of Defence Production had a better understanding of what the minister was doing. Their message was direct: cancellation would have a devastating impact on Canada’s shipbuilding and defence industrial base. Specifically, the Department of Defence Production warned that modern warships required a complex network of planners, designers, technicians and skilled workers. Such infrastructure took years to build and required successive shipbuilding programs to maintain. Like Davis and his highly trained team of engineers, the Department of Defence Production knew that the more time that passed between programs the more probable this network was to fall apart. This put not only the system at risk but also the nation, as it was observed that, “the development of skills to cope with emergencies is as important and possibly more important than the weapons themselves.” That cut to the heart of the matter. Both the RCN as well as the

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75 Naval Board Meeting, 21 May 1963, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 3.  
Department of Defence Production’s predecessor, the Department of Munitions and Supply, had learned this lesson with bitter tears during the Second World War. In that instance, there were those who tried to warn Prime Minister Mackenzie King’s Liberal government in the prewar years about the need to maintain the shipbuilding industry. No one listened, and the country’s lack of preparations for war left Canada struggling to develop this infrastructure while at the same time trying to build large merchant and naval fleets. It simply did not work, and while the faces giving the warnings may have changed over that twenty-year period, the voices were much the same.  

Neither the RCN’s technical experts nor the ones at the Department of Defence Production were willing to remain silent with Hellyer sending such dangerous signals over the General Purpose Frigate. The problem was that Hellyer was not interested in their opinions. For the first eighteen months of his portfolio, the minister effectively suspended the Defence Council. With plans to integrate the three services, Hellyer saw little point in continuing a practice that gave the three service chiefs a direct forum through which they could perpetuate what he saw as a broken system. As a result, Hellyer’s first Defence Council did not take place until 6 July 1964 when the military was in the last stages of integration planning. Until that point, Hellyer dealt with the chiefs on an *ad hoc* basis while at the same time recruiting an inner circle of handpicked men that the *Ottawa Journal* colourfully characterized as his “core of Elite Advisors.” In doing so, Hellyer was mimicking the style of the US Secretary of Defence, Robert McNamara, a man with whom the minister admitted he “shared the unspoken bond of

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78 The 115th Defence council meeting was held on 21 January 1963 while the 116th was not convened until 06 July 1964. See, DDH, 81/609.
kindred spirits.” Indeed, McNamara’s “ruthless re-examination” of US procurement plans, his “outspoken clashes” with the Joint Chiefs, and his reliance on a group of civilian aides – known as the “whiz kids” – for advice, were all traits that were repeated in Canada. Hellyer understood that his senior chiefs were bound to resent “a clatch [sic] of civilian whiz-kids second guessing their decisions,” but he did it anyway, arguing that “their decisions often needed a thorough review….”80 Of course, the minister was perfectly within his rights to do so, but this action had consequences. The fact Hellyer often preferred to follow the advice of his elite advisors over those of his senior chiefs fostered much mistrust at Naval Headquarters. So, too, did the minister’s habit of calling for policy studies without giving a word of warning to his chiefs. As a result, the Naval Board was troubled when they discovered that Hellyer had instructed the Director of Operational Research, Dr. R.J. Sutherland, from the Defence Research Board, to do a cost-effectiveness study on the General Purpose Frigates.

Sutherland and his team analyzed other capital acquisition plans – such as the army’s Bobcat and the air force’s CF 104 replacement – and that made his review a commentary on the larger defence program. It was a good way for him to cut his teeth for the new defence minister believed Sutherland’s background in economics made him an ideal candidate to provide an informed and objective opinion.81 After crunching the numbers and digesting the facts, Sutherland found the General Purpose Frigate

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80 Hellyer, Damn the Torpedoes, 126.
particularly palatable. Of course, that conclusion should not be surprising, if one recalls that Sutherland had fully endorsed the General Purpose Frigate when he first reviewed Brock’s Report in December 1961. Much like his earlier assessment, Sutherland again saw through the excessive lip service paid to versatility in the Brock Report and recognized that the RCN was actually building a balanced anti-submarine warfare force. Nor was that all. Sutherland also tried to explain to Hellyer that the General Purpose Frigate was an integral part of that balanced anti-submarine warfare package:

The situation is therefore that while the threat from the air has increased, and must be expected to increase further, the ability of the RCN to deal with this threat has markedly declined. The original concept of the destroyer escort, that of a primarily ASW ship able to look after its own air defence, has gone by the board since these ships are now for all practical purposes helpless against attack from the air. …In the Canadian context, the GP Frigate is an ASW ship possessing an acceptable air defence armament. This is basically an up-dating of the original Canadian destroyer escort concept in [the] altered circumstances of an increasing threat from the air.82

More to the point, Sutherland’s conclusion was particularly significant because it placed both the General Purpose Frigate and Rayner’s force structure into their proper perspective. The General Purpose Frigate’s troop carrying and shore bombardment capabilities did add a small degree of versatility, but in Sutherland’s view that hardly made the RCN a truly flexible navy.

The Brock report’s emphasis on versatility was the window dressing designed to get the government to buy Rayner’s anti-submarine warfare fleet, and Sutherland was willing to help them make the case. Endorsing the direction that Rayner was taking, Sutherland stressed that smaller navies like the RCN should pick a “specialized” role for its forces and that anti-submarine warfare must be considered “primary in terms of a contribution towards the execution of alliance strategy.” This is not to say that he was
against achieving more versatility but he fully agreed with Rayner’s position that it never come at the expense of anti-submarine warfare. While he warned that the RCN should not become obsessed with NATO force goals (which is ironic given that Rayner was becoming infatuated with meeting these commitments) he argued that the Soviet submarine threat was the greatest menace to Canadian security. As a result, he repeated the observation that he had first made in 1961; namely, that the RCN’s “emphasis upon the ASW role… continues to be sound” and as such it was not the time to relax its commitments to SACLANT. In a larger sense, Sutherland told the minister that the navy was merely expanding on the RCN’s established role as an anti-submarine warfare fleet and that any versatility contained in the Heliporter frigate design [DDH (Large) or (Small)] was, like the General Purpose Frigate, an added bonus.

In Sutherland’s view only the CVH version of the Heliporter design, which he described as “an extremely versatile ship,” could provide the RCN with true flexibility to respond to brush fire wars. It is interesting that Sutherland had commented on the Heliporter debate, but the real significance of his General Purpose Frigate study was that it supported the underlying anti-submarine warfare focus of the Brock Report. That caught the attention of Fraser-Harris who, while delighted to see the General Purpose Frigates get such approval, was worried about Sutherland’s lack of enthusiasm for versatility. After all, in the Assistant Chief of the Naval (Air & Warfare)’s mind, the General Purpose Frigate was supposed to provide cover for an aircraft carrier, not enlarged DDHs. The problem was that Sutherland was minimizing the RCN’s role in responding to limited wars and that undercut one of Fraser-Harris’ key arguments for the retention of naval carrier air. It was for that reason the Assistant Chief of the Naval Staff

(Air & Warfare) could not resist the temptation of telling Sutherland exactly what he thought:

Throughout your paper there is continued emphasis on the priority which must be given to ASW in the North Atlantic. ... and while you quite clearly state that a measure of versatility is desirable ... throughout you suggest that this should always be looked upon as a desirable addition to our capabilities, if it can be obtained without detriment to the ASW North Atlantic at a minimal cost. I personally cannot see this from an operational point of view... the probability of Canadian naval involvement in a limited war is far greater than the probability of Canadian involvement in conventional war. It is here that I for one on the Naval side, find fault with the SACLANT requirement that we concentrate upon ASW Escort vessels for this is but one of the ASW tools, and probably not the best suited to deal with this type of threat.83

Fraser-Harris’ message was all too clear. He was in the midst of fighting to keep naval carrier aviation alive, and yet Sutherland’s report with its emphasis on anti-submarine warfare and the need for escort ships had just put another nail in the coffin.

While Sutherland’s study was obviously a disappointment for Fraser-Harris, it was greeted with much jubilation at Technical Services. Sutherland had looked at other options – such as more Annapolis class, smaller General Purpose Frigates, specialized air defence ships, light carriers, heliporters, and nuclear submarines – and the current General Purpose Frigate design beat them all. Put another way, if government funding only allowed for one type of ship, it would have to be the General Purpose Frigate. In fact, Sutherland was so impressed with the design that he thought the navy could easily make a case for building 10 to 12 of them instead of the current 8 ship program. He further recognized both Davis’ and the Department of Defence Production’s warnings that instability in the shipbuilding industry would not only lead to “a serious loss of engineers and skilled labour to the United States,” but also “block obsolescence” of the fleet. There was more. Even though he did not know that Brock had originally imposed
it upon them, Sutherland was impressed with DG Ship’s cautious approach to the ship’s design. In particular he was surprised that both the hull and the propulsion plant were not novel types and the “missile systems do not involve essentially speculative technology.” DG Ship’s adherence to Brock’s cautious approach seemed to have paid off. A more radical design would not have got such high marks from Sutherland and as a result his report was exactly the type of good news that should have got the program back on track.

Tired of “marking time” in the political arena, a cocksure Chief of Naval Technical Services assumed that the study would lead immediately to a “relaxation” of the moratorium. Rayner was equally confident and wanted to have a meeting as soon as possible with all those concerned so as “to get this programme moving.” Although temporary, this sense of optimism was infectious and it was hard for Davis and his team not to get excited as well. After all, Sutherland had given their cautious and methodological approach to ship design a ringing endorsement. In their view it was only a matter of time before a rational minister should reinstate the program, and so in the meantime they carried on as they had done before. With the minister taking such an active interest in the program, they remained focused on keeping the design modest. This was not easy, however, as the naval air elements involved in the program were pushing for innovations which, if implemented, would lead to significant changes with the design.

Just as the “big ship”/ “flat-top” naval air advocates on the Naval Staff had tried to influence the Heliporter Frigates, another branch of their community was attempting to

83 ACNS (A&W) to Sutherland, 11 June 1963, DHH, 120.009 (D19).
use the Ship’s Characteristic Panel as the means to change the General Purpose Frigate’s aviation component. This particular fiefdom consisted of officers led by DG Air, Captain J. Doherty, who saw the Sea King as the best helicopter for the RCN. The *Bonaventure*, the ongoing St. Laurent conversions, and the upcoming Annapolis class were all going to operate the Sea King and these men wanted the General Purpose Frigate to do the same. Of course, getting the Naval Board to substitute a large Sea King for the General Purpose Frigate’s small utility helicopter seemed like an impossible task, yet these officers from DG Air came up with a clever solution. Early in the General Purpose Frigate’s design it was discovered that – with slight modifications – the utility helicopter’s flight deck could land, refuel and rearm Sea Kings from other ships in ideal weather conditions. This was worked into the ship’s characteristics with the understanding that such a capability was an incidental “bonus” to the original design. The haul-down system for all-weather operations would require “complex engineering” and a complete redesign of the General Purpose Frigate and that was something that no one on Davis’ team wanted. Yet one year later, the Sea King advocates at DG Air – a group Davis would identify as “the helicopter operators”\(^\text{86}\) – saw an opportunity when they looked at this provision for accommodating the larger helicopter in the characteristics and they made their move.

In mid-April 1963, DG Air took advantage of the loophole in the ship’s characteristics to argue that the General Purpose Frigate should be able to land wayward Sea Kings in any weather conditions. Given the unpredictable environment of both the North Atlantic and Pacific, their argument seemed logical. But Tom Maxwell, a key member of Davis’ team, was not buying it. Speaking on behalf of DG Ships, he did not

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mince his words. Maxwell flatly charged Doherty and his officers with having an ulterior motive, observing that they were clearly “trying to equip the ship as a full-fledged helicopter-carrier.”\footnote{Ship Characteristic Panel, 10 April 1963, LAC, RG 24, Accession 1983-84/167, Box 3502, 8000-DDG vol. 12.} He was right. Had the Naval Board agreed to this change DG Air’s next “logical” move would have been to use the General Purpose Frigate’s all-weather flight capability to accommodate a heavier helicopter as the justification for replacing the light utility helicopter with the Sea King. It was exactly this type of twisted and circular logic that would get DG Ships in trouble with the Repeat Annapolis/ DDH 280 design one and a half years later. But in the spring of 1963, DG Ships and a number of key executive officers on the Naval Board were still guided by the mantra of their “cautious approach” to ship design, and as a result DG Air’s attempt to alter the General Purpose Frigate design was doomed to failure.

On the surface, at least, Doherty had good reason to believe that his efforts to turn the General Purpose Frigate into a Sea King carrier would be successful. After all, the Naval Board still intended to send both the Restigouche and Mackenzie classes back to the shipyards so as to turn them into DDHs, but now they were also exploring the idea of adding missile systems as well. Planning for the former class, known as the Improved Restigouche Escort (IRE), was already well advanced and included a variable depth sonar and helicopter facilities as well as the future replacement of the 3-inch-70 with twin Sea Mauler missile systems.\footnote{The key differences were that the General Purpose Frigates had a small helicopter but large medium range Tartar missile system, whereas the Restigouche (and presumably the Mackenzies) would have the more compact Sea Mauler}
close range missile system so that it could accommodate the large Sea King. There was not enough space in either design to have all these systems in one class of ship. As a result, without the Sea King the General Purpose Frigate would never have the capabilities of a DDH. Likewise, the DDH’s close-range missile system could only protect itself, meaning that it simply could not perform the guided missile destroyer’s function of covering a group of ships. Put another way, combining the Mauler and Tartar with the space required for a DDH’s Sea King facilities would have converted the General Purpose Frigate from a guided missile destroyer into a guided missile cruiser (CLG). The same was true for the missile carrying DDHs, as they would require a medium-range missile system like Tartar to gain the distinction of being a guided missile destroyer. Of course, such extensive changes were simply not going to happen given the prevailing attitude at DG Ships, let alone at the political level.

Illustrating that Brock’s cautious approach was still working, DG Ships laid out an argument against changing the General Purpose Frigate’s characteristics. Davis kept the pressure on the Sea King advocates in DG Air, and in a carefully crafted memo he observed that Doherty’s directorate was deliberately stalling their selection from three general utility helicopters (the Bell UHIB, Kaman K-600-s, and Alouette 3) under consideration for the General Purpose Frigate. This he found odd, and Davis was concerned that DG Air was purposely avoiding the utility helicopter decision because of their desire to acquire the Sea King for the General Purpose Frigate. If the selection of helicopters was going to affect the design, DG Ships argued that they had to know immediately. Davis’ request made sense. It was his directorate that would be held

[88 Ship Characteristics for the Improved Restigouche Class Destroyer Escorts, 19 June 1963, DHH, Rayner Papers, 99/31-III-18; NPCC Meeting, 21, 22, 24, 28 May 1963, DHH, NPCC Papers, 79/246, Folder 5;]
responsible, and the types of changes being contemplated at such a “late stage” would undoubtedly lead to delays in the program as well as a higher price tag. The heavier Sea King was the only helicopter that would require major alterations to the General Purpose Frigate’s design, and so Davis was effectively drawing Doherty out into the open. It worked. Pleading ignorance was the best defence and that was exactly what Doherty did when he told Fraser-Harris that “there is no disagreement on which aircraft to buy that this Directorate is aware of.”

At the same time that Davis had Doherty and the Sea King supporters beating the fast retreat, however, another group of advocates – who were involved in the development of the General Purpose Frigate’s missile system – made their own pitch for a new and innovative design. A study of these particular officers shows a remarkable similarity between their methods and those of the Sea King advocates. They, too, used a perceived operational weakness as a means to introduce a new technology. Potential problems with the missile system’s blast impact on the General Purpose Frigate’s superstructure – as well as the teething troubles the United States Navy was experiencing with their operational sets – had combined to suddenly make the Tartar look like the wrong choice for the RCN. At least that was the viewpoint that a group of officers, who favoured the acquisition of the British CF 299 Sea Dart system wanted to portray. The fact that Tartar, which had first been tested in 1956 and went to sea with USS Charles F. Adams four years later, was a “proven technology” meant that the General Purpose Frigate was already one step behind the state of the art. However, these officers were

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90 Muir, Black Shoes and Blue Water, 99, 104-105.
attracted to the CF 299 because it represented the latest and most-promising British missile system under development. Indeed, the early performance projections on the Sea Dart were much more impressive than Tartar’s operational specifications, and so in their minds it was obviously worth taking the risk on this unproven technology. The Chief of Naval Technical Services disagreed. Using the same argument that defeated the attempt to turn the General Purpose Frigate into a Sea King platform, Caldwell observed that CF 299 would require a complete redesign of the ship thereby delaying the program by at least three years. Further showing that the cautious approach was still protecting the program from risky technological adventures, Caldwell then warned that CF 299 was unacceptable because it “would involve the use of a new system that, unlike the ‘Tartar,’ was untried in service.”

As the RCN’s top engineer, Caldwell’s comments regarding innovation were significant because of their similarity to the ones being offered by many executive branch officers at Naval Headquarters. It was not that these men were opposed to innovation but rather they knew that unbridled enthusiasm for new technologies could spell disaster for the program. It was for that exact reason the Director of Naval Ship Requirements, Captain Tom Pullen, led the charge against the attempt to broaden the General Purpose Frigate’s Sea King capability when that proposal came before the Naval Policy Coordinating Committee. Much like Brock’s concept of versatility, Pullen emphasized that the Sea King landing capability for the General Purpose Frigate was originally

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intended as an added characteristic. Pullen had not pulled any punches and neither did Rear Admiral Kenneth Dyer who had recently replaced Brock as the Vice Chief of the Naval Staff. The new Vice Chief admitted that marrying the Sea King to the General Purpose Frigate was a “desirable” idea but there was no way the RCN could support such “an expensive undertaking” that would turn the design into a new class of ship. And therein lay the rub. Dyer, like Brock, was not against innovation but he knew that changes to a ship design tended to make politicians nervous. As a result, introducing new technologies to an established program became a balancing act in which the operational benefits of the innovation were weighed against the inevitable cost increase that followed.

Brock’s legacy of controlling the influence of the advocates outlasted his tenure as Vice Chief of the Naval Staff, at least in the short-term. As DG Ships would observe, there was also a considerable risk factor attached to unproven technology. He would also tell Fraser-Harris that the attempt to turn the General Purpose Frigate into a Sea King platform was unwise because it meant wedding a speculative concept to a new shipbuilding program and that could easily “lead to some embarrassing requirements.” The same was also true for the CF 299, but in that respect the officers who wanted to keep the General Purpose Frigate design modest got a much-needed boost from an unexpected ally. Within his General Purpose Frigate report, Sutherland warned that

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95 DG Ships to ACNS (A&W), 28 June 1963, LAC, RG 24, Accession 1983-84/167, Box 3776, 8200-DDG vol. 2; Naval Shipbuilding economic considerations, 27 May 1963, RG 49, vol.1, file 39-N-1521-2. Davis’ warning was well founded. The RCN was already taking a chance with their decisions to convert the remaining St. Laurents to DDHs and build the Annapolis Class – which were essentially a fourth version of the St. Laurent – while at the same time conducting CHSS-2 trials on HMCS Ottawa.
while “on the basis of a paper comparison …the CF 299 is the better weapon” he was quick to observe that:

A relative point is that the CF 299 is largely a paper design whereas the TARTAR is an on-going development of a weapon actually in service. It is a very general rule that every weapons system achieves its optimum performance at the design stage. As the system enters the stage of hardware development, costs tend to increase, claimed performance becomes more modest and availability tends to recede. One must have very considerable doubts as to whether the optimistic claims which have been advanced on behalf of the CF 299 would in fact be achieved… In this respect it must be said that British claims for their advanced weapons systems have been, almost without exception, much too optimistic.96

As it would turn out, Sutherland’s prediction was correct. While Sea Dart (CF 299) eventually became one of the Royal Navy’s main area-air defence weapons, its ultimate performance objectives were not met and costs did rise substantially.97 Sutherland, like many of the senior staff, saw the danger of tying the General Purpose Frigate to such a risky missile system and he clearly said as much. By making this recommendation Sutherland had solidified his role as a player in a larger procurement game that had few rules but plenty of teams.

Months and sometimes years of studying various types of weapons or sensors also led the technological teams to become ardent supporters of their final selection. Overall the process worked well. Establishing teams to explore new technologies allowed the RCN to sift through the large variety of weapons and sensors being developed throughout NATO. Narrowing the field down to one or two options required a massive amount of work and that alone justified the formation of these groups. The only problem was that teams sometimes lost their objectivity and became blinded by their belief that the RCN

96 “The General Purpose Frigate,” 31 May 1963, DHH, Grant papers, 85/334, File 130, p. 27.
should have a particular technology. Effectively turning them into advocates, the resulting interplay between these teams often led to a complex and highly competitive environment. Ships were designed to be a certain size, and as a result innovation in one system often came at the expense of another. The only other option was to allow the ship’s design to grow.

The task of balancing these competing interests fell to the senior officers at Naval Headquarters, but even at this level there were games being played. At times teams advocating certain weapon and sensor systems would get in the way of senior officers with their own agendas. Fraser-Harris, for example, was delighted when Sutherland so definitively rejected the CF 299 for the General Purpose Frigate. Aware that the General Purpose Frigate was under close political scrutiny, the Assistant Chief of the Naval Staff (Air & Warfare) worried that the attempt to introduce the British missile could cause problems for the entire program. This led a grateful Fraser-Harris to thank Sutherland for his “…support on the TARTAR versus the 299; heaven preserve us from buying a weapon system of this complexity off the drawing board! I do not believe that we in the Canadian forces are in any position to take this sort of gamble.”98 Similarly in a separate but coincidental note to the Director of Naval Ship Requirements, Fraser-Harris also stated that he could not support giving the General Purpose Frigate an all-weather Sea King capability “at this time.”99 This statement was odd given that Fraser-Harris was the most vocal naval air advocate. At first glance it might appear that Fraser-Harris was simply trying to curb the enthusiasm of both the Sea King and CF 299 advocates. In reality, the Assistant Chief (Air & Warfare)’s reaction put the whole system into a larger

98 ACNS (A&W) to Sutherland, 11 June 1963, DHH, 120.009 (D19).
perspective. In itself, innovation was an essential part of the ship design process. But it was unfettered innovation that could lead to runaway costs as well as growth, and that was why it was important for the senior staff at Naval Headquarters to act as a check in the system. In the current political environment these teams were threatening the entire General Purpose Frigate program, and that was something that Fraser-Harris was not going to let happen.

The Assistant Chief of the Naval Staff (Air & Warfare) was not the only one who was waking up to signs that the General Purpose Frigate was in trouble. The moratorium was taking a greater toll on the program than had been first anticipated. Some panic was evident at the 18 June 1963 Defence Supply Naval Shipbuilding Program meeting where it was observed that the General Purpose Frigate was in danger of missing the next production run of Tartar missiles from the United States Navy. While this would lead to an unacceptable delay in the program and higher costs, the Tartar issue was merely a symptom of a growing sense of malaise among those closest to the design. As such, the Department of Defence Production representative said out loud what the entire General Purpose Frigate team was thinking, that the “delays foster a lack of enthusiasm and drive in those who are charged with carrying out this programme.” That led to a rallying call from the Treasury Board representative, D.W. Franklin, who observed that his staff was willing to “expedite matters as far as possible.” Davis and DG Ships were equally committed. In fact, the entire team’s response was typical of their solidarity, as they all wanted the executive committee to take aggressive action to get the program back on track. Davis, however, went one step further by telling his boss that the “uncertainty”

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surrounding the General Purpose Frigate was “most detrimental to momentum” and that “the time has been reached when there is real jeopardy to M-date [construction start up].” Caldwell agreed, and so approached the Chief of the Naval Staff. By getting Rayner involved, Davis was hoping to put pressure on the minister. Yet the Chief of the Naval Staff had his own reasons to suspect that a decision on the General Purpose Frigate had already been made.

On 28 June, Hellyer officially told the public what the navy had known for some time – the General Purpose Frigate was under the cloud of a moratorium. That caught the attention of the nation’s media, and early reports suggested that they anticipated a feeding frenzy that would rival the coverage given to the Avro Arrow. Six days later the minister testified before the Sauvé Committee (mandated to conduct a general review of Canada’s defence policy), and, smelling more blood in the water, the media began circling what it saw as a sinking naval program. The Sauvé Committee was the product of a Liberal government looking for advice. When it came to the General Purpose Frigate, however, it was soon apparent to the Conservative member and former defence minister, Gordon Churchill, that the committee was facing “an exercise in futility.” Despite the Liberal government’s attempt at “trumpeting” the role of the committee, it was clear to Churchill that Hellyer had already decided the fate of the General Purpose Frigate and was set on “sabotaging of the Royal Canadian Navy in so far as its future role is concerned.” David Groos agreed. As the Liberal member of the committee and a former naval officer, Groos’ comments acted as confirmation that the party was ignoring advice from a


committee that was of its own making, and had already destined the General Purpose Frigate “for the ashcan.” The absurdity of the minister’s attitude towards the committee was further driven home when responding to a line of questioning with the observation that he hoped he would not be held “to things I said previously,” – a comment that drew “laughter” from all the committee members.102

Hellyer had every right to express such “strong misgivings” about the General Purpose Frigate. In fact, he would have been negligent in his duty as minister if he did not approach each procurement program with some degree of circumspection. Yet, Churchill and Groos’ suspicion that Hellyer was using the committee as well as the media as a venue for a smear campaign against the General Purpose Frigate appeared well founded. Sounding out what was to become a central prong of his attack, Hellyer drew on the speed of the nuclear submarine to put a dent in the program’s side. The General Purpose Frigate was going to be too slow to catch its prey and that meant that the ship would be “hopelessly out of date” even before it was commissioned. Much to the delight of the nuclear submarine advocates at Naval Headquarters, the minister proposed that the RCN would be better off acquiring nuclear powered anti-submarine submarines. Exactly how serious the minister was about a Canadian nuclear submarines program at this time remains a mystery, but the argument that the RCN was building the wrong platform struck a cord with the media. So, too, did suggestions that the program was going to cost much more than originally predicted.103

The job of protecting the program fell on Rayner’s shoulders, and at first glance the Chief of the Naval Staff did not appear to have the backbone to support the weight of the minister’s growing campaign. In many ways that was not the Chief of the Naval Staff’s fault. Rayner had done a good job of getting approval for the frigates and Oberons from Diefenbaker and the Conservatives, but he was no match for a Liberal government that had made even bigger social spending promises than its predecessors had done. Rayner could be shrewd, but his honesty, integrity and sense of duty placed limits on how far he would bend. If the RCN was to keep the General Purpose Frigate afloat it needed a leader who could play high stakes political games by being aggressive and sly. There were ways that Rayner could have made life difficult for Hellyer without risking his position as Chief of the Naval Staff. Yet when it came his turn to testify before the Sauvé Committee, Rayner provided a straightforward brief that avoided any contentious comments. While the brief itself was a good one – focusing on the role, capabilities, and composition of the fleet – his attempt to justify the General Purpose Frigate was weak. As will be remembered, Rayner had had a hard time convincing the Chiefs of Staff committee of the General Purpose Frigate’s military necessity and it appeared that he was repeating this experience with Sauvé. In fact, this experience was so familiar that Rayner left one committee member with the impression that the struggle against the Soviet’s developing nuclear submarine fleet was “hopeless,” while yet another found that the need for anti-air defence in the navy “has never been clearly made.” Rayner was in a bind. His best chance to get a message across to the committee would come during the question period when he was no longer reading from a script. The Chief of the Naval Staff was presented just the opportunity he needed when the committee
asked him to comment on whether the General Purpose Frigate was the best option to replace the Tribal class. It was a loaded question that would have allowed Rayner to explain the virtues of the General Purpose Frigate in some detail, but his minister, who had been sitting “impassively,” would not give the Chief of the Naval Staff a chance to pull the trigger. “I think your question involves a matter of opinion,” Hellyer suddenly interjected, continuing with a claim that the committee would not want “to expose the admiral to questions involving a nature of the advice which he would give the government.”

For the Chief of the Naval Staff, however, being muzzled by the minister was not nearly as bad as the financial restraint placed on the procurement plans of all three services.

Hellyer was careful about sharing too much information with his military chiefs. He was right to be cautious. On the one hand, Pearson’s vision for Canada was set in stone and nothing could prevent national defence’s purse strings from being tightened. On the other hand, the chiefs were unlikely to offer many economies, particularly when it came to the new procurement programs that they had fought so hard to secure from the previous government. Hellyer’s approach to the cuts, while surreptitious, was ingenious. Under the guise of a budgetary exercise Hellyer gave each service a strict spending cap and then challenged the chiefs to create a five year program that fell within the target amounts. The true genius, however, was that Hellyer allowed the services “complete freedom” to select the programs they wanted to keep. Put another way, the onus was on the individual chiefs to make the tough decisions on cuts, and, given that it was supposedly a fictitious paper exercise, there was no reason for them not to play along.

104 Sauvé Committee testimony, 09 July 1963 (Ottawa: Queens’ printer, 1963), 87-126; “Naval Frigates sound overly exotic,” Ottawa Citizen, 10 July 1963; “Statement by Vice Admiral HS Rayner to the Special
Better yet, the proviso that the chiefs had only six days to respond meant that none of the services could allow the process to be bogged down by infighting or obstruction.\textsuperscript{105}

Accepting that the minister’s initiative was not a directive but “merely an alternative plan,” the Naval Board went to work designing an overall program that could be carried out within a fixed budget of $282 million each year for three years. The challenge that lay before them was exposed through the current estimates that called for expenditures of $307 million in fiscal year (F/Y) 1963-1964, $350 million in F/Y 1964-65, and $439 million F/Y 1965-66. Despite these drastic reductions, however, Rayner made one thing clear – there could be no compromise when it came to the General Purpose Frigates. That was easier said than done and officials at the Department of Defence Production were quick to point out that “this sort of financial planning leaves little margin for [the] frigates.”\textsuperscript{106} The Naval Board reluctantly agreed. No matter what cuts they made there was simply not enough money for the full slate of General Purpose Frigates. As a result, DG Ships was told to prepare separate costing for two, four, and six-ship programs. That made Davis and his team nervous, but they still did not understand that “matters were grinding to a halt” and that this costing exercise was “somewhat akin to the apocryphal ‘rearranging the deck chairs on the TITANIC.’”\textsuperscript{107} The Naval Board, on the other hand, had heard the sounds of financial expediency scraping alongside the General Purpose Frigate and they were afraid that the program was slipping below the waterline.

\textsuperscript{105} Chiefs of Staff Committee, 13 June 1963, DHH, Raymont Papers, 73/1223, Box 63, File 1311; Chiefs of Staff Committee, 04 July 1963, DHH, Raymont papers, 73/1223, Box 63, File 1311; DND DM to CNS, CGS, CAS, 10 July 1963, DHH, 125.089 (D1); Lund, \textit{Rise and Fall}, 501 – 502.
\textsuperscript{107} Davis, “Fourth Case Study: The General Purpose Frigate,” DHH, Davis Papers, 2001/36, 342, 346.
DG Ships had explained that the cost of each ship increased as the overall program got smaller, but Rayner’s first concern was to shore up the holes in the General Purpose Frigate’s budget. As such, the Naval Board made a point of emphasizing the importance of getting the General Purpose Frigate to the construction phase. The best way to do that was to get a guarantee for a two-ship program immediately and worry about the rest later. Showing that the minister was not the only one capable of being shrewd, the Naval Board’s strategy was obvious. It would be extremely difficult for Hellyer to cancel the program once the shipyards had firm contracts, and consequently a two-ship program represented a foot in the door that industry could help pry open at a later date. Yet there was always the possibility that the government might stick to only two ships, and that was a chance that some members of the Naval Board were unwilling to take. In their view it was better to make further cuts – such as more station closures, deferring the upgrading of the Trackers (the ASW aircraft that flew off Bonaventure) and paying off three Tribals early – so as to guarantee a minimum four-ship General Purpose Frigate program. In the end, that was what the Naval Board decided to do, and that meant Rayner was ready to present the navy’s case to the deputy minister and minister.

Rayner made sure Hellyer understood that the navy’s response to his budgetary exercise was “done in considerable haste” and as a result he emphasized that all their recommendations required further study. Despite this jab at the minister’s modus operandi, the Chief of the Naval Staff then proceeded to show him how far the navy had come in meeting their target of $282 million. The “sacrifices” were considerable. Stations were closed and equipment upgrades were slashed, but it was the deep cuts to the

ship replacement program that hurt most of all. Besides reducing the General Purpose Frigates to a four-ship program, the RCN was willing to get cheap American submarines on loan rather than the current plan to buy the Oberons. Monies set aside for converting the Restigouche and Mackenzie into DDHs as well as the plans for building the heliporter frigates were all deferred. The exercise to stay within the assigned financial cap had effectively wiped out the navy’s ship replacement program, and that brought an impassioned plea from the Chief of the Naval Staff that the:

Financial restrictions of the order of magnitude considered in this paper would seriously reduce the effectiveness of the Fleet and the activities which support it. Indeed they would have a most damaging effect on the capability of the Navy to discharge its current responsibilities and to keep up-to-date in future years.¹⁰⁹

This exposed the real objective of Rayner’s paper. The navy was willing to play ball with the minister providing this exercise remained a game. If these cuts were to become policy, then it was important for Hellyer to know the true score.

Due to the delays in the ship replacement program, block obsolescence was still the greatest problem facing the RCN in July 1963. That the navy was relying heavily on Second World War ships (such as the Tribal and “C” class destroyers as well as Prestonian frigates) was not doing much to enhance its reputation in NATO. Moreover, the fact that these ships would soon need to be decommissioned led to some ugly scenarios for the future. Cutting four General Purpose Frigates, six Heliporter frigates and three Oberons from the replacement program would leave the RCN by the early 1970s well short of its 43-ship commitment to NATO force goals. Failure to meet these obligations would have consequences for Canada and that was a perceived weakness for Hellyer that Rayner tried to exploit. The picture that the Chief of the Naval Staff painted

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¹⁰⁹ Board Meeting, 22 July 1963, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 3.
was bleak. Without the full replacement program the RCN would have to rob its Pacific commitment of 14 destroyer-escorts to pay its primary obligation of 29 escorts and *Bonaventure* to SACLANT on the East Coast. In doing so, Rayner was making it clear that there would be a heavy political price to pay with Canada’s allies, the more so since SACLANT was actually in the process of asking the RCN to increase its force goals.\(^{110}\)

Hellyer was not nearly so concerned. In fairness to the minister, the force goals for which the Naval Board was so firmly obsessed were little more than arbitrary figures that were the product of negotiations between Canadian naval officers and their alliance counterparts. Put another way, the decision of what naval forces Canada would actually contribute rested with the nation’s elected officials and not the Naval Board or NATO. The simple reality, therefore, was that no military argument could save the General Purpose Frigates once Hellyer had decided to scrap them.

There were suspicions within DG Ships that the minister was purposely trying to manipulate the costs of the General Purpose Frigate program as a means to get rid of it. A joint Department of Defence Production/RCN estimate for the total cost in July 1963 produced the alarming figure of $428,466,948 which, Hellyer was quick to point out, was much higher than the 1962 prediction of $264 million. For Davis, the calculation to produce those numbers simply did not add up. Support costs and certain sales taxes that had been previously excluded were suddenly incorporated into the new estimate. The fact that the minister of finance was now applying taxes to items that had been exempt was odd, and smacked of collusion within the Liberal ranks. Worse yet, the longer the

\(^{109}\) CNS to Minster, 25 July 1963, DHH, 125.089 (D1).
\(^{110}\) 11 and 15 July 1963 Naval Board Meeting, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 3; CNS to DM DND, 15 July 1963, DHH, 125.089; CNS to Minster, 25 July 1963, DHH, 125.089 (D1); A
minister delayed a decision, the higher these costs would become, particularly since the price for the ship’s fighting equipment and command and control system (ADACS 270) were “being seriously jeopardized by the moratorium.” That gave DG Ships the sense that the program was being set up to fail. But while the expense of the program certainly solidified the case against the General Purpose Frigate, it is important to balance this interpretation with certain key considerations that show the minister was right to question the program’s price tag. For instance, even before the moratorium, the General Purpose Frigate’s missile system was proving much more expensive than anyone had predicted. As a result, the Deputy Minister for National Defence as well as a number of RCN and Department of Defence Production officials accepted, albeit reluctantly, the latest figure of $428 million as the “most accurate” estimate yet offered. Nor did they contest the addition of support costs and they were wise not to challenge the minister on this front. There were a number of areas where flexibility in the system allowed certain costs to be assigned to budgets outside of the program. Under close scrutiny any defence program was bound to face accusations of using “smoke and mirrors” to hide costs, and the General Purpose Frigate was no exception. In short, Hellyer was not the only one who could be charged with playing the numbers game.

DG Ships also used costs as a means to put pressure on Hellyer. The entire program had been geared towards a start up date of June 1964, and unless the minister lifted the moratorium by 15 September 1963 all that planning would have to be redone –

summary of the Revised Naval Programme, 25 July 1963, DHH, 125.089 (D1); VCNS to CNS, 19 April 1943, DHH, NPCC Papers, 79/246, File 93.

at considerable expense – to accommodate the new timings. But the minister was showing no signs of budging, and suspicion at DG Ships finally gave way to fear when Davis and his team members were asked to prepare “possible alternatives to the General Purpose Frigate.” Although most involved in the General Purpose Frigate were still in denial, DG Ships was effectively being warned that they were about to start a new program from scratch. Ship programs were always most vulnerable to advocates of other programs in the early stages of development and this new program would be no different. The fact that the nuclear powered Thresher class submarine was proposed as one option in place of the General Purpose Frigate was a sign that the submarine advocates were quick to circle the dying program in the hopes that they would be the first to feast on its remains. Other foreign-based designs – such as the American Charles F. Adams class and Seahawk guided missile destroyer-escort along with the British Type 82 – also reeked of outside influence and advocates, particularly since DG Ships had an overwhelming propensity to develop purely Canadian ships whenever possible. More importantly, however, the Canadian designs included in this re-evaluation marked the beginning of a process that would lead to the total abandonment of the cautious approach started by Brock.

The study into the potential alternatives to the General Purpose Frigate was an incredible document, particularly since it contained vessels that were remarkably similar to both the Repeat Annapolis that Hellyer would order in October 1964 as well as the one he ended up approving in July 1965 (the DDH 280). For instance, DG Ships found that

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the design (identified as the “General Purpose Frigate without Tartar”) left the General Purpose Frigate “with the general capabilities of an ANNAPOULIS class DE [destroyer escort]” because of its lack of a medium range missile system. Calling for a 3,850 ton ship with a close range missile system and comparable dimensions to the DDH 280, the first of these proposed alternatives was billed as a “GP Frigate without Tartar but modified to carry two HSS-2.” A cheaper version of the original concept, this vessel was intended to keep the General Purpose Frigate alive by trading off the costly Tartar system for more helicopters.115 Just as the helicopter advocates had been accused of trying to turn the General Purpose Frigate from a guided missile destroyer into a DDH by adding a large anti-submarine warfare helicopter, the incorporation of two Sea Kings along with the original utility helicopter further divorced this new design from the General Purpose Frigate concept. By giving this design the capability to carry three helicopters the RCN had actually gone full circle and returned to a smaller version of Brock’s DDH (Small) heliporter frigate. Given that the characteristics were so similar, it should not be surprising that DG Ships had the exact same reaction to this proposal as it had to the heliporter frigate, which was that it “could not be regarded as a balanced design.”116

Aside from so-called variants of the General Purpose Frigate, the design study also made provision for a modified Repeat Annapolis program fitted with a close range missile system. This, too, was an unrealistic design. Unlike the Repeat Annapolis that would appear in the fall of 1964, this earlier concept was to carry two Maulers in the same hull size as the current Annapolis class. This was thought possible because similar alterations were being considered for the Restigouche conversion. Yet that concept was

115 General Purpose Frigate Sketch Design, January 1962, DHH, 73/757.
equally flawed, and there can be little doubt that the Improved Restigouche would have
grown considerably had a missile system and helicopter facility been added.
Nevertheless, the process of searching for an alternative for the General Purpose Frigate
(which would take over a year) allowed DG Ships the time to explore new and exciting
technologies. And it was this process that would eventually lead to a new spirit of
innovation and risk taking at DG Ships. More to the point, the abandonment of the
cautious approach also led to the revival of various advocates and champions.

The Chief of the Naval Staff was not impressed with the General Purpose
Frigate’s alternatives and, according to the Vice Chief, the design study only confirmed
in “his mind that the present GP Frigate design is still valid [and] unless we are forced
into some drastic price cut, he will keep pursuing the present programme.”117 Rayner
firmly believed that his DDH-based navy would require guided missile destroyers for
protection against extended air threats, and so there could be no compromise on the
General Purpose Frigate. As a result, when it came to the minister’s budgetary exercise –
a process that the navy was now euphemistically calling OPERATION CUTBACK –
Rayner had drawn a line in the sand, as the Chief of Naval Technical Services observed:

> Certain major projects are deliberately omitted from the attached listing, despite
> the fact that they also call for early decision. These include the GP Frigate
> Programme, the Submarine Programme and the Restigouche Conversion
> Programme, all of which the CNS is or will be pursuing with the Minister
> separately.118

Rayner was going to confront Hellyer over the ship replacement program and the General
Purpose Frigate would be their first battle. The problem was that the debate over General

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116 Statement of Some Current RCN, USN and RN Ship Design, August 1963, DHH, NPCC Papers,
79/246, File 99.
117 VCNS to ACNS (A&W), 02 August 1963, DHH, NPCC Papers, 79/246, File 99.
118 CNTS to DGFE, 13 August 1963, DHH, RCNHS fonds, 81/520/2200, Vol. 1.
Purpose Frigate was going to take place on the minister’s turf, and such unfamiliar ground left the admiral vulnerable. But while Hellyer deserves credit for the way he would outmaneuver Rayner and the Naval Board, the simple reality was that it would be the advocates – more than the minister – who were guilty of sabotaging the efforts to save the General Purpose Frigates.

Rear Admiral Brock had a better understanding than most at Naval Headquarters about the damage that ship advocates and innovators could have on established programs and force structures. Officers, such as Fraser-Harris and his naval aviation supporters, were blinded by a belief that the navy had to have their preferred platform or technology, and they were often willing to do what ever it took to guarantee their acquisition. They were no match for Brock. His forceful personality was the key factor that kept the influence of these advocates in check and by doing so he ensured the General Purpose Frigate remained on track. Although Brock’s efforts to maintain a firm grip over the advocates and innovators were ultimately successful, there was little he could do to protect the program from Hellyer’s glare.

Not only was the minister taking a closer look at the General Purpose Frigate but he also was planning to place Canada’s defence policy under the microscope. This would have tremendous consequences for the navy as the resulting chaos would reopen doors for the advocates that Brock had previously shut. Moreover, these changes would also have serious repercussions for the way DG Ships did business. While the cautious approach was still the guiding principle at DG Ships, the emergence of the upcoming conflicts over maritime policy and force structure marked the start of year-long
deterioration of that philosophy. And by the end of this period that philosophy would be replaced with an innovative spirit based on risk-taking.
Chapter 4 “A Wasteful Navy Project”

Brock had done his best to keep the influence of advocates in check, but his appointment to the East Coast in July 1963 opened a door that his successor, Rear Admiral Dyer, could not shut. This had tremendous consequences for the General Purpose Frigate as the events leading up to its cancellation actually depict a highly divided Naval Headquarters in which the ship advocates gladly switched allegiances in the attempt to get their project accepted as part of the ship replacement program. And the fact that they were willing to do so challenges the notion that the navy was united in its efforts to defend the General Purpose Frigate against a minister intent on cancelling it. Moreover, new documentation places Hellyer’s role in the programme’s cancellation in an entirely new light. Instead of leading the charge against the General Purpose Frigate, these new sources portray a minister who (while likely under prime ministerial orders to prepare for the cancellation) was slowly being won over to Rayner’s proposal to build a reduced four-ship General Purpose Frigate programme. Encouraged by the minister’s interest in creating a Mobile Force that could respond to both UN operations as well as potential conventional war in Europe, the ship advocates would also challenge the RCN’s destroyer concept of operations – which was based on a specialized anti-submarine force built around enlarged DDH flotilla leaders rather than a carrier – with one of their own. Best described as a limited war concept of operations, this competing vision kept the aircraft carrier at the centre of the RCN’s force structure. The purpose of this chapter, therefore, is to assess how these competing concepts of operations as well as other key conflicts at Naval Headquarters not only impacted the General Purpose Frigate but also force structure in general.
An official visit to Naval Headquarters in early July 1963 by the Commander in Chief Eastern Atlantic (CINCEASTLANT), Admiral Charles Madden, Royal Navy, offered a good opportunity to sound out an ally on Rayner’s plan to put the DDH at the centre of the RCN’s future force structure. As the man responsible for all NATO forces assigned to the Eastern Atlantic, Madden was a logical source for advice and so the senior staff spent much time preparing for his arrival. These preparations provide an invaluable snapshot of Naval Headquarters’ concept of anti-submarine warfare operations in mid-1963 and perfectly capture how some senior officers were supporting the shift away from the carrier to the DDH-based navy without fully understanding how they were going to use the latter in operations.1 The mock up flight decks on HMCS Buckingham and Ottawa only helped to determine whether the idea of flying helicopters off destroyers was technically feasible. As a result, the RCN would not learn all the problems of operating large helicopters off destroyers until the first Sea King was delivered in May 1963 and trials began on HMCS Assiniboine that November.2 What the RCN did know, however, was that the current surface escort fleet was totally incapable of dealing with the modern Soviet nuclear-powered submarine threat. In terms of detection, the destroyer-escort of early 1963 had earned a passing grade. It was not a stellar mark, but

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1 JR Coulter, “ASW Tactics – Employment of Destroyer-borne ASW Helicopters,” 30 May 1963, LAC, RG 24, Accession 1983-84/167, Box 3734, 8100-1, Vol.10; In fact, NHQ had only recently instructed the Maritime Warfare School to develop “a doctrine for the employment if destroyer borne ASW helicopters.”

2 Topics for discussion with CINCEASTLANT,” 03 July 1963, DHH, Rayner Papers, 99/31-IB-26; ACNS (A&W) to VCNS, 06 June 1963, LAC, RG 24, Accession 1983-84/167, Box 52, 1225-3-1, Vol.11; DNO to ACNS (P), 30 April 1963, LAC, RG 24, Accession 1983-84/167, Box 460, 1650-26, Vol. 37. The completion of the first converted St. Laurent class, HMCS Assiniboine, in June 1963 was the initial milestone of a process that would not end until HMCS Fraser left the shipyards in mid 1966. Likewise, the second type of DDHs, the Annapolis, would take some time before becoming operational as the first of the class – HMCS Nipigon – was not due for commissioning until June 1964. With its makeshift flight deck, the trials on Ottawa were for construction purposes only, meaning that the RCN would have to wait at least until 30 October 1963 – the date slated for Assiniboine’s arrival alongside in Halifax – before it could start its operational trials.
the combination of the AN/SQS-503 hull-mounted, 502 attack, and 501 bottom search sonars, along with the eventual introduction of the variable depth sonar (AN/SQS 504) gave the RCN a comprehensive detection range out to approximately 7000 yards. On the other side of this report card – the offensive potential of the destroyer-escort – was totally lacking. Three-inch guns, the only anti-air weapon available in the RCN, were hardly up to the job of bringing down jet aircraft or cruise missiles. Things were not much better in the anti-submarine warfare field as (aside from ship-launched torpedoes) the RCN’s best shipborne weapon, the Mk 10 Limbo mortar, was a direct descendant of Second World War technology. It had a range of a mere 1000 yards, and there was the problem. The gap between the detection and weapon ranges in the destroyer-escort was far too great. The Sea King was going to change all that as it was anticipated it would operate some 10,000 to 20,000 yards from the parent ship. Moreover, it was believed that the Sea King’s “dunking” sonar, weapons payload and ability to hover, made it “by far the best weapon system for attacking submarines.” And it was this belief that led some officers, most notably Brock, to develop an almost fanatical devotion to the marriage of the Sea King to the destroyer. This new platform, however, was just one piece in a more confusing puzzle.

The RCN was facing a larger revolution that would change the way its officers thought about the concept of anti-submarine warfare operations. The destroyer-escort fleet of 1963 was very different from the one that would start to emerge the following

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3 Anti-Submarine Weapon System Requirement for the RCN, March 1964, DHH, 120.003 (D33), p.6-10.

year, and studies prepared in advance of Madden’s visit make clear how the DDH concept had come to dominate the RCN’s operational thinking.

Built around proposed heliport frigates, which would have become the fleet’s flotilla leaders, the navy was going to be divided into destroyer groups of DDHs protected by General Purpose Frigates. This would give each group the capability to defend themselves from air threats while at the same combining the detection ranges of hull and variable depth sonars with the attack capability of the helicopter. More specifically, the DDH concept of operations was based on the prevailing belief that the most effective way to destroy submarines was to take advantage of contacts from the shore-based Sound Surveillance System (SOSUS) through a ship-directed helicopter attack.

Consisting of a network of passive acoustic sensors located between the United Kingdom, Iceland and Greenland, and extending off-shore from continental North America, SOSUS was a revolutionary breakthrough that provided NATO escort groups with a rough area from which they could begin their searches for suspected Soviet submarines. This was an important operational advantage given the size of the North Atlantic, but the inexactness of the SOSUS bearings meant that the task of localizing contacts still rested with ships and aircraft. According to early versions of the DDH concept of operations, hull-mounted sonar and variable depth sonar would act as a search and detection screen while the Sea King would be vectored to the presumed location of the submarine (datum) for the attack. Emphasizing the prevailing view that the Sea King was the ultimate extension of the escort’s weapon system, this concept focused on the

helicopter’s range as well as its ability to localize, classify and then attack the target. In fact, some officers had so much faith in the Sea King that they argued it could even fulfil the screening role of a destroyer-escort. The Sea King could never act as a complete substitute for the destroyer-escort in a detection screen, but these types of ideas made clear to the advocates that some ship types – such as diesel submarines and guided missile destroyers – would play a subordinate role in this DDH-based planning. In this proposed navy, therefore, others types of ships, like the aircraft carrier and nuclear submarine, were either obsolete or too expensive.

Both the anti-submarine submarine and land-based maritime patrol aircraft were also part of the RCN’s developing concept of operations. This was not necessarily good news for the submariners and their aspirations to acquire nuclear submarines. While the Brock Report had suggested that the RCN was still exploring long-term plans for these vessels, the DDH navy actually did not need nuclear submarines. The immediate requirement was for training submarines and while nuclear ones would be a welcome addition for this training role it was a task that many believed could easily be filled by the conventional Oberons. More to the point, with Hellyer suggesting that heavy cuts were on the way, the proponents of the DDH navy could not justify the expense of nuclear submarines or even conventional Barbels. This was a considerable reverse for the submarine advocates particularly since they had been buoyed by the fact that the tactical thinking of the early 1960s had been prepared to leave anti-submarine warfare in the

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5 Ship Characteristics for the Improved Restigouche Class Destroyer Escorts, 19 June 1963, DHH, Rayner Papers, 99/31-III-18; NPCC Meeting, 21, 22, 24, 28 May 1963, DHH, NPCC Papers, 79/246, Folder 5; Naval Board meeting, 19 June 1963, DHH, RCNHS fonds, 81/520/100-100/2, Box 26, file 3.
hands of friendly submarines working with shore-based maritime patrol aircraft. Operational experience, however, proved that this concept had a serious flaw.

As illustrated during the April 1963 Exercise, FISHPLAY SEVEN, friendly submarines working in close proximity with other forces were proving a liability. In specific, this exercise - which was designed to provide intensive training to test the current barrier doctrine’s ability to detect and kill submarines in wartime conditions - revealed that the “whole concept of sub-air cooperation was questioned.” Indeed, the results were not encouraging. While the barrier did discover twenty-one out of the thirty-one “hostile” submarine transits in phase one of the exercise, only five of these detections led to kills. Phases two and three (where eight out of fourteen and thirteen out of seventeen detections produced only two and three kills respectively) confirmed these results, and indicated that the problem was not with detection but rather destruction of the enemy. How many more kills would have resulted had surface units been included in this operation was not asked, but it is significant that destroyers would take part in the 1964 version FISHPLAY (code name LONGLOOK). Worse yet, it was further determined that there was not a single case where “sub-air” cooperation led to an attack but there were examples where poor navigation equipment resulted in weapon releases on friendly submarines, producing the conclusion that it was “clearly too dangerous to use pouncer aircraft [aircraft that could suddenly descend on a contact].” Despite these comments on the aircraft, the greatest criticism was reserved for the submarines where it was found that “with present weapons, conventional SSKs [conventional submarines] would not achieve an adequate kill-rate in a barrier in a short campaign.” Nor was that all, as the whole concept of sub-air barriers was attacked as “ineffective” and:
It is clear that the large air effort devoted to SUB/Air coordinated operations did not bear fruit in the exercise. In fact these operations do not seem to have been successful in previous exercises of this type either. An AS barrier of this type may be able to generate a prohibitive attrition rate in a long war, but there is every reason to believe that a greater degree of independence in the operation of aircraft and submarines would give at least as great an attrition rate.\(^7\)

Simply put, while both friendly submarines and maritime patrol aircraft were suitable for barrier operations, operational authorities were coming to the conclusion that it would be best for these platforms to operate independently of the other.

The faith throughout the early sixties that friendly submarines and aircraft were natural partners was not standing up to operational testing. There were simply far too many incidents where aircraft attacked friendly submarines in error, and these cases of “mistaken identity situations exemplified [the] dangers” of these two platforms operating in the same area.\(^8\) Until the development of sound propagation techniques, the classification of submerged targets was one of the most vexing tasks facing not only the patrol aircraft but surface forces as well. That made the chance of sinking friendly submarines a real possibility, and as a result the RCN had accepted the new American philosophy that the submarine’s “problems of communication and IFF [Identification Friend or Foe] will continue to inhibit close co-operation with other types of ASW forces.” The solution was to treat the anti-submarine submarine as a scout or lone hunter that would operate in an “outer ring” barrier well beyond the detection range of the DDH groups and their supporting maritime patrol aircraft.\(^9\)

\(^7\) Exercise FISHPLAY SEVEN, 27 November 1963, LAC, RG 24, Accession 1983-84/167, Box 421, 1640-21-11, vol.2.
\(^8\) DNOR to ACNS (A&W), 27 November 1963, LAC, RG 24, Accession 1983-84/167, Box 421, 1640-21-11, vol.2.
Other developments also helped to clarify how the maritime patrol aircraft was perceived to be a better partner for the DDH than the anti-submarine submarine and aircraft carrier. Two exercises in particular, NEW BROOM XI (convoy protection readiness) and SLAMEX 63 (defence against nuclear missile carrying submarines), illustrate the manner in which new technologies and tactics were coming together to form a Canadian concept of operations based around the DDH and maritime patrol aircraft. Both the destroyer and patrol aircraft had the ability to either deploy or exploit all the necessary anti-submarine detection assets – such as SOSUS bearings, magnetic anomaly detection, variable depth sonar, hull-mounted sonar, helicopter dunking sonar, and barrier patrols – to hunt a submarine. There was also “Jezebel” which, having just started to enter the fleet, would have repercussions on the carriers’ future in the RCN. A new passive acoustic detection system that picked up the radiated noise made by transiting submarines, Jezebel consisted of sonobuoys dropped in field patterns by aircraft or launched from surface ships. Achieving incredible detection ranges in the order of thirty to sixty miles, Jezebel sonobuoys were an important tool that helped escort forces to further localize SOSUS bearings. Although Jezebel was “not an end in itself” it did reduce search areas to a more manageable size.\(^\text{10}\) It was then up to the detection gear on the specific platforms – such as the DDH’s hull-mounted and variable depth sonars – to direct the Sea Kings and maritime patrol aircraft to a more precise datum so that they could unleash their airdropped torpedoes. To ensure a quick response (given the attendant helicopter fuelling, maintenance and crew rest requirements) to detections it was determined that the RCN would require groups of five or six DDHs just so that one

\(^{10}\) Various documents from Rayner Papers, DHH, Rayner Papers, 99/31-II-16.
helicopter could remain airborne with another standing by for immediate launch. The extended range of maritime patrol aircraft, on the other hand, allowed them to circle above the surface forces until relieved by another aircraft. And that, according to those who subscribed to the DDH concept of operations, was all the air support the RCN actually needed. Put another way, if Hellyer’s cuts forced the navy to give up its carrier, the DDH and maritime patrol aircraft mix ensured that the RCN could still perform anti-submarine warfare operations well.

Rayner saw the DDH and land-based patrol aircraft as the right and most cost-effective mixture for the RCN to combat the Soviet submarine threat. The fact that this developing concept of operations made no reference to a carrier was troubling for the naval air supporters, but to make matters worse arguments were being advanced that the RCN did not require support from both maritime patrol and fixed wing carrier aircraft. The idea that shore-based RCAF aircraft (such as the very long range four-engine Canadair Argus) could replace Bonaventure was a dangerous development for the naval air supporters and it was one they hoped that Madden would quickly dismiss during his trip to Ottawa. As it would turn out, however, both the carrier and nuclear submarine advocates would be greatly disappointed with Madden’s message.

Madden’s visit marked a new and important phase of the growing anguish among the advocates. Calling it “the Battle for the Britannia [sic]” – which was a reference to the Argus’s lineage as a Canadian-built variant of the British-designed Bristol Britannia – Fraser-Harris had long feared that this RCAF aircraft “would undoubtedly sound the
death knell for naval aviation.” Having attacked the concept well before the first Argus became operational in May 1958, the Assistant Chief (Air & Warfare) always suspected that the expense of maintaining a fleet of 33 maritime patrol aircraft would become “so great as to make the retention of a carrier highly unlikely.” He was right. The day of reckoning had arrived. Believing that “Rayner and Pullen and indeed the majority of the nautical types… were simply not interested” in his campaign against the maritime patrol aircraft, Fraser-Harris would battle the concept on his own. It was a private little war that would end in defeat once the newly integrated Canadian Forces Headquarters made the joint decisions to seek a replacement for the Argus with another maritime patrol aircraft as well as giving the go-ahead for the Repeat Annapolis.

Madden began his meeting with Rayner by telling him exactly the same thing he had just told the Dutch navy. Like the RCN, they too were at a crossroads over whether to seek a replacement for their Majestic class aircraft carrier, the Karl Doorman. Nor did the similarities end there. Their industrial base was only capable of constructing one major ship class at a time and so their senior staff was going through its own turmoil over what to build next. This discussion laid the groundwork for a stunning conclusion that would send shockwaves reverberating throughout the carrier supporters’ ranks. Madden was blunt. From his point of view, the small escort carrier was nothing more than a highly “vulnerable” and expensive target that was a serious “drain” on his escort forces. Put simply, he did not want to waste escorts on screening a carrier when he would rather see these same destroyers (with their future helicopters) hunting submarines. His major advice, therefore, was that Bonaventure should not be replaced because “he felt ASW

carriers were of limited effectiveness now and would diminish in importance. He estimated that the purely ASW carrier would be phased out in about five years. In saying so, Madden had laid out the blue print for the next decade. This plan, which would end with the United States Navy decommissioning USS Intrepid on 30 March 1974, would see the dedicated escort carrier disappear from the American order of battle and their anti-submarine warfare aircraft sharing deck space with the fighters and attack planes of the giant strike carriers. Rayner’s desire to satisfy alliance requirements ensured that this meeting had a considerable impact on him, especially since SACLANT would later repeat this belief that the RCN should dispose of its carrier by 1970. The true significance of these messages, therefore, was that Canada’s allies were playing a key role in convincing Rayner that his decision not to replace Bonaventure and instead concentrate on a helicopter carrying destroyer-based force was the right one. That Madden and SACLANT saw no future for the escort carrier was a tough pill for the carrier supporters to take. It got worse.

Much to the delight of the destroyer men, Madden wanted only one thing from the RCN – more destroyers. Acting as yet another vindication of his report, all the ships Brock had recommended (the General Purpose Frigates, DDH (Large) heliporter frigates, the Improved St. Laurent, Improved Restigouche and Improved Mackenzies and even the diesel submarines) would have been welcome additions to EASTLANT’s command. The only aspect of Brock’s report that was not encouraged was the future acquisition of nuclear submarines. As with the Dutch, nuclear submarines were deemed too expensive

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for a small navy like the RCN. Moreover, as Sutherland had observed in his General Purpose Frigate report, they offered little benefit to the Canadian shipbuilding industry, which had neither the experience nor facilities to build such a complex warship.\(^{15}\) But Madden saved his biggest bombshell for a follow up letter he sent to Naval Headquarters some two weeks later. Entitled “The future of the A/S Carrier in EASTLANT,” this paper identified what was going to replace the escort carrier, arguing that “the essential air support can be provided by maritime patrol aircraft.” Consecrating the polygamous marriage of the maritime patrol aircraft as a support platform to the destroyer and Sea King union, this paper then pronounced that “by 1972 the A/S carrier should be replaced by the frigate carrying helicopter.”\(^{16}\) The importance of this declaration cannot be overstated: Madden had thrown his weight behind those who wanted to see the RCN as primarily a DDH navy. The idea that the escort carrier’s role could be done by a cheaper and less vulnerable combination of helicopter-carrying destroyers and maritime patrol aircraft was perhaps the most devastating blow in a string of disappointments for carrier aviation supporters. From their perspective, the heliport frigate debate and Sutherland’s General Purpose Frigate report were the nails in the coffin for naval air, and now Madden had just come over to Canada to help dig the grave.

Things were certainly grim for Fraser-Harris, and in late July it appeared that he was ready to give up the fight. Having called an “emergency” Naval Staff meeting to discuss the drastic nature of the minister’s proposed financial cuts, Fraser-Harris – along


\(^{16}\) Madden’s letter is missing, however verbatim excerpts are quoted in ACNS (A&W) to VCNS, “The future of the A/S Carrier in EASTLANT,” 23 August 1963, DHH, NPCC Papers, 79/246, Folder 59.
with at least four naval air supporters – were willing to place *Bonaventure* into reserve so as to achieve short-term savings for other programs:

> ...[in fact the] Naval Staff strongly caution that the decision taken to pay off *Bonaventure* and re-deploy her aircraft will inevitably lead to the strongest pressure to abolish Naval Aviation in all its aspects from the Canadian maritime scene. Any suggestion that future plans to re-introduce carrier aviation in the ASW, air defence or strike and support roles would almost automatically be doomed to failure.

Fraser-Harris and his supporters knew the risk they were taking. In a mature, yet painstaking admission these officers conceded that moving *Bonaventure’s* Tracker aircraft ashore was a “more effective use of existing Naval Fixed Wing aircraft.” More or less sabotaging their own campaign, the naval carrier air supporters admitted that re-deploying the Trackers to cover coastal waters would “releas[e] the Argus and Neptune aircraft for deeper penetrations patrols in the open ocean where they belong.” Offering up *Bonaventure* was a desperate response to the Government’s proposed cuts and it was one that Fraser-Harris would quickly come to regret. Within four weeks, both he and his proponents would march back from the verge of defeat in an incredible reversal that would see them launching a renewed offensive to save their plans to replace *Bonaventure*.

While Fraser-Harris had tarred all the members of the “small ship clique” with the same brush, there were senior executive branch officers who were not unsympathetic to his plight. Rear Admiral Dyer, having a week of leave before taking over as Vice Chief of the Naval Staff, had not yet arrived at Naval Headquarters and so missed the meeting with Madden. His reaction to the aftermath of EASTLANT’s trip, however, was
indicative of his leadership style. Dyer was everything that Brock was not. A man whose sense of humour and quiet composure encouraged discourse suddenly replaced three years of an egocentric and domineering Vice Chief of the Naval Staff. Although he could be firm when needed, Dyer was not one to make snap decisions and instead preferred to take a deliberate approach that considered the opinion of others. There lay the rub. Brock had proved a good counterweight to Rayner’s reserved personality. Effectively keeping the advocates under control through his gruff composure, Brock’s move to the East Coast left the RCN with a vice chief who was a consensus builder at a time when it needed an autocrat. Fraser-Harris had met his match with Brock, but Dyer’s willingness to explore the Assistant Chief of the Naval Staff (Air & Warfare)’s perspective effectively let the Pandora of Naval Air back out of its box.

On 21 August 1963 Dyer gave Fraser-Harris a chance to respond to Madden’s influential report (“The future of the A/S Carrier in EASTLANT”). Fraser-Harris took particular exception to Madden’s claims that the anti-submarine warfare carrier was nothing more than an attractive target for the enemy. Moreover, Madden also argued that, unlike shore-based maritime patrol aircraft, a Soviet submarine could easily dispense of the Tracker threat simply by sinking the parent carrier. Of course the reality was not nearly so simple, but Fraser-Harris’ counter argument was weak. In his view, the escort carrier would not stand out in a convoy since it was only slightly bigger than the proposed General Purpose Frigates and could “easily be mistaken for a merchant ship.” This logic was seriously flawed and it was obvious that Fraser-Harris was trying to have it both ways: he could not claim that the escort aircraft carrier was the best anti-

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submarine warfare platform and then suddenly expect people to believe that the Soviets would not recognize it as the RCN’s “juiciest target.”¹⁹ Likewise, Fraser-Harris relied on some dubious statistics in an attempt to overcome the fact that a fleet of maritime patrol aircraft was much cheaper to operate and maintain than carriers.²⁰ But it was his arguments regarding fix wing aviation that actually defeated his own case because it inadvertently revealed how the maritime patrol aircraft could, in fact, operate as a natural partner for the DDH.

What Fraser-Harris put forward as his most powerful point was that modern anti-submarine warfare required an “essential Balance of Weapons Systems” which consisted of “a mix of ships, helicopters, fixed wing, and fighter aircraft the absence of any one of these tools will seriously impair the effectiveness of the others.” This much was certainly true. And the naval air advocates had worked hard to suggest that the RCN could use V/STOL jet aircraft to provide an umbrella of air defence - a capability that the DDH flotilla leaders would not have. Yet, during his testimony to the Sauvé Committee one-month earlier, Rayner had effectively rejected the V/STOL argument. When it came to hunting Soviet submarines in areas of elevated air threat, the DDH navy was not going to operate as an independent national entity, but as part of an alliance force that would be integrated with larger NATO groups. In these cases American strike carriers would

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¹⁹ ACNS (A&W) to VCNS, The Case for the Small Carrier, 26 August 1963, DHH, NPCC Papers, 79/246, Folder 59; Welland, This will have to do, 12.
²⁰ For instance, Fraser-Harris noted that “cost increase alarmingly” for the Maritime Patrol Aircraft the further operations strayed from the coasts as he argued that it required at least fourteen Maritime Patrol Aircraft to keep one on station for a 1000 mile transit. This suggested that the numbers of aircraft to do the same job as a carrier would not be worth the expense. However, later studies conducted by the navy show exactly how far fetched Fraser-Harris’ notions were as it determined that it took ten aircraft to keep 2.5 Patrol Aircraft on station continuously. ACNS (A&W) to VCNS, 23 August 1963, DHH, NPCC Papers, 79/246, Folder 59; “Number of Ships and Aircraft required to track a nuclear or fast diesel submarine in waters of low SOSUS Coverage,” DHH, 76/51, file 4A.
provide the extended air cover while the General Purpose Frigate and other guided
missile destroyers would take care of the medium and short-range air defence needs.\textsuperscript{21}

Rayner’s confidence in the maritime patrol aircraft made the future of carrier-
based fixed wing aviation look equally bleak. The maritime patrol aircraft was
considered the ultimate surveillance weapon and that capability made it a good fit for a
destroyer-based navy. Further refining the developing DDH concept of operations, the
RCN was heading down a road in which the navy “must aim to detect submarines by
search methods in the broad ocean. In other words, the accent now should be on
surveillance. This is the direction in which we are aiming our ASW efforts.”\textsuperscript{22} That was
an important statement. The Repeat Annapolis, which would evolve into the DDH 280s,
would become the flotilla leaders of a fleet that, while capable of destroying submarines,
was being designed primarily as a surveillance and detection force. And in this particular
vision of the future there was little room or, more importantly, money for both maritime
patrol aircraft and fixed wing carrier aircraft.

Dealing with the fixed wing issue was not easy for Fraser-Harris. Forced to admit
“[that] the Anti-Submarine helicopter is the most efficient means of attacking high speed
submarine” the Assistant Chief (Air & Warfare) tried to build a case for the Trackers by
observing that the Sea King “does not have the search capability of fixed wing A/S
aircraft.” Moreover, he also relied on a recent staff study on the Trackers to directly
attack the DDH concept of operations. This study found that “with only the escorts and a
limited number of helicopters guarding the force, the submarines have virtually complete
freedom of action as long as they can keep about 10 miles or more beyond the screen.”

\textsuperscript{21} Sauvé Committee, 9 July 1963, DHH Library, p. 121.
\textsuperscript{22} The RCN Today, nd (circa late 1964/early 1965), DHH, 73/712.
Only fixed wing aircraft flying from carriers could deny the Soviets this advantage. In his mind, while willing to admit that a ship-directed helicopter attack was the best way to hunt a submarine, it was the Trackers that had the speed to arrive on the scene in time to localize and attack. But maritime patrol aircraft were just as fast as the Trackers. No matter how Fraser-Harris cut it, therefore, there was no escaping the truth in Madden’s conclusion - that the maritime patrol aircraft could perform all the tasks of fixed wing carrier aircraft.

Fraser-Harris would never accept that argument, but he came to realize that he was losing ground with the Trackers, concluding that: “in view of the A/S helicopter’s known attack capability, a reduced attack capability in the A/S fixed wing aircraft could be accepted if necessary.” As he would observe, however, the real issue was not fixed wing aviation but rather, “the vexing questions as to whether the RCN should continue to operate an aircraft carrier or carriers. Whether we like it or not, we are bound to have to face up to rejustification [sic] of this weapon system, both within the Navy and with the minister, Treasury Board etc.”

But as the naval air advocates were soon to discover the minister, let alone Treasury Board, was not the problem. Hellyer had his own vision for the military and it was one that made the carrier look more attractive. As a result, Fraser-Harris would take advantage of the political desire to build a force that could deal with “brushfire” wars as a means to secure the carrier’s future. In doing so he would rekindle the factionalism among the officers at Naval Headquarters. That factionalism would, in

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turn, not only undermine the RCN’s defence of the General Purpose Frigates, but it would also challenge Rayner’s developing concept of a destroyer navy supported by maritime patrol aircraft and conventional submarines.

While he was acting as defence critic in opposition, events such as the Congo and the Berlin crises had suggested to Hellyer that the military might need to better prepare for limited war situations. Barely in power for one month, internal strife in Haiti and a potential military showdown between that nation and its neighbour, the Dominican Republic, in May 1963 further drove that point home. Between four to six hundred Canadian nationals – “mostly priests and nuns” involved in missionary and relief work – were stuck in Haiti and might need evacuation. The Americans were willing to help, but Prime Minister Lester Pearson worried that this offer would come at a considerable cost. Canada was not going to serve as a pawn in a larger geopolitical chess game as Pearson believed that President John Kennedy’s administration would justify the deployment of US troops by claiming that “other countries had asked them to act.” On the other hand, not doing anything would be equally dangerous – images of wounded or killed Canadian nuns and priests would not bode well for the government. As a result, the destroyer Saskatchewan sailed from Puerto Rico with orders to standby off Haitian waters, while Bonaventure – which was in Charleston, South Carolina – was put on a state of readiness that would allow her to sail within four hours. 

The anticipated violence in Haiti never materialized, but the navy had nonetheless saved the government from having to ask the Americans to rescue Canadian nationals. Behind that diplomatic “victory” lay an important lesson for the minister. Despite being one of Canada’s newest destroyers, the Saskatchewan was not at all the type of ship required to perform the tasks of evacuating nationals and protecting Canadian property as well as assisting in the maintenance of order. The ship’s company did the best they could to carry out these tasks, and with just under half of the crew assigned to landing party duties, the Saskatchewan was effectively converted into a floating army camp. Messes became classrooms for crash courses on “Landing Party Organization… Tactics… [as well as] controlling mobs and riots” while the quarterdeck served as a temporary range for small arms firing and training. It was an odd scene for an anti-submarine destroyer that was made to look even odder once the American’s response to the crisis, which consisted of a large United States Navy amphibious force, “hove into sight.”26 This fleet, complete with 500 marines to send ashore, was exactly the type of force Canada would require if it wanted deal with potentially destabilizing events in Third World nations as well as preventing limited wars. The emphasis the Liberals had placed on these situations while in Opposition indicated that Canadian foreign policy under them was certainly heading in this direction.27 At the very least it was a concept that Hellyer wanted to explore further. But it was the Iwo Jima class of that American amphibious fleet – which was a type of carrier comparable in size to Bonaventure – that caught Fraser-Harris’ eye.

26 Atwood to Minister’s Staff Officer, 21 May 1963 LAC, RG 24, Accession 1983-84/167, Box 460, 1650-26, vol. 38; Saskatchewan, ROP, 1 June 1963, DHH, RCNHS fonds, 81/520/8000, Box 96, File 3.
In mid-August 1963, Hellyer informed the Chairman of the Chiefs of Staff, Air Chief Marshal Frank Miller, that he had a vision for the Canadian military called Mobile Force. At that time Hellyer only gave Miller a sketchy idea of what this meant, telling him that it “is basically an air transportable fighting unit which could be airlifted with its equipment for quick deployment anywhere in the world.” It was also to be mechanized with “high fire power,” and yet still flexible enough to be part of the mobile reserve for the Supreme Allied Commander in Europe as well as United Nations operations.

Sealifting this force, while an idea that the minister was willing to investigate, was very much a secondary consideration. But that was enough for Fraser-Harris who saw a sealift capability for Mobile Force as a good way to save naval carrier aviation in the RCN, so much so, in fact, that he managed to get appointed to the tri-service Mobile Force Committee (which was tasked with studying whether the minister’s idea was a realistic concept) as the navy’s representative.28

Fraser-Harris knew what he was doing. The RCAF could transport either the brigade or its equipment in a timely manner, but not both, and that limitation allowed him to make the argument that Mobile Force could best be served by a mixture of air and sealift. Other points emanating from the committee were also clearly the Assistant Chief (Air & Warfare)’s work, as he further explained that Mobile Force could easily face a situation where suitable airfields or ports were simply unavailable. In such instances, it was understood that aircraft carriers and assault ships were the only options to serve as floating airports and support facilities. Although no specific ship types were mentioned,

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28 Minister to Chiefs of Staff Committee, 27 August 1963, and Mobile Force Study of Composition and Cost, Terms of Reference, LAC, RG 24 Vol. 21811, CSC 2447:1; Chief of Staff Committee, 05 September 1963, DHH, Raymount Papers, 73/1223, Box 63, File 1311; Rayner to Miller, 17 September, and Minutes of 1st Meeting of the Joint Service Study a plan for Mobile Force, 18 September 1963, LAC, RG 24, Vol.
Miller saw what Fraser-Harris was trying to do. From his point of view, “the navy” was taking advantage of the minister’s new initiative so as to acquire the Iwo Jima class carriers as well as more escorts to protect them. He was right, of course, yet it was not “the navy” but rather a faction within its senior ranks that was using Hellyer’s vision to their advantage. Nor was this the only policy committee that the naval air advocates exploited. Wanting to redefine Canada’s role in the world, the Liberals once again turned to Dr. Sutherland to reassess Canadian defence policy with the view to examining “major alternatives.” However, Sutherland’s defence policy study would have repercussions for the navy and would lead to a renewed debate over whether the RCN should put enlarged DDHs or aircraft carriers at the centre of their fleet. And it was likely for that reason that the naval air proponents got one of their own appointed as the RCN’s representative to Sutherland’s policy study.

Aside from his earlier attempt to push the V/STOL requirement and having tried to kill the heliporter frigate at the Naval Staff meetings in the spring, Captain Wilgress, who it will be remembered was the Director of Naval Air Requirements (DNAR), continued his role as a key figure in the campaign to save carrier air. And his presence on Sutherland’s committee meant that the top two naval aviation supporters were on the two key policy committees that had the greatest potential impact on the RCN’s future roles and composition. It was a clever move that gave them a tremendous amount of influence, particularly since these committees allowed the carrier supporters to challenge the DDH’s growing hegemony over naval thinking. In fact, Sutherland’s study was

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21811, CSC 2447:1. Other members of the committee included Brigadier H.W. Love (chairman – army) and Air Commodore F.W. Ball.

particularly useful for the carrier enthusiasts because it would spell out the justification for acquiring the Iwo Jima class. Although they were not to make recommendations, the Defence Policy Committee nevertheless managed to pass judgement on some of the options available for Canada’s maritime defence. For example, one idea held that Canada’s immediate maritime needs could be met through a “Coast Guard” type navy. Strictly speaking, this was true, but all committee members agreed that the foundation of Canada’s foreign policy was built around “a system of alliances” and that the cost of deviating from this formula would be high. Indeed, a Coast Guard Force bought little political capital abroad and would both diminish Canada’s role in the world as well as severely strain relations with the US. That realization was good news for the destroyer navy because, as Madden’s visit had recently shown, NATO wanted escorts from Canada to meet the Alliance’s stated goal of deterring Soviet aggression. But the ‘Coast Guard’ fleet was not the only option Sutherland’s committee discouraged. Nuclear submarines, as well as building ships for an RCN contribution to United States Navy or Royal Navy task forces or multi-lateral groups, were all concepts that either cost too much or would not be publicly acceptable. Amphibious sea transport, however, was a different matter. Undoubtedly the product of Wilgress’ presence, the option of acquiring “three light carriers” to transport a brigade group was considered “a practical possibility that deserves consideration.” In the end, therefore, the future composition of the RCN came down to a destroyer force specializing in anti-submarine warfare, an amphibious fleet centred on the Iwo Jima class, or a combination of both.31

30 DNAR to DNOR, 20 June 1963, LAC, RG 24, Accession 1983-84/167, Box 52, 1225-3-1.
31 Ad Hoc Committee on Defence Policy, September 1963, DHH, 85/333, File 006.
Both Mobile Force and Sutherland’s Defence Policy Study gave the naval air
supporters some powerful ammunition to use against a destroyer-centric navy. Nor was
that the only encouraging sign that made a renewed offensive to save carrier aviation
possible. Coinciding with the policy and capability re-evaluation there were also changes
in senior staff appointments that made for a more carrier-friendly atmosphere at Naval
Headquarters. Certainly Brock’s transfer to the East Coast left his vision of a DDH-
centric navy vulnerable. Indeed, within weeks of having taken over as Vice Chief of the
Naval Staff, the more open-minded Dyer sent Fraser-Harris a paper on amphibious sealift
stating that he saw it as a possible alternative program for the RCN. 32 Better yet, the men
on the Naval Staff who Fraser-Harris had identified as “small ship” types – Pullen and
Russel – had been posted elsewhere; while Wilgess and Howe, who had declared their
stripes as naval air supporters in the April debate over the heliporter, remained. 33 That
gave Fraser-Harris an opportunity. With Dyer away on other duties, Fraser-Harris was
left to chair a Naval Staff meeting in earlier September 1963. While doing so he made a
point of telling them that the relationship between the Naval Policy Coordinating
Committee and Naval Board had evolved to the point where the Naval Staff had become
redundant. As the name implied, the Naval Policy Coordinating Committee’s function
was simply to prepare and fine-tune the Naval Staff’s policy for a decision at the Naval
Board level. Over the years, however, the Coordinating Committee had slowly exceeded
their mandate to the point where they were designing policy. Fraser-Harris urged that the
time had come to “re-establish [the Naval Staff’s] reputation as a body capable of

32 Naval Secretary to VCNS, 30 May 1963, LAC, RG 24, Accession 1983-84/167, Box 52, 1225-3-1;
Brock Appointment message, DHH, BIOG B; Dyer Appointment message, DHH, BIOG D. Madden’s visit
was slated for 03-04 July while Brock officially assumed command of FOAC on 04 July while Dyer took
providing higher authority with properly staffed, well considered papers.” They certainly listened. This pro-carrier Naval Staff would become the Assistant Chief of the Naval Staff (Air & Warfare)’s spearhead in his coming offensive, and they wasted no time in ordering these staff papers from their directorates.34

Two important staff papers – one entitled “Fleet Composition for the 1970’s” (also known as the McCord Study) and the second called “The RCN of the 1970 Era” – emerged almost immediately. Not surprisingly both advocated the acquisition of carriers. Seeing through the lip service that the Brock Report had paid to United Nations operations and limited war, McCord attacked the proposed destroyer-centric navy by charging that “this fleet is not versatile enough to carry out the tasks listed in the Naval Objectives Report [Brock].” The other study was equally candid - identifying that winds of change at Naval Headquarters were blowing the smokescreen of the Brock Report’s versatility away:

Although current policy does not in fact reflect a general trend toward conventional weaponry with greater limited war emphasis, there is no doubt that current thinking, the forerunner to policy changes, is definitely in this direction. It is therefore assumed that the RCN of the future will be a more general purpose naval force.35

They were right, of course, and both studies proposed future structures that would make the RCN into much more than just a balanced anti-submarine force. Once again the argument was put forward that only carriers could provide the capability to deal with the air defence, surface threat and troop transport requirements for limited wars. Moreover, totally contradicting Madden’s earlier message, these reports tried to sell the carrier by

33 Naval List, April 1963, Canadian War Museum Research Center.
34 Naval Staff Minutes, 05 September 1963, DHH, RCNHS fonds, 81/520/1000-100/3, Box 38A, file3.
observing that they could be used as anti-submarine platforms when not employed on limited war operations.

The only truly versatile vessel, according to the reports, was the aircraft carrier and therefore McCord suggested that the RCN acquire 4 of them while the other study wanted 5. The size of these proposed fleets was staggering, but McCord’s four carrier groups (Bonaventure and 3 new light carriers) also required a total of 24 guided missile destroyers (6 per group) and 48 hydrofoils (12 per group) for escort duty. 36 “The RCN of the 1970 Era,” on the other hand, was a little more realistic. Representing an early concept of limited war operations, the escorts in that study would be divided into 5 groups based around the Iwo Jima class aircraft carrier, with 2 DDHs and 2 Destroyer-escorts providing a close anti-submarine screen while 2 General Purpose Frigates would be located on the distant flanks to provide air cover. In addition some groups would have V/STOL strike fighters while others would carry helicopters for troop deployment in limited war situations or the Sea Kings when operating in the anti-submarine role. According to the carrier supporters, that was the strongest selling point of their concept of operations. This fleet could be used for both limited war and anti-submarine situations whereas the DDH-centric navy could only do the latter. Moreover, estimates for these “general purpose” fleets ranged from $700 to $952 million which, to the naval aviators and their supporters, seemed quite reasonable.

At the same time that these staff studies were boldly thrusting at the core of the DDH’s current dominance over the RCN’s force structure, a second prong of Fraser-Harris’s offensive had already advanced on the situation regarding Bonaventure’s future.

It was equally aggressive. The doubts that Madden had raised over the need for a light carrier had turned the planning for Bonaventure’s refit, which was scheduled for May 1965, into a hotly contested issue. The key question was whether the refit was worth the expense, and remarkably it was the naval aviators and their supporters on the Naval Staff who sounded the alarm:

Naval Staff wished to go on record that it viewed with concern the length of time BONAVENTURE would be out of service, and the high cost of her refit related to her remaining expected life. …Naval Staff considered immediate steps should be taken to explore the possibilities of obtaining an alternative vessel, but failing this, could see no alternative to the refit.37

This warning was prophetic given that the Bonaventure’s refit, which was estimated at costing between $5 to 7 million, would become a political scandal in the late 1960s. Fraser-Harris was particularly cautious as he had “a nasty suspicion that we are liable to be faced with something more like an $8 million dollar bill and 12 months or more out of service.” His instincts were correct even if his estimates were not – refitting Bonaventure would end up costing $17 million.38 Whether Fraser-Harris’ was truly concerned with costs can be seriously questioned, particularly since a closer examination of his opposition to the refit reveals yet another clever ploy.

For most naval air advocates, Bonaventure was a symbol of what they called the “all eggs in one basket concept.” Using that as a euphemism for the RCN’s habit of acquiring carriers that barely met their operational requirements, these officers complained that Naval Headquarters always expected these smaller vessels to perform functions beyond their capabilities. Certainly that was the situation facing Bonaventure

36 J.E.D. McCord (Director of Naval Operations requirements) A Staff Study of the Fleet Composition for the 1970s, September 1963, DHH, NPCC Papers, 79/246, File 78A.
37 Naval Staff Minutes, 01 August 1963, DHH, RCNHS fonds, 81/520/1000-100/3, Box 38A, file 3.
as even after her refit she would only be capable of providing “marginal” value for limited war operations. What the RCN truly needed was Fraser-Harris’ dream carrier – the large and upgraded American Essex class. An Essex would be much more costly than Bonaventure’s refit, but according to Fraser-Harris, this platform was worth the price because its operational life would extend into the 1980s. Nor did their ambitions end there. Well suited to operate the A-4 Skyhawk, the Essex also represented a stepping stone by which the RCN could reacquire a strike fighter. The naval air proponents had longed for this capability ever since they had lost the Banshees in 1962, and they were willing to do whatever it took to get it back. As a result, the minister’s interest in limited wars was worth exploiting because, as Wilgress had emphasized, the Essex class was “most suitable in [the] fighter role of the mobile force concept.”\(^3^9\) Simply put, the Iwo Jimas would carry the troops and helicopters while the Essex would provide the air cover and strike support.

Fraser-Harris knew exactly what it took to turn a concept into a potential procurement program. As a result, a letter was drafted that instructed the Canadian Naval Member in Washington to get information on the Essex class from the Americans. This request was not nearly as innocent as it first looked; inquiries of this nature often served as official notice that the RCN was actively considering the weapons system in question. In turn, any hint of Canadian interest in the Essex would give this unsanctioned program a sense of legitimacy, the more so since these types of signals would then be followed by intense pressure from the Americans who would naturally be anxious to make a sale.

fear of this type of outside influence caught the attention of Commodore Sam Davis, and while sitting at his desk in DG Ships he penned a note to Dyer asking: “Are you sure we want to send this letter?” From Davis’ point of view, the RCN had already let the Americans down when it failed to order the Tartar missile system for the General Purpose Frigates in August. Getting the Americans hopes up for the potential sale of an Essex to Canada on the heels of that disappointment would be folly, particularly when the acquisition of this class had not been studied at either the Naval Board or even DG Ship level. Dyer agreed. Constantly asking the Americans for assistance with programs that “then fizzle out” made it more likely that the RCN would not get help when they really needed it. Having gone too far, the Assistant Chief of the Naval Staff (Air & Warfare) backed off and claimed that he did not actually see a requirement for an Essex at this time. Instead, he now suggested that he had only asked because “the ‘Joint Mobile force’ Study now underway might well call for a requirement for [such] a carrier.” In the end, the letter to Washington was never sent. But the fact that it was Davis who had caught on to what he was trying to do was not lost on Fraser-Harris. At the same meeting where he had implored the Naval Staff to re-exert its influence, the Assistant Chief (Air & Warfare) also emphasized that it was essential to gain the support of the technical services. Fraser-Harris was well aware that Davis and DG Ships held considerable power when it came to recommending whether a ship type was a viable program for the RCN. Realizing that DG Ships had a virtual monopoly over declaring what was and was not technically possible, Fraser-Harris heaped praise on Davis’ engineers and insisted that

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40 Davis minute note 30 September 1963 and Fraser-Harris, 02 October 1963, LAC, RG 24, Accession 1983-84/167, Box 3790, 8200-24, vol. 3.
Naval Staff members invite representatives from Technical Services to their meetings whenever they thought it necessary.42

It was important for the naval air supporters to try to get DG Ships as an ally because those who supported the DDH navy had some powerful arguments against the Iwo Jima and Essex. Certainly, there were influential people in the department’s think tanks who questioned whether the Canadian navy would ever need such platforms. For instance, with *Bonaventure* and *Saskatchewan* scheduled to participate in UNISON (a Commonwealth Defence Co-operation exercise),43 the Director of Strategic Studies had given serious thought to the RCN’s role in United Nations sponsored forces. He also looked at options for dealing with limited war outside of NATO. Although a boiler explosion in *Bonaventure* forced the RCN to drop out of this exercise, the planning was nevertheless helpful to Rayner as the Director of Strategic Studies drew the following major conclusion: “For the foreseeable future, it is likely that the role of UN sponsored military forces will be limited to Military Supervisory Commissions (such as Kashmir, Palestine, UNEF in Egypt and Congo).” This pattern of peacekeeping missions made it extremely unlikely that Canada would ever get involved in limited war situations that would require a serious level of firepower or sophistication. Only a Korean War type of scenario could justify the Essex and Iwo Jimas and even a cursory study of the new Liberal government suggested that they did not want Canadians involved in larger types of conflicts and potential quagmires (such as the Americans’ growing interest in Vietnam). Reiterating an earlier Joint Staff Study, it was furthered argued that destroyers

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42 Naval Staff Minutes, 05 September 1963, DHH, RCNHS fonds, 81/520/1000-100/3, Box 38A, file 3.
were the best platform to participate in Military Supervisory Commissions and that the RCN did not need new ships for the UN role.\textsuperscript{44}

Rayner jumped on this message. With some creative mess arrangements and packing, Rayner had told the minister as early as June 1963 that the destroyer navy (with \textit{Bonaventure}'s assistance) had the capability to transport 5,270 army personnel. The only requirements were a disembarking port and landings had to be unopposed. Whether this was true was questioned at this time. The idea of fitting 50 fully-equipped soldiers on a Prestonian class frigate or 100 troops on a destroyer-escort, had a ring of unreality about it – but this argument served its purpose well. In the remote chance that sealift was required over the next decade Rayner claimed that the current fleet could cope. Nor was it the only argument to cast doubt on the wisdom of the limited war concept of operations.\textsuperscript{45}

How the navy was going to afford both a DHH navy and aircraft carriers for limited war operations was the key question that had yet to be asked. For the destroyer proponents the answer was simple. The navy could do one or the other well but not both. The Chief of the Naval Staff had worked through the numbers and a sealift capability for the navy simply did not add up; shopping for expensive ships made no sense at a time when the government was breaking the military’s bank. In fact, Rayner had just returned from a Chiefs of Staff meeting where he protested the government’s recent decision to further gouge the navy’s proposed budget. How could the navy be expected to meet this

\textsuperscript{43} CANCOMCORTRON ONE to CANFLAGLANT, 071915Z 1963, LAC, RG 24, Accession 1983-84/167, Box 460, 1650-26, Vol. 38.
\textsuperscript{45} NA to CNS (HA Porter) to CNS, 26 August 1963, DHH, Rayner Papers, 99/31-IB-15. For more information on the impact of limited wars on Canadian peacekeeping operations see: Sean Maloney, \textit{Canada and UN Peacekeeping}, (St. Catherines: Vanwell, 2002).
potential target of $270 million while at the same time explore new and costly roles for the service? This was odd. Having elements in the navy exploring the acquisition of aircraft carriers to meet Mobile Force requirements was totally inconsistent with those who were examining a reduction in the General Purpose Frigate program to respond to the minister’s budgetary cutback exercise. It is tempting to blame the minister for these seemingly contradictory initiatives because both Mobile Force and the exercise to examine potential budget cuts were supposedly his ideas (the latter, as will be seen, had more to do with Liberal politics than Hellyer’s personal initiatives). Upon closer scrutiny, however, it is hard not to fault the navy for much of the confusion over its future direction.

Without the money to fulfil both the Mobile Force and anti-submarine roles, the navy had few options but to specialize. In Rayner’s mind, the choice of which one to choose was easy. Like most of the “small ship clique,” Rayner suffered from an almost fanatical devotion to meeting SACLANT force goals, and the best way to do that was a destroyer fleet protected by General Purpose Frigates and conventional submarines. It was the obvious and right mix for an alliance navy geared towards anti-submarine warfare. Yet firm direction was required to help the navy navigate around the groups of ship advocates as well as other factions that peppered its ranks, and that was something that Rayner did not provide. Nor did Dyer. Instead, the Vice Chief of the Naval Staff was more interested in getting “input from Captain’s level of those serving in Naval Headquarters …in formulating the shape of the RCN.” Moreover, Dyer also wanted to appease the disgruntled elements on the Naval Staff. Without directly saying so, he

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46 CCOS Committee minutes, 26 September 1963, DHH, Raymont Papers, 73/1223, Box 63, File 1311
47 NPCC Minutes, 24 September 1963, DHH, NPCC, 79/246, Folder 5.
emphasized that things would be different on his watch as Vice Chief. He announced that, unlike under his predecessor, the Naval Staff would once again be responsible for the navy’s requirements and that he would encourage input from all Branches of the Naval Service. Fraser-Harris’ message had been heard and acted upon as the Naval Staff was allowed to re-exert its influence after years of so-called oppression under Brock’s regime. There were times when the navy required a consensus builder like Dyer to resolve conflict among members of the RCN’s tertiary level of decision-making, but this was not one of them. The captains and commanders that formed the Naval Staff’s directorates were the source of the factionalism and now they were going to have a forum through which to reopen the debate over the RCN’s force structure.

In fairness to both Rayner and Dyer, Mobile Force – along with the minister’s attitude towards the GPF – had put them in a difficult situation. Ignoring Hellyer’s interest in limited wars risked the possibility that the navy would be left out in the cold if Canadian defence policy suddenly shifted in this direction. There was no crystal ball at Naval Headquarters to tell them that Mobile Force would stall at the planning phase, and therefore Rayner and Dyer had little choice but to hedge their bets. Moreover, challenging a ministerial directive at a time when the government was in the process of cutting budgets was not smart politics. From that perspective, therefore, the Naval Board did the right thing by forming another ad hoc study group under the chairmanship of the Director General Fighting Equipment, Commodore HG Burchell. The senior staff was obviously worried that the DDH-centric force structure proposed in Brock’s Report would not satisfy the new minister, particularly since Burchell’s committee was tasked with studying Hellyer’s request for alternative naval programs. Yet Rayner did not want
them to overreact to the minister’s interest in limited wars. His instructions were clear: the committee was to “bear in mind that the aim of the Navy is to be primarily effective for ASW” but that they were also to explore “a capability for UN Peacekeeping Operations for limited war.”\footnote{Naval Board Meeting, 25 September 1963, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 3. Aside from Burchell the rest of the committee consisted of H.A. McCandless (Supply/Deputy Naval Compt), C.P. Nixon (executive/DNOR), R.W. Murdoch (Comms/ DN Intel), R.J. Pickford (exec/DN

Moreover, unlike Brock’s Report, the Naval Board did their best to give the committee a balanced composition; its membership included two executive branch officers, two supply officers, one communicator (intelligence), two engineers (one of which was Burchell) and finally one naval aviator (Wilgress).

Burchell was a good choice to head this committee. He was fair and understood the dangers that the building factionalism in the RCN posed to the navy and its planned programs. In fact, seven months earlier he had written a report that had a direct bearing on the situation the RCN was facing in September 1963:

I am concerned about the frequency of the occasions when I encounter authorities in DND, other Government Departments and Industry who greet me with comments like:

1) “Your boys are having second thoughts”
2) “So and So says he doesn’t agree with the Naval approach
3) “I get different advice depending on the individual I talk to.
And so on.

It is not my desire or intention to stifle discussion or freedom of thinking or expression of opinion. It is however important that the creditability of programmes approved by requisite authorities in the RCN should not be compromised by loose talk, no matter how sincere the individual and/ or his expert views. There is a time to express one’s views and when that time is past I do not wish DGFE staff to participate in the generation of “red-herrings.”\footnote{49}

This warning was well founded. The re-emergence of the carrier debate had a drastic impact on the General Purpose Frigate program. If the program was to have any chance of surviving the government’s proposed cuts, it needed the unqualified support of the
entire staff organization at Naval Headquarters. Brock had foreseen this. As early as January 1963 he had warned all the advocates that the decision to build the General Purpose Frigate had been made and that “it is not intended that any changes to the concept and the broad characteristics already approved will be tolerated.”

His message was clear. Debate and discourse between the ship advocates or the champions of various weapon systems was welcome during the formation phase, but nothing was more likely to scrub an approved program than dissension in the ranks.

Brock’s approach was something that Burchell understood all too well. In the latter’s view, “once a discussion has been completed every member equally has a duty to support the majority situation,” and any alteration from that plan was not only counter-productive but also “unintelligent,” “irresponsible,” and “disloyal.” More to the point, he found that “once action is underway on an approved project anything less than full support is sabotage.” Whether intentional or not, this was exactly what some elements within the navy were about to do to the General Purpose Frigate. In fact, noting the extent of the factionalism within the RCN at this time, one officer could not resist the temptation to mock Burchell’s position because it “assumes that the majority is right.” In reality, Burchell had had a moment of clarity well before the current crisis over the navy’s force structure had begun. But that logic was quickly put aside when the minister offered the naval carrier supporters a bone with Mobile Force. They were quick to take a bite. Nor were they the only ones gnawing at what appeared to be the minister’s bait, as at least one patron of the nuclear submarine program saw the General Purpose Frigate’s

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49 DGFE to Staff, 15 February 1963, LAC, RG 24, Accession 1983-84/167, Box 493, 1700-DGFE, vol.2
50 General Purpose Frigate Program briefing, DHH, 95/102, Cassette 1, Side A.
potential demise as a ray of hope for the acquisition of these underwater hunters. Other troublemakers also played an important part in killing the General Purpose Frigate program, and the role of personalities represents another important factor that impacted the direction of force structure in the RCN.

Throughout the RCN’s history there have been occasions where naval policy was shaped by colourful, dominant and egocentric personalities who stirred up trouble when things did not go their way. In general, these types of officers had some kind of cause, idea, or program that the majority did not accept. Convinced of the righteousness of their particular cause, and motivated by a conspiratorial sense that their superiors and colleagues had “wronged” them, such officers often tried to force their view upon the majority no matter what the consequences to the navy. Fraser-Harris certainly was cut from this mould. It was clear that Fraser-Harris saw the “small ship clique” as a hostile and competitive group who were conspiring with one another purposely to place roadblocks in front of naval air’s runway so as to prevent it from truly taking off in the RCN. Nor was that the only thing he blamed on the small ship types; in Fraser-Harris’ mind this group had also held up his career because of his failure to support “the party line.” Since this kind of thinking would have such serious repercussions on the navy’s ship replacement program, it is worth exploring these types of allegations. Moreover, it is equally important to understand how the dynamics as well as personal relations between officers and groups of officers can shape and change naval policy.

Until his dying days, Fraser-Harris remained convinced that he never made Rear-Admiral because he was not a part of “the old school” club. This fraternity consisted of

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51 DGFE to Staff, 15 February 1963, LAC, RG 24, Accession 1983-84/167, Box 493, 1700-DGFE, vol.2
all the senior officers who had joined the RCN prior to the Second World War and had been educated at the military’s naval college, HMCS Royal Roads. (An important point of clarification is required here: all the men who Fraser-Harris had claimed were part of this Royal Roads club had actually joined the navy well before the college opened its doors in 1942. As a result, his beef was actually with an elite group of permanent officers who had joined the navy before the Second World War). According to Fraser-Harris, most of these officers – who were the ones apparently stuck in the “pre-war small ship mentality” – disapproved of his behaviour as well as his failure to conform to the “club rules” as dictated from “the Royal Roads team.” Indeed, the eccentric Fraser-Harris was the antithesis of the so-called model pre-war permanent force officer. He preferred skiing rather than golfing, he was an out-spoken maverick instead of conducting business with quiet dignity; and worse yet he had a “natural enthusiasm for female companionship” which got him into trouble with his highly moralistic Chief of the Naval Staff. It was bad enough that Fraser-Harris had moved onto his third wife, but breaking all social taboos in the RCN, his new partner also happened to be a junior officer in the WRCNS. That, Fraser-Harris later recalled, brought a comment from Rayner that: “I [Fraser-Harris] would certainly not get promoted under his regime,” while a more sympathetic Dyer simply “asked me why I did not behave like a senior officer.”

It is difficult to determine whether his personal life and habits were actually targeted by the senior staff; however, it is possible to test Fraser-Harris’ thesis that “a built in service

54 Fraser-Harris to Robbie, 25 July 1993 and 6 November 1993, IWM, Fraser-Harris papers.
oriented resentment of the introduction of the aviation branch” was to blame for his misfortunes with the promotion board.

Fraser-Harris was not the only senior officer who was convinced that he had been held back both for swimming against the navy’s policy stream and for failing to play by the “Club rules.” While serving as the Senior Canadian Officer Afloat (Atlantic) in September 1961, Commodore James Plomer wrote a highly critical report in which he warned that the East Coast fleet was in “a poor physical state” and suffered from low morale, maintenance problems as well as inadequate readiness for wartime operations. Much to his chagrin, Plomer - who would play a pivotal role in the General Purpose Frigate’s demise - believed Naval Headquarters ignored this well-thought out report because he was a former reserve officer and therefore not part of the close knit “pre-war club of permanent force officers.” This belief harked back to the Second World War when another officer named Andrew Dyas MacLean made a similar charge that the permanent force did not listen to reserve officers no matter what their proven abilities were. Upon closer examination of that case, MacLean’s true motivation for publicly attacking the Naval Staff in 1943 was not based on some noble crusade to right perceived wrongs, but rather it was the product of a bitter officer who did not get a promotion for which he believed he was entitled. He was not the only officer to attack the navy in this fashion, and he would not be the last, as both Plomer and Fraser-Harris fit this paradigm perfectly. The top brass’s apparent disinterest in naval air or fleet efficiency may have frustrated Fraser-Harris and Plomer, but a closer examination of their records show how

56 Richard Oliver Mayne, Betrayed, particularly Chapter Two.
bitterness from being passed over for promotion fuelled their subsequent campaigns against the senior staff and the navy.

Correspondences from Fraser-Harris in the 1990s identify exactly how hurt he was from being “held back.” At the top of his list of personal grievances was the belief that he remained a commodore “until all the ex Royal Roaders [pre-war officers] had safely got by.” 57 [It should be noted that Fraser-Harris never was promoted beyond the rank of commodore]. Although navy lists confirm that officers with less seniority had beaten Fraser-Harris to the rank of commodore, it is interesting that he offered few complaints during his meteoric rise to the rank of captain. Ironically, the fact that Fraser-Harris was promoted too quickly to acting captain was likely the reason he was delayed in getting promoted to commodore. 58 This not only produced an elevated sense of self-worth in him, but also his youthful exuberance often led to situations where he would buck the system and use unorthodox means to get what he wanted. In fact, Fraser-Harris was the first to admit he “…was then, and still am, a bit of a rebel” and it was likely this attitude that created his “pretty cynical attitude to ‘The powers That Be!’” Rather than being the product of discrimination towards the aviation branch, this rebellious attitude was his true undoing and upon further reflection even Fraser-Harris was forced to admit later in his life that “there really were good reasons for my temporary stagnation in the second echelon!” 59

57 Fraser Harris to Robbie, 4 August 1993 and 13 September 1993, DHH, 93/492, Fraser-Harris Papers; Navy List for January 1960 and Naval List for July 1960, DHH Library.
58 Navy Lists for January 1948, January 1950, January 1956, and October 1962, DHH Library. It is interesting to note that Fraser-Harris claimed that he had been passed over by EW Finch-Noyes, yet the 1948 Navy Lists shows that the former’s seniority as a lieutenant commander was 16 August 1945, while the latter had been a commander since 1 July 1945. Finch-Noyes remained senior to Fraser-Harris on all subsequent Navy Lists.
59 Fraser-Harris to Robbie, 25 July 1993, IWM, Fraser-Harris papers.
The same was true for Plomer. Before becoming a member of the regular force, Plomer had given distinguished service as a volunteer reserve officer during the Second World War, and it was that history which he believed was holding up his advancement to Rear-Admiral. Plomer soured as he witnessed a highly talented group of pre-war officers either catching up or passing him on the navy list. Unfortunately for Plomer, his belief was the product of an over-active imagination and an almost pathological fear of being out-ranked by inferior (in his view) officers.60 Out of his list of pre-war officers who had been “unfairly” promoted ahead of him, one had always been senior, another was always junior, while yet a third was a supply officer and therefore did not follow the same career path.61 In reality, only one pre-war officer, Michael Grote-Sterling, had bested Plomer as the other officer who was promoted ahead of him (P.D. Budge) had actually worked his way up to Rear-Admiral from the lowly rank of ordinary seaman. But the real source of Plomer’s bitterness came in the spring of 1962 when he was appointed to temporarily replace Rear Admiral R.A. Wright who had taken early retirement from the Naval Comptroller position on the Naval Board. Rayner had emphasized to Plomer that he was only holding the position until Wright’s actual replacement, Rear Admiral C.J. Dillion, could be relieved of his current duties. Having served as the Comptroller for two and a half months, Plomer came to believe that he was entitled to the position as well as the rank of Rear-Admiral that went with it. Rayner disagreed and Plomer did not take the

61 These officers respectively were Medland, F. Caldwell and C.J. Dillion.
news well. In his mind, he was being persecuted for his reserve past and the only way to get justice was to appeal to minister, which he did in the spring of 1962.62

Bypassing the chain of command in this manner was grounds for dismissal, but Rayner took pity on Plomer telling the minister:

Unless he can be persuaded to withdraw his fancied grievance, and undertake further loyal service, I have no course but to recommend that he be compulsorily retired. Before concluding I wish to elaborate the basis of my recommendation. Commodore Plomer is regarded as a man of sincerity [sic] and strong convictions; one who has worked hard and achieved considerable success. Although some of his statements in his recent submission have been misleading, exaggerated or offensive, I prefer to overlook this aspect considering all the circumstances.63

Rayner was right. Plomer, like Fraser-Harris, was a man of strong convictions who did not take criticism well. Moreover, his relaxed style with juniors, “untidy appearance” and awkwardness in social situations would have marked Plomer as an outsider and misfit whether he was part of the “Club” or not.64 But despite these weaknesses, and believing that Plomer had simply been “carried away by his own conviction,” Rayner did everything he could to encourage him to stay in the navy. It was too late. Seeing himself as “a victim,” Plomer requested that he be granted early retirement on the grounds that he no longer had “confidence in the navy” and that his staying “can only be a source of friction and contention.” That warning was truly ominous as both Plomer and Fraser-Harris would cause tremendous internal and external upheavals in the navy, and by doing so they would show that there was no hellish fury like an egocentric personality scorned.

64 ACNS (A&W) to VCNS, 29 August 1963, DHH, 120.009 (D19).
Plomer would have his revenge. In retirement he no longer had to worry about service regulations and as a result he wrote a highly critical article entitled “The Gold-Braid mind is destroying our navy,” published in the September 1963 edition of Maclean’s magazine. Reading like a declaration of war against the navy’s top brass, Plomer’s opening salvo was devastating. In addition to the complaints he had lodged in his report to Naval Headquarters in September 1961 – namely that the navy had morale, maintenance and readiness problems – Plomer told the Canadian people that they had been “hoodwinked” by a senior staff involved in “a major scandal.” That scandal was at the centre of his new set of allegations. Firing a shot directly at the men he blamed for not promoting him, Plomer charged that the RCN was a “self-perpetuating, self electing group of admirals [who] have come to believe themselves as a social institution, a marching society, a kind of uniformed Tammany Hall.”65 But while discrimination against non pre-war officers was supposed to shock the sensitivities of an egalitarian Canadian society, his charge that the navy had bought the wrong types of equipment was meant to tap into the anger of the hardworking taxpayer. On that score, Bonaventure was used as an example to show how the RCN had purchased an aircraft carrier that was too slow, small, crowded, and poorly designed for North Atlantic conditions.66 The General Purpose Frigate should have been an easier target for Plomer given its questionable value to limited war operations and its escalating price tag, but the foundering program strangely escaped his crosshairs. Instead, the threat to the General Purpose Frigate in early September came from within the navy itself.

65 The term Tammany Hall, also known as the Columbian Order, is a reference to a group founded in New York City by William Mooney in 1789. It was a Colonial society of patriots who became synonymous with power and corruption.
66 Plomer, “The gold-braid mind is destroying our navy.”
Sam Davis would admit in his private correspondence that “the navy, before unification, was becoming dangerously fragmented, that it was seething just below the surface of Naval Board and Naval Staff proceedings.” More than ever, the RCN needed to project a united front when it came to the General Purpose Frigate as any sense of internal uncertainty could easily spell trouble for the program. But there were some submarine and aircraft carrier advocates who were nonetheless willing to take advantage of the chaos created by Plomer’s charges to push their own agendas. Commander E.G. Gigg – who aside from working under the Director of Naval Ship Requirements was one of the most vocal nuclear submarine advocates in the RCN – caused the most damage. Gigg shared many of Fraser-Harris’ rebellious qualities, and would earn a reputation for his outspoken brinkmanship while serving on the Canadian delegation during their Oberon negotiations with the British. He was a man who said what he thought regardless of the consequences and his attitude towards the General Purpose Frigate was no different. In a report written to Fraser-Harris, Gigg was highly critical of Sutherland’s General Purpose Frigate study and its conclusion that the guided missile frigate was the best option for the RCN. Instead, Gigg questioned the General Purpose Frigate’s ability to operate as both an anti submarine warfare and a limited war platform. His key arguments, which would be used in part by the minister to justify the cancellation of the project, were that the General Purpose Frigate was trying to do too much and so could not perform any one specific task well. He also agreed with the minister’s June testimony to

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67 Douglas to Davis, 28 August 1986, DHH, Davis Papers, 2001/36, file 15, “Correspondence.”
68 For more information on the British interpretation of the RCN’s negotiating team see: Various Correspondence on file “Royal Canadian Navy: discussions leading to building of three Oberon Class,” PRO, ADM1/ 28562; For the Canadian side see: Oberons, LAC, RG 24 Accession 1983-84/167, Box 3515, S-8000-SS/ON; Gigg minute note on D.R. Saxon, 15 November 1963, DHH, Gigg papers, 88/64-6; Dyer to CNTS, 15 July 1963, DHH, Gigg Papers, DHH, 88/64-1. In this latter memo, Dyer observes that “while
the Sauvé committee that the ships themselves were too slow to deal with Soviet nuclear submarines. On that score, Gigg was particularly critical, observing that the General Purpose Frigate was useless as an anti-submarine warfare ship because it did not carry a Sea King helicopter to provide the necessary “speed” to kill a 35-knot submarine. Moreover, Gigg had little faith in the General Purpose Frigate’s anti-aircraft armament, arguing that the RCN still needed an aircraft carrier to deal with “shadowers,” a term to describe enemy reconnaissance or attack aircraft that remained just outside the range of a ship’s missiles. But his greatest problem with Sutherland’s General Purpose Frigate report was that it constantly “marginalized” the value of the nuclear submarine as an anti-submarine weapon. In his conclusion, therefore, a combination of nuclear submarines and Iwo Jima class aircraft carriers was the best mix to deal with both the anti-submarine warfare and limited war threats that would likely face the RCN over the next decade.69

Gigg’s report put Fraser-Harris in a difficult position. On the one hand, Gigg was making powerful arguments in support of the Iwo Jimas that Fraser-Harris would want his superiors to hear. On the other, Gigg was also disparaging the same General Purpose Frigates that Fraser-Harris needed as screens and picket ships for his Mobile Force carrier task force. And that was the key conundrum that haunted Fraser-Harris throughout this period. Ideally, the type of navy he envisioned required both the carriers and General Purpose Frigates, but given the current political and financial climate it was obvious that the government would never accept such a costly fleet. Fraser-Harris had a plan, however. Unlike Gigg, he would not sabotage the General Purpose Frigate but neither

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CDR Gigg is available to join the team as proposed it is known that because of his strong conflicting opinions he would prefer not to be a member of the team.”
would he defend it. He had to concentrate all his efforts on getting the minister to accept the carriers and as a result he could not be bogged down in what he saw as a futile attempt to save a dying program. Put another way, Fraser-Harris may have been one of the General Purpose Frigate’s fathers, but he was not going to save this child at the expense of his favourite son, naval air. Instead, his strategy was to first convince the minister of the need to acquire carriers. Once the minister had accepted this principle he would then push for a new General Purpose Frigate program by arguing that those carriers desperately required guided missile destroyers for picket defence and escort screens. Not surprisingly, this was exactly what the Burchell Report would later argue, but Fraser-Harris had to be careful not to reveal his hand at the time of Gigg’s criticisms. As a result, while Fraser-Harris told Dyer that Gigg’s opinions on the future composition of the fleet were worth sharing with Rayner, he warned that it would be “unwise for the Navy to indulge in such a strenuous assault” upon the General Purpose Frigate.70

Fraser-Harris was indeed walking a thin line. Gigg’s larger arguments on force structure were a useful tool to help further weaken the DDH navy’s hold on Naval Headquarters, but his specific arguments against the General Purpose Frigate were counter-productive to a ship type that Fraser-Harris would later want resuscitated. This was where the balance between competing sets of advocates could turn into a bizarre game of shifting alliances and power struggles. As a submarine patron, Gigg’s goal was to make room for a nuclear submarine program through the cancellation of the General Purpose Frigate. Of course, the danger to Fraser-Harris’ position was that Gigg’s

69 Comments by Commander E.G. Gigg on “The General Purpose Frigate Program” and cover letter, 3 September 1963, DHH, Gigg Papers, 88/64-16 (6); VCNS to ACNS (A&W), 15 August 1963, DHH, 120.009 (D19).
70 ACNS (A&W) to VCNS, Report by Commander E. Gigg, 4 September 1963, DHH, 120.009 (D19).
arguments might be so persuasive to the minister that he would not support any future
guided missile destroyer concepts at all. Nor was that the only tricky situation for Fraser-
Harris or Gigg for that matter. Both men had to deal with the fact that while Plomer had
viciously attacked the navy he was also proving to be a vocal advocate of their positions.
Indeed, Gigg could hardly disagree with Plomer’s conclusion that the navy’s “greatest
need is for submarines” nor would the aviators want to refute Plomer’s belief that “Naval
aviation in Canada represents a considerable capital investment, and in fact this is the
most efficient section of the service.”

Dealing with Plomer was not easy for Fraser-Harris. He certainly appreciated
Plomer’s support of naval aviation and even claimed that he had gained a “true picture of
the ‘gold braid’” mind, which he used to take a poke at the DDH navy:

Had they benefited more from their Staff and War College and NDC courses, they
would have been keener on achieving a wider base for justification of their force
structure than the total specialization in that of the anti/submarine role in which
scientific progress and atomic power were anyway, gradually swinging the
balance in favour of the submarine and the aircraft over that of the surface ship.

While he disagreed with Plomer’s arguments on fleet effectiveness – which Fraser-Harris
believed was as good as, if not better, than the Royal Navy and United States Navy – he
was willing to use the allegations on Bonaventure to his advantage. As the Director of
Naval Aviation in 1954, Fraser-Harris remembered how the government forced the navy
to accept the Bonaventure because of a balance of payments agreement with Great
Britain. Plomer’s anger had led him to blame the senior staff for Bonaventure’s
acquisition, but that allowed Fraser-Harris to once again plug his dream ship by

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72 Fraser-Harris to Robbie, 25 July 1993, IWM, Fraser-Harris Papers.
observing how “the navy’s choice then and still would be an Essex Class.”

Nevertheless, that was as far as Fraser-Harris’ sympathy for Plomer would carry. It was not that Plomer had gone public with his concerns – only weeks after the publication of “The Gold-Braid” article Fraser-Harris was twice reprimanded for an inadvisable statement as well as personal editorial on defence policy that appeared in the press – but rather it was the fact that Plomer had attacked the navy that he found objectionable. For Fraser-Harris this was “untidy” thinking as airing the navy’s dirty laundry in public did far more harm than good. Such an external display of dissent did indeed lead to a gruelling media circus, but in reality Fraser-Harris’ internal machinations would result in just as much damage to the service.

Headlines in the national media – such as “RCN ineffectiveness ‘national scandal,’” “Navy like private club” and “Commodore loading his guns” – all indicated that Plomer’s first broadside had had its desired impact. Interestingly, there was no reaction from either the navy or the minister to Plomer’s remarks. Of course, the navy could not say anything without Hellyer’s permission. The minister’s silence was deafening. This was particularly odd given that the navy had developed its own public relations offensive to counter Plomer. Under Dyer’s leadership, each of Plomer’s charges were identified and then farmed out to the Division that could best provide an answer to them. There were no claims of perfection – the navy had its share of problems – but Dyer chose to attack Plomer’s credibility by showing that his interpretation was grossly exaggerated. For instance, on the question of morale the navy admitted that the East

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73 ACNS (A&W) to VCNS, 29 August 1963, DHH, 120.009 (D19).
74 Ottawa Journal, 7 September 1963; Toronto Globe and Mail; 11 September, and Ottawa Citizen, 11 September 1963; VCNS to MND, 12 September 1963, and ACNS (A&W) to VCNS, 12 September 1963, DHH, Rayner papers, 99/31-1B-27; ACNS (A&W) to VCNS, 29 August 1963, DHH, 120.009 (D19).
Coast fleet was not as happy as it could be, but it was far from the condition as described by Plomer. Moreover, this situation was not the product of Plomer’s abstract concepts—such as the navy’s supposed failure to implement the 1949 Mainguy report—but rather were centred on more practical causes. Inadequate housing for sailors, a shortage of qualified personnel, slow promotion and trade advancement as well as adverse sea-to-shore ratios all conspired to depress the fleet’s morale. Reports of proceedings and documentation from the coast confirm that the navy’s interpretation was the right one. And the best remedy for this condition was more money from the government and not Plomer’s quick cure of a “drastic housecleaning at the top.”

The navy had also marshalled some powerful facts and figures to counter Plomer’s criticisms on the RCN’s maintenance and promotions policies. With regards to the former, operational records for 1962 showed that 42 percent of the fleet was ready for operations at any given time. This figure was comparable to the RCN’s larger allies, as the United States Navy’s rate was only slightly lower while the Royal Navy’s was almost the same. The situation regarding promotions, however, was a little murky. While Rayner totally rejected Plomer’s allegation about preferential treatment for “ex-cadet officers,” the Chief of the Naval Staff’s predecessor—Harry DeWolf—was willing to admit that during his reign: “two or possibly three promotions to Rear-Admiral during my time are open to criticism on the ‘old boy’ level.”

Likewise, anecdotal evidence suggests that friction between the “birdbrains” (aviators) and the “fish heads” (surface fleet officers) might have seeped into the promotion board. For instance, a leading figure

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in the aviation branch, Commander H.J. Hunter, had decided to take early retirement after an anticipated promotion did not materialize. The Chief of Naval Personnel, Rear-Admiral P.D. Budge – knowing that Hunter had his surface qualifications – called the aviator into his office where he was reported to say “What’s all this about you wanting to leave the Navy? Give up this flying nonsense, become a real commander, and I will see that you get your own ship.” Yet as a former junior rank, Budge was the poster boy who showed that, while the “club mentality” undoubtedly existed, it was neither exclusive nor as pervasive as Plomer claimed. Ironically, it was Budge who provided the statistical evidence that added some much-needed balance to Plomer’s account. Out of the 98 RCN officers at the rank of Captain or above, 37 were cadet entry officers while the remaining 61 had joined the navy by some other means. Of course, the statistic that they did not dwell upon indicated that 6 out of the 9 Rear-Admirals in the RCN were part of what Fraser-Harris would characterise as the pre-war officers club.

The navy was the first to admit that there was some truth to Plomer’s allegations, but what Rayner could not tolerate was the constant distortion of facts as well as the extreme hyperbole. Worse yet, the reputation of serving officers had been thrown into disrepute and that led to a special plea to the minister. “In these circumstances” Rayner told Hellyer, “I consider that for the good of the Service and in justice to the officers concerned the truth of these matters should be made known to the people of Canada in timely and efficient fashion.” The navy wanted to take a shot at Plomer and yet the

minister seemed unwilling to pull the trigger. That was frustrating and some individuals, such as the Director of Naval Information, Commander R.C. Hayden, began to wonder why no defence was being offered:

The Navy has taken quite a beating as a result of the Plomer article and practically no one has spoken out, publicly, on the Navy’s behalf. Worse still, the Plomer piece came at a time when the Navy was having particularly heavy weather. Almost as though it was planned.81

Hayden’s suspicion may have been closer to the truth than he realized. Although the General Purpose Frigates were not part of Plomer’s first attack, his allegations certainly set the scene for the program’s cancellation. Within the literature, Hellyer is often depicted as the main suspect who had the most to gain from Plomer’s attack. Believing that the minister was determined to cancel the General Purpose Frigate at all costs, such accounts imply that Hellyer used Plomer as a means to set the stage for the program’s demise.82 While certain aspects of this assumption are likely true (namely that Hellyer made personal contact with, and used, Plomer), new evidence strongly suggests that Hellyer was not as resolute about cancelling the program as previously believed.

The General Purpose Frigate had truly put Hellyer in a tight spot. The minister was under considerable pressure from Prime Minister Pearson to get all the service chiefs to make cuts. While he saw tremendous waste within the military itself, Hellyer did show signs indicating that he was worried that the cuts were going too far. At an earlier cabinet meeting in August 1963, Hellyer had displayed much sympathy for the service chiefs and he even gave them a chance to give Pearson a direct “indication of the magnitude of the cuts required for such a tight budget.” Pearson was unmoved. After the

chiefs had left the meeting, Pearson assured Hellyer and the rest of cabinet that the government was “heading on the right track” and that the money currently allotted to defence was needed elsewhere. Things were not so easy for Hellyer.83

Numerous sources – most notably his own trusted advisor, R.J. Sutherland – had all indicated that the General Purpose Frigate was the right ship for the RCN. Nor could he overlook the benefits that the program offered the Canadian shipbuilding industry. But it was Rayner’s offer to reduce the program down to four ships that appeared to have had the biggest impact on Hellyer. Only two weeks after Hellyer had let his chiefs make their appeals directly to the Prime Minister, a British liaison officer submitted a remarkable report to the Admiralty in which he recalled a confidential discussion with the minister:

When asked about the GP Frigates, Mr. Hellyer said that he felt what he ought to do was to cut back on the programme but politically this was difficult to do. If he does reduce the numbers or slow down the programme it will be even more difficult to make off-shore purchases.84

Pearson’s desire to shift defence dollars to social programs would make it “difficult” to keep the General Purpose Frigate alive but Rayner’s four-ship program meant that it was no longer impossible. Hellyer was being torn between military necessity and larger governmental policy, and it is interesting to speculate what would have happened had the navy been united in its defence of the General Purpose Frigate. What is certain, however, is that the advocates within the navy were not only chipping away at Rayner’s General Purpose Frigate but his Oberon program as well.

Like most people, Jeff Brock was quick to blame Hellyer for the changes that were occurring in the ship replacement program. “The future that had been so carefully

planned, and that had looked so secure,” he wrote in the post-war volume of his memoir, “now appeared to be lying in ruins for reasons incomprehensible to me, even in political terms." What Brock failed to realize, however, was that the same ship advocates that he had kept tight control over while he was Vice Chief of the Naval Staff had immediately run amok when he went to the East Coast in July 1963. This had serious repercussions. The fact that the submarine advocates were actually trying to derail the Oberon acquisition in order to leave room for nuclear boats at the same time that the minister was reconsidering the General Purpose Frigates did not bode well for the navy.

As Vice Chief, Brock had been willing to play hardball with the Oberons as a means to get the negotiations started between the British and Canadian governments. The fact that the British were not flinching to pressure to buy Canadian equipment in exchange for a commitment on the Oberons had frustrated Brock to the point where a British officer and confidant observed in January 1963:

The Canadian Vice Chief of the Naval Staff told my Naval Advisory yesterday that because of the delay in concluding a satisfactory agreement between the Canadian and British Governments over the purchase of the three Oberon submarines, he now intended to recommend that the RCN should purchase three secondhand [sic] Guppy submarines from the United States. Rear Admiral Brock went on to say that he knew that 10-year old Guppy submarines could be provided more quickly than the Oberons. This is the first time that the Canadian Navy have shown any sign of weakening in their support for the purchase of the Oberons. Admiral Brock made it clear that he was concerned solely with meeting his responsibilities in furnishing the Canadian Navy with ships, and he said that if he could not get what he wanted in one way he was prepared to try another.

Brock’s tactics worked. Soon after this encounter the British signalled a genuine willingness to buy either Project Insight or the CL 89 aircraft, and that break allowed

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84 GL Coates Royal Naval Liaison Officer, 16 August 1963, PRO, ADM 1/28085.
85 Brock, *Thunder and Sunshine*, 116
86 Commonwealth Relations Office, 4 January 1963; A/S Mortar Proximity Fuse, nd, PRO, ADM 1/28085.
both sides to begin the process of selecting their negotiating teams.\textsuperscript{87} Since that time, however, opposition to the Oberons had been growing among the Naval Staff. With Brock now serving on the East Coast, some submarine advocates began to openly express their dissatisfaction over the fact that the Oberons had come from the top and were unilaterally imposed on the bottom. In the words of a British official serving in Ottawa:

It appears that the Minister of National Defence and his Deputy, together with the Chief of the Naval Staff are in favour of purchasing OBERONS; it is understood that the purchase of OBERONS was not decided originally as a result of any Naval Staff recommendations, and by a Naval Board decision taken in isolation.\textsuperscript{88}

Hellyer was anxious to make the Oberon deal and had picked up where his predecessor (Harkness) had left off, but in more confidential talks with the Royal Navy attaché he admitted that the Oberon deal was in danger because of “growing pressure within the Naval Staff to acquire vessels and equipment built only to North American Standards.” Fraser-Harris led that campaign as well. The fact that both his Essex and Iwo Jima classes were American ships exposed his bias, but the move to USN equipment did make sense from a logistics and supply point of view.\textsuperscript{89}

For at least one Royal Navy officer in Ottawa this was nothing new; he had heard “lower levels” making the same complaints about the Oberons. Yet another British official was even more specific when he observed that “Argument has swung to and fro [sic] and an influential body of RCN officers still believe that the right course for Canada is to purchase second-hand submarines from the USA.”\textsuperscript{90} While Brock had used the possibility of a Guppy purchase as a means to apply pressure on the British, a third

\textsuperscript{87} Ottawa to CRO, 10 January 1964, PRO, ADM 1/28085.
\textsuperscript{88} D.A. Nichols to Deputy Secretary, “Discussion with Commonwealth Chiefs of the Naval Staff: Appendix B” 12 September 1963, PRO, ADM 1/28562.
\textsuperscript{89} Fraser-Harris to Robbie, 04 August 1993, IWM, Fraser-Harris Papers.
\textsuperscript{90} CRO to Ottawa, 15 July 1963, PRO, ADM 1/28085; Head of GFIII to USF, Oberon for Canada, 11 November 1963, PRO, ADM 1/28561.
source elaborated on exactly why these particular staff officers wanted second-hand submarines from the Americans:

Mr Hellyer and his Deputy Minister are both inclined to favour purchase of OBERONs while the RCN seems to prefer USN GUPPYs on the grounds of North American standardisation. They have not said so officially but many officers in the RCN feel that they should not commit themselves, if they can avoid it, to a long term programme for conventional submarines which purchase of the OBERONs would involve. Second-hand USN GUPPYs with limited life would leave the door open in a few years time for acquisition of nuclears. There is no question of them going for nuclears now, for reasons of cost and operating difficulties.91

Of course, it was not “the navy” but rather the submarine advocates who believed that the American Guppys would be just as good as the Oberons for training purposes. In fact, Gigg had made considerable progress in convincing others that this was the best route for the RCN, and yet he was also frustrated that no action was being taken on this initiative:

It never ceases to amaze me how many people say they believe we should get USN submarines as an interim programme and start building our own nuclear propulsion submarines yet continue to write about getting OBERONS as if they offered the best solution. Surely it is time we stopped “selling ourselves” and got down to “brass tacks.”92

The fact that the British had picked up on this type of factionalism at Naval Headquarters was significant, the more so since they were also aware that it was the Naval Staff that was actually behind the drive to place “more weight… to limited war and UN operations” and the acquisition of aircraft carriers.93

While Hellyer was willing to defend the Oberon deal from the factionalism at Naval Headquarters he had little incentive to do the same with the General Purpose Frigate. As a result, on 27 September 1963, Hellyer decided that he would push ahead with the procurement of the Oberons for training of RCAF and RCN forces, but that “in

91 GL Coates Royal Naval Liaison Officer, 16 August 1963, PRO, ADM 1/28085.
92 Gigg Minute note, 2 July 1963, DHH, Gigg papers, 88/64-6. Emphasis in original.
view of the reduced resources available for defence, I have no alternative but to recommend cancellation of the [General Purpose Frigate] program.” And once that decision had been made, Hellyer had to prepare the government for the anticipated backlash that the cancellation would create. 94 Luckily for the minister, Plomer would again attack the navy during his testimony before the Sauvé Committee on 10 October. This time, however, the General Purpose Frigates suddenly became one of Plomer’s key targets. This coincidence is difficult overlook, the more so because Hellyer did not tell the Naval Board of his decision to cancel the General Purpose Frigates for almost another month. It is therefore understandable why some believed that Plomer’s appearance before the committee was no accident particularly since it conveniently laid the groundwork for the public announcement of the cancellation in late October. 95 While there are currently no archival documents linking Plomer to the minister, there is strong circumstantial evidence to show that Hellyer saw both the internal and external dissidents as assets to help him sell the cancellation.

Like Gigg, Plomer also provided criticisms that the minister would subsequently use to justify the program’s cancellation. He, too, found them too slow to hunt Soviet submarines, but Plomer went even further by observing that “a ship that can only carry one helicopter is too costly a platform.” Further helping the minister’s future announcement regarding the procurement of the Oberons, Plomer then used the high cost of the General Purpose Frigate program to explain how the navy’s priority should be the

93 “Future air defence for limited wars, 1963,” nd, PRO, ADM 219/663.
95 D.A. Nicholls to Deputy Secretary, “Discussion with Commonwealth Chiefs of the Naval Staff: Appendix B, 12 September 1963, PRO, ADM 1/28562; Captain T.L. Martin, RN to Deputy Director Tactical Weapons Policy Division, 18 July 1963, PRO, ADM 1/ 28085; A.W. Lang to ADNC, 22 July
acquisition of submarines. It was an effective performance that led one journalist to reflect later how “abandonment of the frigates became a foregone conclusion following the controversy left in the wake of Commodore Plomer’s attack on the ‘gold-braid mind’ before the Commons Defense [sic] Committee.” Indeed, Plomer’s testimony had the press hanging on to each word. According to the Director of Naval Information, the reaction at Naval Headquarters to the press’ depiction of the growing controversy was an emotional one:

Try as I may to be fair, and keep cool, I find it bloody difficult, on reading stuff like this, to suppress the urge to pop someone on the nose. It is not so much the nasty stuff they say about the Navy, and the CNS; what really gets one’s goat it’s the sleezy, [sic] sloppy, inaccurate reporting.”

The time for the navy to finally strike back had come, and five days later Rayner appeared before the Sauvé committee.

Choosing to focus on Plomer’s original set of allegations, Rayner did not even mention the General Purpose Frigates during his forty-minute address. This the committee found odd – it must be remembered that no one at the hearings (including Rayner) knew that Hellyer had already cancelled the program – and as a result the General Purpose Frigate was raised a number of times during the members’ question period. Rayner seemed unprepared. A number of officers at Naval Headquarters privately thought what the press was saying out loud, which was that Rayner’s defence of the General Purpose Frigate was ineffectual and only managed to further confuse the

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In fact, the Director of Shipbuilding branch, Jack Rutledge, and his team at the Department of Defence Production were the only ones who appeared to be mounting an energetic defence of the program. Arguments, such as the claim that cancellation would lead to “the death of naval shipbuilding in Canada” and a “loss of industrial know-how,” contained a powerful political punch. So, too, did the assertion that the shipbuilding industry, their lobby, and employees would all punish the Liberals at the polls. These were exactly the type of arguments the navy had needed to make when Hellyer considered defending the program in August. Why the navy was not putting up more of a fight was a complete mystery to Defence Production. But like the British officials involved in the Oberon acquisition, there was at least one individual at Defence Production who believed he had stumbled upon the answer. This official had heard that some “Navy circles” wanted to build “off the shelf US carrier of Iwo Jima Class” and therefore were willing to let the General Purpose Frigate go. The men responsible for providing Rayner with the advice and information required to defend the General Purpose Frigate from Plomer’s new charges were all on the staff of the Assistant Chief (Air & Warfare), and therefore it perhaps is not surprising the file on this matter shows a total lack of staff work. Whether intentional or not, these officers, like Plomer, made it that much easier for the government to cancel the General Purpose Frigate and they also contributed to the growing turmoil at Naval Headquarters.

Fraser-Harris wasted no time taking advantage of that chaos. In early October he sent a memo to all his directorates announcing:

As a result of the various studies now taking place within the Defence Department relating both to cut-backs in the Budget for the immediate future years, and examinations of possible changes in emphasis upon the roles and missions of the armed forces of Canada, it is now possible to see emerging from the general state of confusion, a pattern which will enable us to get started upon a preliminary new look at our way ahead.\textsuperscript{103}

The “new look” was of course a euphemism that described the need for a fleet that focused on limited war operations, and as such Fraser-Harris’ proclamation marked the beginning of a big push to finally dislodge the DDH’s dominance over the navy’s operational thinking. Despite the secrecy of the minister’s decision to cancel the General Purpose Frigate six days earlier, Fraser-Harris’ instincts nevertheless proved uncannily correct as he argued that the new look was based on the assumptions that the “Oberon programme is confirmed and the GP Frigate is cancelled.” Everything was falling into place. Without the General Purpose Frigate there would be no air defence and that meant it was “essential that we return to the Fleet fighter aircraft carrier. To transport troops, to provide helicopter lift for them as well as ASW Ops we need carriers.” He then gave the Naval Staff, along with DG Ships and other technical services, their marching orders to assess a two-prong plan that he had developed. The first half, which consisted of the short-term plan, included studies on:

1) deck trials on Bonaventure to assess her ability to accommodate the A-4 Sky Hawk
2) the immediate acquisition of 18 A-4s.
3) the building of at least two Iwo Jima in Canada;
4) a re-examination of the Restigouche and Mackenzie Class conversions.

\textsuperscript{102} Sauvé Committee File, LAC, RG 24, Accession 1983-84/167, Box 101, 1270-211.
The long-term plan was more basic: the replacement of *Bonaventure* with a vessel that had similar dimensions to an Essex Class.\(^{104}\)

The attempt to dislodge the DDH’s hold over the navy began at the very next Naval Staff meeting. In view of the reduced naval estimates, and wanting to give Burchell’s committee some further guidance, Dyer had asked the Naval Staff to identify what the navy’s priorities should be. But the conversation quickly evolved into a discussion over the advantages and disadvantages of proceeding with the modernization of the current anti-submarine warfare fleet as opposed to the immediate funding of a new carrier construction program. Since there was not enough money for both, the pro-carrier Naval Staff started to slash at the modernization program and it only got worse when Fraser-Harris took over the meeting after Dyer was suddenly called away. In a discussion that would have enormous repercussions for the anti-submarine fleet, the Naval Staff reopened the Restigouche and Mackenzie class conversions. Although self-serving, their logic for doing so was sound. From their point of view, the RCN was going to lose the General Purpose Frigates and gain at least two Iwo Jimas. As a result, there was no longer a need to turn the Restigouche and Mackenzie class into helicopter-carrying destroyers because the Iwo Jima carriers would provide all the necessary helicopter support. Instead, to “optimize” the Restigouche for anti-submarine warfare operations their plan was to give these ships the new ASROC or IKARA systems (the respective designator for the American and British/Australian rocket-boosted torpedo) that had a range of approximately 12,000 yards) rather than helicopters. Likewise, the planned helicopter facilities on the Mackenzies would be scrapped in favour of a Tartar

missile system to make up for the area air missile shield that the General Purpose Frigates would have provided. Moreover, both classes would be fitted out with two Mauler missile systems for self-defence purposes as well as keeping the original plan to add variable depth sonars, a command and control system (ADACS), and Jezebel. Fraser Harris was covering his bases. The limited war concept of operations demanded some type of guided missile ship for area air defence, and so converting the Mackenzies in this manner ensured that Fraser-Harris’ fleet would have this capability regardless of whether or not the General Purpose Frigates could be resuscitated.

This early attempt at dismantling the DDH navy did not go unnoticed by its proponents. The Flag Officer Pacific Coast, Rear-Admiral W.L. Landymore, as well as his East Coast counterpart, Brock, were both in Ottawa and that must have caused Fraser-Harris some discomfort particularly since he had identified these men as the top two “small ship types.” But it was the preparations for the planned visit of the Dutch Chief of the Naval Staff, Vice Admiral Olivier, to Naval Headquarters that truly gave the DDH supporters a chance to re-exert their influence. As Madden had suggested during his June visit to Canada, the Dutch were also at a crossroads over what to do with their ageing Majestic class carrier. Still wrestling with this issue, Olivier was now coming to Ottawa to get a first hand appreciation of the RCN’s “philosophy” on “the replacement of your ASW carrier and aircraft.” Although not intended as such, the Dutch Chief of the Naval Staff had asked a loaded question, one that struck at the heart of the growing crisis over the fleet’s future composition. And the RCN’s answer, which would come in the

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form of yet another staff paper, triggered much acrimony because it challenged the key assumptions behind the limited war concept of operations.

The report, known as “ASW in the ’70s,” was intended to be the definitive Canadian response to Madden’s earlier observations on the future of the escort carrier in EASTLANT. It began by observing how the real threat in the 1970s would be the next generation of Soviet nuclear submarines. It was not their estimated speed of 35 to 40 knots that was the most daunting problem, but rather that these vessels would be the first true Soviet ballistic missile firing boats. Unlike the Soviet’s current submarine fleet of Zulu, Golf and Hotel classes – which all had to surface to fire their two to three short-range rockets – these new boats would contain up to 16 subsurface-launched intercontinental ballistic missiles (ICBMs). That fact alone was about to turn the concept of ASW operations on its head. Whereas the focus at the beginning of 1963 had been to get weapons that could match the detection range of ship-borne sonar, the growing Soviet “boomer” (a colloquial term for nuclear missile carrying submarines) threat would place the emphasis on early detection. Simply put, unlike the current stock of submarines, which had to get close to the coast of North America and then surface to fire their missiles, the new boomers would have to be caught in the Eastern Atlantic because of the range of their missiles, and being submerged complicated their detection. Once located in these waters, both the helicopter and (to a lesser extent) ASROC had the ability to take their weapons’ payload out to a range that would overcome the nuclear submarines’ speed advantage.107

106 Naval Board meetings, 16 October 1963, DHH, 81/520/1000; NA/CNS to VCNS, 9 October 1963, LAC, RG 24, Accession 1983-84/167, Box 3734, file 8100-1, Vol. 10.
The boomer threat was bad news for those who believed in the limited war concept of operations. Countering the emphasis that was placed on this new underwater peril would not be easy. Classifying it as “The Canadian Problem” the “ASW in the ’70s” report found that, as a “small navy,” the RCN had to make a choice. It could either concentrate on its alliance commitments to anti submarine warfare – which Madden had already stated was to build more helicopter frigates – or it could reject these principles and focus on a fleet to meet “national requirements” like Mobile Force. That position represented a total rejection of Fraser-Harris’ claim that his carrier fleet could do both anti-submarine warfare and limited war operations.\footnote{Ibid.} It should not be surprising, therefore, that Fraser-Harris reacted as he did:

\begin{quote}
[this] highlights my own concern with the philosophy of ‘a Canadian ASW Navy.’ To my mind, the two most popular phrases concerning the Canadian Navy, namely, an ‘ASW Navy’ and ‘a small ship navy’, simply are not compatible. If we do not face up to this fact and broaden our base we will be pushed into the position of national specialization within a specialized [ASW] Maritime function.”\end{quote}

Moreover, further countering the emphasis that was again being placed on the “small ship,” Wilgress wrote his own aide memoir in which he presented a balanced – but unexciting – argument on the benefits of carrier operations to Canada. It did not go far enough for Fraser-Harris, and perhaps feeling the pressure from the small ship types, he made his most flamboyant charges yet. According to Fraser-Harris, Wilgress had failed to challenge the main threat to the carrier, which, of course, was the growing belief that RCAF shore-based patrol aircraft could totally replace fixed wing carrier aviation. Then the gloves truly came off as Fraser-Harris took a swing at the small ship clique:

\footnote{ACNS (A&W) to VCNS, 21 October 1963, LAC, RG 24, Accession 1983-84/167, Box 3734, file 8100-1, vol. 10.}
they [surface ships] are the least effective of the anti-submarine weapon systems in the future years. Only the fixed wing aircraft or the helicopter can cope with the fast nuclear submarine, the ship cannot nor never will, be able to. Its primary function will become more and more that of area control, command, and search and attack co-ordination. [But] without aviation there can be no navy, since without it there is no maritime task that could be effectively performed. The only alternative to Canada would be to provide a number of specialized ships that could operate within the Fleet of some other nation.110

Of course, that was exactly what the RCN was doing. And recent exercises not only vindicated the RCN’s role as an alliance force that specialized in anti-submarine warfare, but also suggested that the carrier – while a much valued assist – was not indispensable to Canada’s maritime concept of operations.

At the exact same time that the fleet’s future force structure was being hammered out in Ottawa, Bonaventure, the new destroyer Saskatchewan and three older destroyers were sailing off Scotland north of the GIUK (Greenland-Iceland-United Kingdom) gap. This area – which represented the choke point through which Soviet boomers would have to pass to get to their launch points – was the focus of a major NATO exercise from 3 to 25 October 1963 called FLATROCK. The aim of the first part of the tactical phase was to prevent the “hostile” submarines from breaking through the gap into the North Atlantic, while the second phase was to get an underway replenishment group past a nasty gantlet of submarine, air, fast patrol boat and mine threats. The most interesting aspect of this exercise was the manner in which the air cover for the anti-submarine phase was organized, as the area through which the replenishment group had to pass was divided into two sectors. Responsibility for the northern portion was assigned to Bonaventure along with the Dutch aircraft carrier Karel Doorman, while maritime patrol aircraft (including some RCAF Argus) patrolled the southern sector. Each was to operate

110 V.J. Wilgress, “An aide memoir on Naval Aviation,” DHH, NPCC Papers, 79/246, Folder 67;
exclusive of the other and that acted as a comparison between the effectiveness of the maritime patrol aircraft on the one hand and the anti-submarine warfare carrier on the other. Since it was well known at SACLANT that both the Dutch and Canadians were questioning whether or not they should replace their carriers or rely exclusively on Maritime patrol aircraft it can be stated with a fair degree of certainty that this was done on purpose.

The results were suggestive. Bad weather prevented Bonaventure and Karel Doorman from launching their aircraft 57 percent of the time, which left it to the land-based aircraft to patrol the northern sector when “the carriers were unable to fly.” Shore based maritime patrol aircraft, however, were apparently more responsive than carrier based ones; accounting for 226 hours, or 74 percent, of all flight time including seven and a half hours on an actual contact (believed to be a Whisky class) that was shadowing the exercise. Moreover, like the maritime patrol aircraft, the smaller ships had also fared well in the rough waters of FLATROCK. Comments that the Canadian destroyer-escort’s detection equipment had “passed with flying colours,” or that their performance in adverse conditions was “most commendable,” indicated that they were equally capable of coping with the worst that the North Atlantic could throw at them. In fact, much praise was heaped upon Saskatchewan, which got high marks for her ability to maintain her sector screen. As a result, two of the key elements of the destroyer concept of operations – namely the “small ship” and maritime patrol aircraft – did particularly well. One of Fraser-Harris’ key concerns with the DDH was whether a frigate-sized ship could

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111 CINCEASTLANT’s Report on Exercise Flat Rock 05 May 1964, LAC, RG 24, Box 418, File 1640-21, Vol. 35.
operate large helicopters in heavy weather. No DDHs were involved in this exercise since the Sea King trials on the first ship to be converted (HMCS Assiniboine) were still one month away. Yet FLATROCK had certainly identified that the maritime patrol aircraft and destroyers-escorts were capable of launching their primary ASW weapons under heavy environmental conditions at times when Bonaventure could not. 113

Despite this encouraging praise for maritime patrol aircraft and small surface ships, the real star performer at FLATROCK was the passive acoustic Jezebel system. Tactical command of the second phase of FLATROCK was given to Canadian Commodore R.P. Welland who was anxious to try out new tactics that Jezebel had made possible. Welland wanted to use the capabilities of Jezebel and the ashore SOSUS station at Shelbourne, Nova Scotia, to immediately put the submarines on the defensive. In an early part of the exercise – before the actual commencement of the tactical phase – Welland had dropped 128 Jezebel sonobuoys, which, with the help of the fixed array SOSUS station, would capture the sound signature of all the “hostile” submarines. When the “Go” signal to start the phase was given Welland and his groups were able to locate all the submarines operating against them in record time. And that led some frustrated submarine captains to accuse the Canadians “of stealing their operation orders before sailing” while the British Flag Officer exclaimed that the RCN’s results were simply “not possible!” Jezebel was a highly classified American venture supported by the RCN and as a result the forces involved in this British-led exercise knew little about it. What they did not understand, therefore, was that Jezebel was a revolutionary technology and its

112 1st Canadian Escort Squadron, October 1963, ROP, DHH, RCNHS fonds, 81/520/8000-260/1, Box 228, File 3; CINCEASTLANT’s Report on Exercise Flat Rock, 05 May 1964, LAC, RG 24, Box 418, File 1640-21, Vol. 35.
introduction led one Canadian to proclaim “Anti-Submarine Warfare really took off from there in the very real sense.”\textsuperscript{114}

FLATROCK represented one of the RCN’s first real chances to test the shipborne version of Jezebel on a large scale. A comparison with the RCAF’s use of Jezebel, which had been operating on their aircraft since 1959, illustrates some of the problems that the RCN had to overcome. The RCAF system was far more efficient. Each Argus had the ability to either analyse the information from the sonobuoys directly within the aircraft or they could retransmit the raw data through radio relay links to a ship or shore analysis centre.\textsuperscript{115} Thanks to the Argus’ range and altitude this information could be transmitted tremendous distances and (with the help of 12-buoy pattern laid in a grid pattern with 40 to 50 miles between buoys) could keep 15,000 square miles of ocean under surveillance. In comparison, the “major limitation” of shipborne Jezebel was the “very short ranges over which the radio transmission from the sonobuoy can be received by the ship.”\textsuperscript{116} But this was where Welland’s use of Trackers turned out to be indispensable to the successful employment of shipborne Jezebel.

There was good reason why Welland believed that \textit{Bonaventure} would reap in Jezebel’s success. Although her Trackers had not yet been fitted with Jezebel these aircraft did play a crucial role acting as relay platforms. Highlighted by reports that these first sets of relays were built in \textit{Bonaventure}’s electronics officer’s basement (due to a lack of naval funding),\textsuperscript{117} Welland argued that the reason why FLATROCK was such a

\textsuperscript{113} Exercise FLAT ROCK, 1963, DHH, 2001/4, File 64; CINCEASTLANT’s Report on Exercise Flat Rock, 05 May 1964, LAC, RG 24, Box 418, File 1640-21, Vol. 35.
\textsuperscript{114} Snowie, \textit{The Bonnie}, 167-171; Welland, \textit{This will have to do}, 8-13; Soward, \textit{Hands to Flying Stations}, 320-322.
\textsuperscript{115} ASW Research and Development, March 1964, DHH, Rayner Papers, 99/31-v-3
\textsuperscript{116} Ibid.
\textsuperscript{117} Snowie, \textit{The Bonnie}, 170.
success for the Canadians was because of the Tracker’s ability to overcome the distance between the sonobuoy and the Jezebel readers on the carrier as well as the V class destroyer *Algonquin*. And it was for this reason specific praise was made in the exercise’s summary that the fitting of Jezebel in the V Class destroyer *Algonquin* and relays in the Trackers “contributed most markedly to the results,” while Welland made a special plea that getting Jezebel for all RCN ships and aircraft needed to become “the highest priority” because it had proved “a major advance in the submarine detection capabilities of anti-submarine vehicles.”

*Bonaventure*’s ability to deliver between 12 and 18 Trackers for relay duties also seemed to guarantee the carrier’s future, particularly since they would be capable of internal analysis once Jezebel equipment was fitted as part of their mid-life modernization program. But not everyone agreed that the Jezebel-fitted Trackers necessarily had to fly from the carrier to make a successful contribution. When weather had forced *Bonaventure* to take shelter at the Royal Navy’s Invergordon naval base, Welland had sent four Trackers to operate from land bases so as to keep track of the submarines’ positions. Thanks to these shore-based Trackers and their relay capability, Welland knew exactly where the submarines were when the exercise resumed. This was significant. According to the DDH concept of operations, the RCN’s Tracker aircraft were destined for shore bases with *Bonaventure* scheduled for the scrap yard in 1975. The idea was that the shorter range Trackers could cover inshore waters thereby releasing the Argus for long-range mid-Atlantic work, and that also applied to the employment of Jezebel. *Bonaventure* and her Trackers greatly enhanced this system through their

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response time – unlike shore-based aircraft, the carrier could provide almost instant support - but the simple fact was that with money becoming tight in Ottawa, Jezebel was perfectly suited to the small ship and maritime patrol aircraft team. Put another way, the ideal employment of this system was for aircraft to process and relay Jezebel data back to the surface units for interpretation by the ship’s command and control organization, and whether that ship was a destroyer or an aircraft carrier did not matter. Moreover, work was underway to change the sonobuoy’s frequencies so as to provide the shipborne Jezebel with an over-the-horizon capability, thereby greatly reducing its reliance on aircraft.\footnote{ASW R and D, March 1964, DHH, Rayner Papers, 99/31-v-3.} In a larger sense, therefore, FLATROCK was the base of a growing mountain of evidence which suggested that – even though the helicopter destroyer had not yet made its operational debut – the RCN was nevertheless on the right track tactically with developing a more cost-effective DDH concept of operations.

The RCN’s decision to specialize in anti-submarine warfare had actually been made in the late 1940s when the Soviets first started building a large submarine fleet, and as Rayner was quick to point out in mid-October 1963 Canada was getting much praise from it top allies for the direction it had taken:

...extracts from official assessments of NATO naval forces… have consistently given Canada high marks in respect to both size and effectiveness. Up to the present, Canada has not only fulfilled its NATO naval commitment numerically, but has produced a force whose quality has been rated second to none.\footnote{Untitled Summary, circa October 1963, DHH, Plomer Papers, 2001/14-24; For more on the birth of the Soviet submarine threat see: Gary Weir and Walter Boyne, \textit{Rising Tide: The Untold Story of the Russian Submarines that fought the Cold War} (New York: Basic Books, 2003).}

But the anti-submarine fleet that the RCN had conceived in the late 1940s – namely the St. Laurents, Restigouches and Mackenzies – was not enough to replace the now obsolete...
Tribal and Prestonian classes. The General Purpose Frigates and DDH flotilla leader heliporters would have filled those gaps and completed that anti-submarine fleet. Events back in Ottawa, however, ensured that the General Purpose Frigates would never be built, while the role given to the heliporter-frigate flotilla leaders would not be fulfilled until the smaller DDH 280s emerged a year later. Ironically, the General Purpose Frigate was the only common ground between the fleet that people like Fraser-Harris wanted and the one that the RCN would build. Both the specialized anti-submarine force and the limited war concept of operations required guided missile destroyers for protection against high-speed air threats. The conflicts and personalities in the RCN, however, gave the government all the ammunition it needed to sink the General Purpose Frigate. While the minister may have found a use for individuals such as Plomer, both the Sauvé committee and even the press finally saw through this troublesome ex-officer. False modesty and claims that “a martyr’s crown would not fit me” exposed his self-serving motivation for attacking the service, particularly since he suggested that “the circumstance surrounding my own departure from the Royal Canadian Navy be investigated.” Indeed, the Sauvé committee was not fooled. Quickly realizing that they were dealing with a bitter man who was exacting his own personal vendetta against the service, former naval officer and Liberal member David Groos rejected Plomer’s offer to “name-names,” by observing “we don’t want to be a part of a McCarthy Committee interrogation.” Having uncovered Plomer’s bias, the committee was now ready to dismiss his main argument as they concluded there was insufficient evidence of the “gold-braid mind” or the “old boys club” to warrant further investigation.\footnote{“Statement by Commodore J Plomer to the Special Committee on Defence,” 10 October 1963, DHH Library; \textit{Ottawa Citizen, Globe and Mail, Victoria Columnist}, 15, 16 October 1963.} Plomer’s defeat was bittersweet for the navy.
The damage was already done and on 24 October 1963 the minister had little trouble standing before the House of Commons to announce the cancellation of the General Purpose Frigate.

Most of the minister’s reasons for doing so – such as price escalation, the attempt to fit too many capabilities into one ship, and the failure of the General Purpose Frigate to carry a Sea King helicopter – were hardly novel as they had already been made by either Plomer or Gigg. Furthermore, indicating that Hellyer had listened closely to the voices of dissent emanating from within the service, the minister also argued that the navy needed a more economical way to carry troops. To counter the loss of the General Purpose Frigate to the anti-submarine fleet, Hellyer then claimed that he was willing to accelerate the Restigouche conversion into a helicopter destroyer. Unfortunately, this potential addition to the anti-submarine fleet was already in the process of being attacked by the supporters of the limited war concept of operations as the Burchell committee advised the Naval Board that there was not enough money “to build a self-sufficient force.” As a result, they had little option but to recommend that the Restigouches should have anti-air, surface-to-surface, and shore bombardment capabilities rather than a helicopter platform.¹²²

That was just the beginning. Advice from allies and the minister’s own elite advisor, Sutherland, along with the operational situation at sea, all suggested that the RCN was on the right track with its continued emphasis on anti-submarine warfare and the development of the DDH concept of operations. But the existence of other ship-type advocates – most notably the carrier and nuclear submarine supporters – would challenge
the hegemony of the DDH-centric navy. These particular advocates’ attempt to save their platforms through the development of the competing limited war concept of operations was a defining moment for the RCN. It was the determined defence by these advocates that not only made it easier for the government to cancel the General Purpose Frigate, but also caused the force structure crisis that would haunt the RCN over the ensuing year. While the minister’s interest in Mobile Force and nuclear submarines certainly helped fuel that crisis, the presence of powerful and egocentric personalities also played an important role in the disruption of the ship replacement program. The impact of such individuals cannot be measured in terms of what they achieved – Plomer’s charges, after all, did not lead to reforms and Fraser-Harris’ attempt to save the carrier ultimately failed – but rather the damage that they caused. A number of individuals, and even some ship factions, agreed that the RCN needed a guided missile destroyer capability and perhaps because of that Hellyer had considered Rayner’s four-ship program. Yet the self-interests of these advocates ensured that the General Purpose Frigate was never defended properly. In the end, therefore, opinion in the RCN was far from unanimous, making the General Purpose Frigate the true victim of the internal and external dissent that engulfed Naval Headquarters. This experience should have taught the navy a valuable lesson; programmes that do not have full support at the staff level (or at least the appearance of support) are almost always doomed to failure. Unfortunately the navy learned little as the

122 “Statement made by Paul Hellyer in respect of the General Purpose Frigate,” 24 October 1963, DHH, RCNHS fonds, 81/520/8000, Box 123, File 7; Naval Board Minutes, 23 October 1963, DHH, RCNHS fonds, 81/520/1000/-100/2, Box 26, file 3.
infighting over force structure continued throughout the year and would cost them more than just the General Purpose Frigate.
Chapter 5 The battle of the Iwo Jimas.

Attempts by both the nuclear submarine and naval air advocates to influence the RCN’s force structure would lead to a disruptive crisis at Naval Headquarters that deeply divided the senior staff. Whether the RCN would specialize in anti-submarine warfare or build a fleet capable of performing multiple tasks was at the centre of this capability debate. The lines between the groups were clearly marked; both the destroyer and nuclear submarine proponents naturally favoured an exclusive anti-submarine warfare role while the carrier advocates were aggressively pushing a multi-task navy based around the Iwo Jima design. DG Ships was caught in the middle of these competing interests, and as a result was seriously impacted by the crisis. In the wake of the General Purpose Frigate’s cancellation, Sam Davis consistently argued that the DG Ship organisation could not handle long periods of inactivity. Yet the chaos of the force structure crisis, along with endless squabbling among the advocates, ensured that the navy was incapable of presenting the government with a unified message. Davis and his team tried to remain neutral towards ship classes and force structure in general – their job was simply to take concepts and transform them into ships – but the crisis effectively turned him from an impartial observer into a destroyer advocate. Explaining that process – along with the reasons why the multi-purpose Iwo Jima lost out to a specialised anti-submarine warfare fleet – are the central aims of this chapter.

According to Sam Davis, most of his team at DG Ships did not realise that the General Purpose Frigate program was in trouble until it was too late. Instead, he found that they were “living in a sense of denial and false hope,” but this myopic view was not due to a lack of interest. As engineers and naval architects, the men at DG Ships only
cared about the program, and as Davis recalled “quite properly I think, at the working level we did not take too much notice of politics.” By the time the Defence Supply Naval Shipbuilding Panel held one of its final meetings on the General Purpose Frigate in mid October 1963 it was hard for even the most optimistic members to ignore that “the writing was on the wall.” Described as a truly “gloomy affair,” the agenda quickly turned to questions regarding cancellation charges as well as fears of doing whatever was necessary to “salvage the basic organization.”

Despite the sudden realization that the program was in grave trouble, official word of the General Purpose Frigate’s cancellation hit DG Ships particularly hard. Comparable to the impact that the Avro Arrow’s “Black Thursday” had on its creators, the atmosphere among those directly involved in the General Purpose Frigate was “understandably glum.” There was little Sam Davis could do to inspire his men “other than adopt a cheerful demeanour.” A good leader, Davis also asked Rayner to come down and say a few words. It was a sad affair. Everyone involved in the project was gathered into a drawing office at which point the Chief of the Naval Staff spoke “gently as was his way rather like a father consoling his sons and their friends who had lost a difficult match – but we all shared an acute sense of loss.” Nor were they the only ones who were demoralised. After touring Halifax, the Director of Naval Air Requirements found that “the GP Frigate cancellation had a far greater effect on the Coast than it did in National Defence Headquarters. Generally speaking, this cut considerably lowered


2 For information on the Avro Arrow see: Palmaro Campagna, Storms of Controversy (Toronto: Stoddart Publishing, 1992); Murray Peden, The Fall of the Arrow (Stittsville: Canada’s Wings, 1979); E.K. Shaw, There never was an Arrow (Ottawa: Stell Rail Education, 1983); Davis, Fourth Study: The General Purpose Frigate, DHH, Davis Papers, 2001/36, 357.
morale of junior officers and they all hope that the Minister will come up with a new
ship-building programme to offset this cut.” Further suggesting that the concerns were
widespread, Reports of Proceedings - a monthly report filed by all commanders - from
both coasts corroborated this claim. But any hope that the men on the coast had for a
quick replacement was soon dashed.³

DG Ships was also looking forward to a new program, and they made the
appropriate arrangements to ensure that the vast experience gained from the General
Purpose Frigate was not lost. The goal was simply “to finish off neatly” and in “an
orderly way.” As a result, the General Purpose Frigate office remained open to tidy up
all the loose ends. There were a number of areas that required attention. Certain aspects
of the program were seen through to conclusion simply because the money on these
specific areas had already been spent. Others, such as the bridge and machinery control
room mock-ups, were finished due to interest shown by the United States Navy and
Royal Navy. The Australians, who were second-guessing their decision to acquire the
Adams class, were also interested in information on the General Purpose Frigates in case
they decided to start a similar program. But for DG Ships there was no doubt that the
program was over – at the 12 December 1963 shipbuilding panel the members concluded
the “subject closed” and voted that the General Purpose Frigate be stricken from their
agenda.⁴

³ DNAR to ACNS (A&W), 27 December 1963, LAC, RG 24, Accession 1983-84/167, Box 465, file 1650-
36, vol. 3. For comments from the fleet see: 4th Escort Squadron, ROP, October 1963, DHH, RCNHS
fonds, 81/520/8000, Box 234, file 6; 2nd Escort Squadron, ROP, DHH, RCNHS fonds, 81/520/8000-260/2,
Box 230, File 6.
⁴ DSNSP Minutes, 15 October 1963, DHH, NPCC Papers, 79/246, Folder 16; DSNSP Meeting, 12
December 1963, DHH, 79/246, Folder 16; N.J.B. Wiggin (Chief Superintendent) to DG Ships, 12
November 1963, LAC, RG 24, 1983-84/167, vol. 3376, file 8200-DDG, Vol.2; Caldwell to NHQ, 3
October 1963, LAC, RG 24, Accession 1983-84/167, Box 3776, file 8200-DDG vol. 2. It is interesting to
Davis and his team were not impressed with the minister’s reasons for terminating
the General Purpose Frigate, particularly since they believed that the program had been
sacrificed merely to demonstrate to the senior staff that Hellyer was a man “not to be
trifled with.”5 Aside from telling Canadians that the program was too expensive, Hellyer
also claimed that the General Purpose Frigate was a substandard design because of its
inability to carry a Sea King Helicopter. That came as a bit of a shock to DG Ships.
They had, after all, worked hard to repel the helicopter advocates’ efforts to replace the
light utility helicopter with a Sea King in order to prevent the General Purpose Frigate
from ballooning into an even larger and more expensive design. Hellyer’s public
announcement had effectively told DG Ships that the cautious approach with the General
Purpose Frigate had been a mistake. As Rayner noted, Hellyer’s criticism suggested that
the minister wanted to turn the General Purpose Frigate into a new class of ship: “The
general purpose frigate was not developed primarily to carry a helicopter. It is possible
of course to carry a helicopter in it, but if one were designing a ship to carry helicopters,
one would build a different type of ship altogether.”6 That was true but there was another
reason Hellyer gave for cancelling the program, which was that by trying to cram too
many capabilities into one ship the General Purpose Frigate would not have been able to
do any one particular task well. This was the key question that would consume the navy
over the ensuing year: would it be better to build smaller specialized destroyers and
submarines that maximised the RCN’s anti-submarine capability, or larger vessels that
could properly perform multiple tasks?

The fact that it was aircraft carriers rather than destroyers that dominated the agenda in the immediate aftermath of the General Purpose Frigate’s cancellation indicated that those who wanted a multi-purpose navy had the initiative. For over three years the General Purpose Frigate had formed the basis of all RCN planning, but now that slate had suddenly been wiped clean. The General Purpose Frigate’s demise hit the small ship clique and their destroyer concept of operations particularly hard, while at the same time opening the flood gates for the carrier advocates and their desire to give the RCN the ability to respond to limited war situations. Their campaign was well co-ordinated and relentless. Numerous staff studies, as well as both the Burchell and Mobile Force Interim Reports, collectively called for the RCN to adopt the modular concept first proposed in McCord’s September force structure analysis. Although their recommendations on the overall size of the navy differed, the composition of the actual “modules” contained in these reports was remarkably similar (generally consisting of four to six destroyer-escorts built around either an Iwo Jima type or light fleet carrier). There was one platform (the DDH) that was noticeably absent from all this planning, and its omission leaves little doubt that the naval air proponents were making a concerted effort to replace Rayner’s DDH-centric navy for one of their own.

The discussions on the destroyer’s future in the RCN also illustrated how the naval air supporters were changing the path that Rayner had set out for the navy. In their view, aside from the detection value provided by their sonar sets (particularly the variable depth sonar), the destroyer’s chief value was to act as a screen for the actual strike units

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8 Naval Board, 23 October 1963, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 3; Naval Board, 30 October 1963, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 3; “Notes Covering Presentation to
which consisted of the Iwo Jimas and their helicopters. This was a role that the RCN’s current fleet of destroyer-escorts could meet, and that meant there was no need for additional escort construction at this time. Rayner was not impressed with this logic and he began to believe that the Burchell report had backfired. It was his intention for this committee to stimulate debate, but some senior officers found that it actually “placed a cloak over free and original thinking within Naval and Air Staffs.” Instead of exploring options, Burchell’s committee appeared to be selling a multi-purpose carrier fleet.

Believing that his original instructions were not being followed, the Chief of the Naval Staff told Burchell that his committee must consider the navy’s requirement for either new destroyer-escorts or guided missile destroyers. Burchell would follow Rayner’s directive, but it was clear to most observers that the destroyer’s dominance over force structure planning had come to an end.

The first casualty was the Restigouche and Mackenzie class conversions that Fraser-Harris had targeted four weeks earlier. Neither the Mobile Force nor Burchell’s Interim Reports supported the current plan of turning these ships into helicopter-carrying destroyers. There simply was no need: with eight Sea Kings each, the Iwo Jimas would provide the fleet with all the helicopters it required to deal with medium and high speed Soviet submarines. That also applied to Brock’s heliporter frigate, which the Mobile Force report attempted to bury once and for all. Singled out as being too small to carry out both the anti-submarine warfare and Mobile Forces roles, this “destroyer-like” design was deemed completely sub-standard to the Iwo Jima. 9 Two pillars of the DDH

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navy were under attack, but there was at least one carrier proponent (regrettably anonymous) who wanted to go even further. In a remarkable report, this officer argued that the time had finally come for the RCN to admit that the entire DDH experiment had been a colossal failure, and that the concept of operating helicopters from destroyer-escorts “while feasible is not very effective.” The attempt to roll back the clock was one thing, but it was his next observation that was the most explosive – arguing as he did that the St. Laurent class conversions had to be stopped immediately. Preventing the Mackenzies and Restigouches from becoming helicopter-carrying destroyers was not unrealistic because they were still in their original configuration. Yet his final solution for the St. Laurents that had already been converted (or were too far along to change back to destroyer-escorts) was extreme: they would not carry a helicopter “except when detached from the parent body.”

It was a ridiculous argument – cancelling the St. Laurent conversion at such an advanced stage undoubtedly would have led to difficult questions from the press and parliament – but such extreme interpretations were the product of the ship advocates and the highly competitive environment they had created.

The government’s proposed budgetary cuts to the military, in conjunction with their re-evaluation of Canada’s defence policy, caused much anxiety among the various advocates. While the direction of defence policy towards United Nations operations made the DDH and nuclear submarine advocates nervous, the cuts – which now had grown to three Tribal class destroyers, three frigates and all ten minesweepers – scared almost everyone. The minesweepers in particular provided a powerful lesson. According to Commander Keith Nesbitt, the men on the minesweepers – much like the naval aviators and submariners – claimed “to be the most professional group in the

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10“The Future of the RCN,” DHH, NPCC Papers, 79/246, File 78A.
But unlike the aviators and submariners, the minesweepers did not have strong advocates at Naval Headquarters backing them, and as Nesbitt observed they were the first to go. Having a minesweeping capability was important, particularly since these ships also contributed to the Canada-United States regional group, but they had not proven themselves indispensable. Fraser-Harris was determined to ensure that the same thing did not happen to naval air.

The Assistant Chief of the Naval Staff (Air & Warfare) made an aggressive pitch to sell the virtues of the Iwo Jima class. His argument was simple. These vessels were already under consideration for the anti-submarine warfare role, and as a result “the creation of a Mobile Force requirement would simply confirm the case for the LPH [Iwo Jima] and lead to a firm programme for the construction of at least two of these vessels in Canada.”

It was Fraser-Harris’ next point that formed the basis of the coming force structure crisis. The larger naval powers could afford to build composite fleets devoted to specific tasks, but Canada needed multi-purpose ships that could be taken off anti-submarine warfare duties and re-assigned to Mobile Force when the need arose. Fraser-Harris’ argument was powerful. The RCN had limited resources, and devoting the same forces to more than one task was the only way the navy could possibly meet the minister’s vision for a mobile force. Burchell’s committee made the same point. They adopted a three-module concept built around two Iwo Jimas and Bonaventure, and by doing so his committee was designing a flexible force that – while keeping anti-

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11 Commander Keith Nesbitt, interview by Tony German, tape recording transcript, location unknown, 5 October 1984, DHH, 90/292, Folder 16.
submarine warfare as its primary function – would also be capable of multi-role operations.13

Fraser-Harris had done a good job of selling the dual anti-submarine warfare/Mobile Force capability of the Iwo Jimas, but the Naval Board was not buying it. Events over the summer had left the naval air advocates with little doubt that both flag commanders on the coasts – Brock and Landymore – were opposed to their vision of a carrier-based navy, but now a majority on the Naval Board could be added to the list. They were right. Although far from unanimous – Dyer as well as the Naval Comptroller, Charles Dillon, were favourably disposed to naval carrier air – the majority of members, notably Rayner, Rear-Admiral Grote Stirling (Chief of Naval Personnel), and Rear-Admiral John Caldwell (Chief of Naval Technical Service), appeared to prefer a specialised anti-submarine force structure centred around large helicopter-carrying destroyers.14 Collectively, these men were, at the very least, extremely cautious about implementing any radical changes that would so dramatically alter the navy’s character from one focused on the NATO role of anti-submarine warfare to another that could perform numerous tasks. That frustrated Fraser-Harris and his supporters on the naval staff who still clung to their argument that a specialised anti-submarine warfare force would “reduce the possibility of proper contribution in the future” to any global situation. In their view, the Naval Board was missing out on a unique opportunity. Never had the political winds been so favourable – given the recent Liberal trends in defence policy – to

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13 Naval Board, 23 October 1963, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 3; Naval Board, 30 October 1963, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 3; “Notes Covering Presentation to Naval Board by Chairman of Ad Hoc Working Group,” DHH, RCNHS fonds, 81/520/2200, vol. 1.
14 Charles Joseph Dillon, interview by Hal Lawrence, tape recording transcript, (Lawrence’s home), 10 February 1983, DHH, BIOG D, p. 134; “Office of the Royal naval Liaison Officer,” 24 October 1963, PRO, ADM 1/28562. In fact, a Royal Navy liaison officer in Ottawa, reported that Rayner’s preference to
building a more general-purpose fleet. That much was true. The majority on the Naval Board may not have favoured the acquisition of carriers, but they certainly were not going to reject them outright. What bothered Rayner was the fact that the Naval Staff’s policy papers and discussions were so painfully biased towards the acquisition of carriers.

The Naval Board met the modular concept with much caution. They worried that this carrier-based fleet was not going to be “practical and realistic” and Burchell’s briefs certainly left them with the uncomfortable feeling that the carrier modules would never fit with the minister’s fixed ceiling of $270 million. The same was true for the concepts being advanced by the Mobile Force study. At least one member of the Naval Staff agreed. “No attempt has been made,” a worried Director of Naval Plans, Captain Jack Pickford, told the Vice Chief of the Naval Staff, “to verify the costing or the manpower implications.” All the Mobile Force Study had proved to Pickford was that the concept was “obviously far beyond the economic capability of the RCN.”¹⁵ His suspicions were well founded. Burchell’s committee claimed that their three-module force could be sustained with a yearly budget of $252 million. This was just the operating costs – which were questionable in their own right – and the fact that a price tag on building this fleet was not being properly debated at the staff level led to much circumspection.¹⁶ While troubling, these costs were not Rayner’s greatest concern.

According to Dyer the navy had “generally accepted” the idea that the RCN should be able to contribute “to the maintenance of peace either through UN or other auspices.” What required resolution was whether supporting the mobile force role would

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adversely impact the RCN’s primary anti-submarine commitment to SACLANT as well as CAN-US regional defences. The answer led to an ugly scenario. Presumably, a limited war situation could easily precipitate heightened global tensions between the super powers, and that would require NATO to more closely monitor Soviet fleet movements. There was simply no way that the RCN’s anti-submarine warfare helicopters could be committed to a search for submarines in the North Atlantic if the Iwo Jimas were off attempting to contain a brush-fire war. The possibility that the Iwo Jimas could be required in two places at the same time even caused Dyer to have reservations, as he admitted that “a military judgement (some might say gamble) would have to be made in supporting the [mobile force] concept.” And with that, the Iwo Jimas’ dual capability lost much of its luster. Rayner was not surprised, and never having supported the idea in the first place he told Dyer: “only additional ships to SACLANT for us.”

It was hard for Rayner to show much enthusiasm for Mobile Force. A new NATO strategy (MC 26/4), which was designed to replace MC 70, called for an increase of the RCN’s SACLANT escort commitment from its current level of 29 to a new total of 31, while the CANUS Basic Security Plan would remain at 14 escorts. Rayner was not going to ignore the minister’s interest in mobile force, but neither was he keen to risk the RCN’s alliance reputation on a political whim. SACLANT was all that mattered, while Mobile Force represented an additional capability at a time that the RCN was being asked to cut its current commitments to meet a strict budgetary ceiling. Rayner had great difficulty reconciling this contradiction. He was not the only one. The Director of Naval

Programmes was equally concerned about the impact that the financial restrictions were having: “For the first time in post-war Naval History the estimates are being prepared in the first instance by DNPC [Director of Naval Programme Control] in reverse order of procedure. That is, the cash available will govern the programme and the cash available is fixed.” In other words, finances were the true factor that would determine what capabilities the RCN would perform, and there was simply not enough money for both the anti-submarine warfare and mobile force roles.

Decommissioning the frigates, Tribal class destroyers, and minesweepers from SACLANT and CUSPRG earlier than anticipated was a painful process for Rayner, which was made all the more difficult because it appeared the navy had been singled out for immediate cuts. Only the navy was being asked to make an instant and a “very substantial reduction” to its NATO commitments “at a time when the other services were being less affected,” and perhaps feeling a little persecuted Rayner made a direct plea to Hellyer to reconsider these “retrograde steps.” Dealing with the cuts and the uncertainty surrounding the RCN’s force structure was perhaps the greatest challenge that faced Rayner during his tenure as Chief of the Naval Staff. It was all happening too fast for his comfort and he warned Hellyer about “burning our bridges behind us, in the fire of financial expediency, before we can see clearly the size and shape of the navy in the light of future military requirements.” In an attempt to extinguish the growing flames, Rayner once again reminded the minister that the best force structure with the available funds (and it is important to emphasize that money was the key here) was one that consisted of

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18 Director of Naval Programme Control to Naval Comptroller, 21 November 1963, DHH, RCNHS fonds, 81/520/2200, vol. 1.
19 Chiefs of Staff Committee Meeting, 26 September 1963, DHH; CCOS Committee meeting, 14 November 1963, DHH, Raymont Papers, 73/1223, Box 63, File 1311; Deputy DM to CNS, 18 November
DDHs supported by conventional submarines, maritime patrol aircraft and guided missile destroyers as well as destroyer-escorts. The minister never had a problem with this particular fleet structure – except for the guided missile destroyers it was the one he would eventually adopt, as well as the one that the RCN would maintain for the next forty years. Hellyer was not even certain if a sealift role for Mobile Force was really needed. He was not the one asking for aircraft carriers, but rather Hellyer’s goal was simply to determine the best and most effective contribution Canada could make to the collective defence of the free world, as well as the preservation of peace, at the least possible expense to the taxpayer.\textsuperscript{20} Instead, it was the naval air advocates who were taking advantage of the minister’s flirtation with new roles to sell a platform that the RCN could not really afford.

This re-evaluation on defence policy could not have come at a worse time for the navy. Facing block obsolescence as well as a ship industry whose effectiveness was seriously degraded by inactivity, Rayner had no problem telling Hellyer that there was “an urgent need to decide on future ship and aircraft construction programmes as soon as possible.”\textsuperscript{21} It was not enough just to tell the minister that there was a developing crisis. The real trick was to convince Hellyer that the DDH-centric navy was the best option for Canada’s maritime forces. More importantly, however, Rayner had to control the enthusiasm of his own officers whose squabbling over force structure was only making matters worse. Brock had been Rayner’s strongman, but now that he was serving as Flag

\textsuperscript{1963, DHH, NPCC Papers, 79/246, File 93; Rayner to Minister, 18 November 1963, DHH, RCNHS fonds, 81/520.2200, vol. 1.}
\textsuperscript{20} See various drafts on LAC, Hellyer Papers, MG 32 B 33, Vol. 84, file 10.
\textsuperscript{21} Rayner to Minister, 20 November 1963, DHH, RCNHS fonds, 81/520/2200; VNCS to CNS, 19 November 1963, DHH, 91/378; CNS to VCNS, 1 November 1963, LAC, RG 24 Accession 1983-84/167, Box 3549, file 8000-35.
Officer Atlantic Coast, there was little restraint placed on the advocates who were freely expressing themselves.

Rayner believed that the navy first had to decide on the capabilities it would perform. Only then could it determine the types of ships that would best fulfil those capabilities while at the same time conforming to the strict financial restrictions being imposed on all the services. The government was not ready to make a decision on policy because they were still in the process of re-evaluating Canada’s defence priorities. Their Conservative predecessors had had great difficulty with defence policy, and as a result the Liberal’s careful and methodological approach to the subject made sense. The problem was that the navy was left without a cohesive procurement plan, and it was this lack of firm direction – in combination with the penetrating cuts – that turned the various advocates against each other and helped lead to the force structure crisis. This highly competitive environment created a situation in which the RCN was working backwards as groups of advocates pushed their ship types first and then looked for the justification second.

It was a time that required inspired leadership. Rayner would not provide it. The loss of his beloved General Purpose Frigate had certainly taken a toll on the beleaguered Chief of the Naval Staff, but it was his recent inability to convince the minister that Canada should increase its SACLANT force goals (along with his deteriorating health) that drained what little fight Rayner had left in him. Rayner had no trouble being frank with the minister but he had no intention of challenging Hellyer’s authority. Fellow Board member, Charles Dillion, captured the Chief of the Naval Staff’s attitude perfectly:

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22 For more on the political situation see Robinson H Basil, Diefenbaker’s World (Toronto: University of Toronto Press, 1989).
“Rayner was very discreet and tactful and the general attitude that he reflected was ‘well, we have to do what our masters tell us.’ You know, we are the servants of our political masters.”\(^{23}\) With the fabric of his naval planning unravelling before his eyes, Rayner instead approached the minister in mid November 1963 and hinted that he had had enough. The 1\(^{st}\) of August 1964 would mark his fourth year as Chief of the Naval Staff and he thought that this date might be a good time to retire. There was no vindictiveness in his message as he later told the minister that his decision was based on the fact that his leaving would clear the way for “several outstanding officers” to get a chance at promotion.\(^{24}\) The problem was that this long-term exit strategy from a demoralized Chief of the Naval Staff left the navy with lame duck at a time when it needed a tiger.

It is tempting to blame Rayner for the internal chaos that the advocates were causing. A more aggressive Chief of the Naval Staff undoubtedly would have silenced the naval air patrons while at the same time keeping the navy’s future direction firmly fixed on its alliance commitments. That was not Rayner’s style, but the real trouble was that few outside of the Naval Board understood where he wanted to take the navy after the General Purpose Frigates were cancelled. In fact, that the Assistant Chief of the Naval Staff (Plans), Commodore M.A. Medland, was forced to ask Dyer: “what is the specific direction of CNS for equipment and capabilities of the RCN over the next 10 years if they are markedly at variance with the [Burchell] group’s recommendations?”\(^{25}\) While Rayner was willing to tell Hellyer what type of fleet he wanted, the Chief of the Naval Staff did not provide enough direction to his subordinates. Had he done so

\(^{23}\) Rear-Admiral Charles Dillon, interview by Hal Lawrence, 10 February 1983, tape recording transcript, (location unknown), DHH, BIOG D, 142.
\(^{25}\) ACNS (P) to VCNS, Planning and Costing, 3 December 1963, DHH, 91/297.
forcefully it is unlikely that either the naval air or nuclear submarine advocates would have acted as they did.

Things only got worse once the minister finally presented his “possible force structure” to his service chiefs. This document laid out potential tasks for each of three services between 1963 to 1972 and left it up to the individual chiefs to decide what equipment would be required to meet them.²⁶ SACLANT was listed as the top priority and it was a commitment that the navy was to meet with the “maximum effort within approximate present expenditure level.” As far as Mobile Force was concerned, the minister appeared to respond to the army’s steadfast refusal to weaken its commitment to the Supreme Commander Europe (SACEUR), as he now placed greater emphasis on responding to general, rather than limited, war situations. The minister’s new plan envisioned a requirement for four Canadian brigades, one of which would continue to be deployed in Europe. Of the remaining three based in Canada, two would be designated as reinforcements for the European theatre while the fourth was to provide maximum flexibility in the greatest variety of circumstances. Hellyer presented two alternatives for transporting Canadian Forces to Europe and neither was attractive to the carrier champions. While “option one” called for a mixture of air and sealift to carry a brigade and two squadrons of aircraft to Europe in thirty days, the composition of this force structure could be met with cargo type ships rather than carriers. Worse yet, “option two” did not require the navy at all.²⁷

²⁷ “Summary of one Possible Force Structure for the Period 1963-1972,” DHH, 124.013 (D8). It was observed that the brigade would be transported by air in fourteen days and the heavy equipment would be stockpiled in Europe.
Rayner was quick to jump on this opportunity. Specialized cargo ships – such as the American Comet class – were his preferred choice for the minister’s force structure, and that led Dyer to the conclusion that “Option 1 is not likely to go – CNS wants to man AKs [Comets] with civilians.”

Rayner’s idea made sense. Hellyer’s force structure was ambiguous about whether this sealift requirement would be “costed over and above” the navy’s financial cap and manning levels, but cheap RCN cargo vessels manned by the Department of Transport would relieve the navy of much of this burden. The Comets made the naval air supporters nervous. This single task vessel represented a direct competitor to their multi-purpose Iwo Jima, and there was more bad news yet to come. Rayner’s other ideas were equally disturbing. For instance, he not only wanted to test whether ships in the current fleet could handle the sealift requirement, but he also suggested that the RCN explore the possibility of hiring merchant vessels in times of crisis. Few officers supported the latter option, but the fact that there were alternatives for the sealift role did not bode well for the naval air advocates and their plans for the Iwo Jima.

It also did not help that the viability of the Iwo Jima as an anti-submarine warfare platform was being questioned. The Americans had built these ships for amphibious landings in tropical conditions and that meant anti-submarine warfare was a “very secondary function.” Even more troubling was the fact that the United States Navy had never once operated these ships in this role and a worried Naval Board observed that the

28 Dyer’s notes, nd, DHH, 124.013 (D8).
Iwo Jima were “completely untried as ASW vehicles.”30 Perhaps the greatest concern was that no one knew how these single propeller ships would handle in the harsh environment of the North Atlantic.

It was a good question. Twin screw ships like Bonaventure were more manoeuvrable than single propeller ones, and yet the RCN’s current aircraft carrier was facing growing criticism over her effectiveness in rough weather. Although given years after his retirement, the following comments by Captain Freddy Frewer provide an excellent sense of how some surface officers questioned Bonaventure’s seaworthiness in the North Atlantic:

Oh boy, the Air boys will hate me for this – …this is terrible of me as an ex-carrier Captain to say, but I always had the feeling, being a salt-horse [surface officer], not a flyer, that most of these guys when they took off they got off and then their main thought was getting back on board. I sure as hell felt that way as the Captain, that you were worried about weather conditions to such an extent your mission was sort of spoilt because you’re preoccupied with the whole thing. I had this out with CNS, who was Herbie Rayner at the time, and he agreed with me.31

Exercise FLATROCK had already suggested that shore based maritime patrol aircraft could handle rough weather better than Bonaventure, and an incident only weeks later further drove that point home. At first attributed to a “freak sea,” Bonaventure and several of her aircraft were damaged through a combination of “heavy weather damage” and a stability problem. Bonaventure was not designed for the North Atlantic – she was originally built for the Pacific War against Japan – and to prevent a repeat of the “rogue wave incident” it was decided to reduce her displacement by at least 750 tons.32 Such

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30 Naval Board, 30 October 1963, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 3.
31 Captain Frederick Frewer, interview by Tony German, tape recording transcript, [location unknown], 2 November 1984, DHH, 90/292, Folder 13.
32 HMCS Bonaventure ROPS, November 1963, DHH, RCNHS fonds, 81/520/8000, Box 11, File 2; Soward, Hands to flying Stations, 327-329; Naval Staff Meeting, 13 February 1963, DHH, RCNHS fonds, 81/520/1000-100/3, box 38A, file 3.
efforts were a band-aid solution for a larger reality: *Bonaventure*, while a prized asset to
the RCN, was hardly the ideal carrier for the North Atlantic conditions. Coincidentally, a
milestone was reached on the exact same day (27 November 1963) as *Bonaventure’s*
infamous “rogue wave” incident: the converted St. Laurent destroyer, HMCS
Assiniboine, embarked her first Sea King helicopter. Like *Bonaventure* (and presumably
the Iwo Jimas), the DDHs would also have to face the environment. The difference
was that the aircraft carriers’ ability to do so was under far more scrutiny. If weather
conditions prevented shipborne takeoffs, the destroyer could still hunt submarines with
other weapons and its sensors. Some were quick to identify that *Bonaventure* was
nothing more than a large floating target in such situations, and once again it was
emphasized that maritime patrol aircraft would be in the air while the carrier’s Trackers
were strapped to the deck. Moreover, the fact that the Iwo Jimas were of “similar size
and layout” as *Bonaventure* led to a moment of pause for at least one technical service
officer:

> It is unlikely that the RCN would wish to hazard the lives of 2800 men in a single
screw, single prime mover plant. It would seem the RCN, with a little ingenuity,
could design a ship better suited to North American conditions and with
machinery arrangement (twin screw) less liable to potential failure.

Others were equally suspicious of the design, and the job of determining whether the Iwo
Jima was suitable for the RCN fell upon Sam Davis and his team at DG Ships.

Davis tried to avoid the type of ship advocacy that permeated throughout the
navy. The loss of the General Purpose Frigate was a terrible blow, but DG Ships would
have felt the same way whether it had been an aircraft carrier, nuclear submarine or a

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33 *HMCS Bonaventure* ROPS, November 1963, DHH, RCNHS fonds, 81/520/8000, Box 11, File 2;
*Soward, Hands to flying Stations*, 327-329.
program of minesweepers that been cancelled. They had invested much time in the General Purpose Frigate and it was the wasted effort that hurt the most. Such calls were not theirs to make, and the men at DG Ships accepted that the final decisions on force structure belonged with the Naval Board and politicians. Designing and building ships was their passion and getting the chance to exercise their imaginations was what really mattered to them. Yet commenting on specific design concepts was within their bailiwick, and Davis wasted no time in observing that he had “quite serious reservations” about the Iwo Jima.35

There were a number of things that DG Ships did not like about Fraser-Harris’ approach to the Iwo Jima class. Perhaps the most troubling was the sense that the Assistant Chief of the Naval Staff (Air & Warfare) was rushing the concept through the staff process. Everything seemed geared towards getting the program approved, and important details – such as whether the Iwo Jima was even the right ship for the RCN – were being left for later. Presumably the RCN would require modifications to their design, particularly since “the USN wanted an amphibious warfare helicopter troop carrier which could be used in ASW Warfare [sic]. The RCN probably wants an ASW helicopter carrier which can be used as a troop carrier. These somewhat similar lines of approach do not necessarily result in similar ship designs.”36 No one had come to DG Ships to discuss the viability of essential Canadian modifications to the Iwo Jima for the ASW role. As a result, the Director Ship Design and Construction, Captain Keith Farrell could only assume that the RCN wanted a “Chinese Copy” of an assault ship rather than

meeting the Canadian requirement for an anti-submarine warfare vessel. Nor was DG Ships being asked to conduct the type of official visits and liaison that normally provided them with crucial information anytime the RCN was interested in a foreign design.37

Nothing was happening as it should and DG Ships was not afraid to say so, telling Fraser-Harris:

We most definitely are NOT hereby inviting the floodgates of change to open but we can incorporate changes so long as you decide precisely what you want. Such a decision upon ship characteristics and types of equipment is urgently needed or we might be forced into building ships which we later regret. As always we stand ready to meet your wishes.38

Fraser-Harris was well aware that – while DG Ships may not have had the final say on whether a potential ship program was accepted – their reports certainly carried a tremendous amount of influence. Intentional or not, he had certainly left DG Ships with the impression that they were purposefully being excluded from the Iwo Jimas. Davis was not the only one who thought so; the Director of Naval Operational Requirements actually warned Fraser-Harris that: “It is considered that within Headquarters the LPH [Iwo Jima] procurement problem should be handled as far as possible through normal staff channels, e.g. the Ship Characteristics panel.”39 In fairness to Fraser-Harris, however, DG Ships’ criticisms of their approach – although valid in its own right – may also have been motivated by self-interest. While DG Ships did as they were told, there is conclusive evidence that they preferred working on original Canadian designs rather than copies of foreign ships. Overcoming the extreme challenges associated with developing

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a unique “in house” design was a tremendous sense of pride, explaining why one DG Ship officer stressed to Fraser-Harris that the RCN had “a design organization second to none.” Nevertheless, sensing that the Assistant Chief (Air & Warfare) was in a hurry, DG Ships observed that they could “produce a modified LPH [Iwo Jima] in the shortest possible time,” but that did not change their opinion that it was “somewhat short of the characteristics which we would expect.”

That they had concerns about the Iwo Jima did not mean that DG Ships was trying to stand in Fraser-Harris’ way. In fact, Davis later recalled the Assistant Chief of the Naval Staff (Air & Warfare) as “a cordial ally… who was keen for innovation. We were entirely opposite in temperament – but seemed to get on productively and well.”

It was obvious to DG Ships that the destroyer had lost its pre-eminence over the RCN’s force structure, and that the naval air advocates had the momentum at Naval Headquarters. This created a problem at DG Ships. “In the past we have accumulated much information on destroyer types,” one officer wrote to the Chief of Naval Technical Services, “but now with our swing towards Carrier designs we find ourselves short of data with which to give you accurate estimates or cost and size, etc.” DG Ships had little information on carriers and by looking at future trends it was a deficiency that they anxiously wanted to correct.

41 Davis Family Memoir, DHH, CNTHA Papers, 93/110, file 397.
Davis knew that Fraser-Harris was after a conventional Essex Class to replace *Bonaventure*. Davis was also aware that the Essex, along with the Iwo Jimas, was nothing more than an interim measure designed to cover the RCN’s short and medium term naval air needs. Fraser-Harris’ long-term goal, as explained in the Mobile Force study, was for the RCN to build three nuclear-powered aircraft carriers in Canada. It was an incredibly ambitious idea but one that DG Ships believed was possible. Rather than building Iwo Jimas, Davis told Fraser-Harris that his team could design a nuclear-powered aircraft carrier based on a “scaled down” Essex capable of handling thirty A-4 fighters for $101.1 million each. While the Iwo Jimas were coming under increasing fire, DG Ship’s willingness to look into Fraser-Harris’ long-term plan for nuclear carriers was welcome news. The decision to borrow A-4 Skyhawk aircraft from the United States for trials on *Bonaventure* was equally encouraging. The idea behind this request was ingenious. Successful trials on *Bonaventure* would permit the immediate acquisition of these strike aircraft. Such a heavy investment in naval air would practically guarantee that the *Bonaventure* would be replaced (likely by a nuclear carrier), particularly since the A-4 Skyhawk’s limited range would preclude their employment from shore bases.

Rayner recognised that the anti-submarine warfare fleet’s inability to protect itself from air attacks was one of the navy’s greatest deficiencies. He was still hopeful that a future program of guided missile destroyers would fill this gap, explaining why he had ordered Burchell’s committee to consider these vessels. Fraser-Harris on the other hand

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was quick to point out that the A-4 Skyhawks could also provide mobile force with much needed tactical air support, and that was something the guided missile destroyers could not do. Rayner was not convinced. In a similar vein to his idea of manning Comet class ships with Department of Transportation personnel, the Chief of the Naval Staff suggested that the A-4 Skyhawks for Mobile Force could come from a potential air force procurement program. The Chief of the Naval Staff’s attitude was a setback, but in a larger context Fraser-Harris could celebrate: the Burchell committee was about to endorse many of his ideas.

First presented to the Naval Board in mid-December 1963, Burchell’s final report was the antithesis of Brock’s Ad Hoc Committee on Naval Objectives. Whereas Brock had planned a specialized anti-submarine warfare force that could perform some general-purpose tasks, Burchell was espousing a truly balanced fleet. This was certainly how Davis interpreted the report. Finding Burchell’s recommendations “a trifle unusual” Davis observed this paper fleet differed from Brock’s because it “seemed to be somewhat a throw back to the ‘large ship’ Navy of the immediate post-war aspirations – since the LPHs [Iwo Jimas] were, essentially, small carriers.” Moreover, Davis felt that it was the inclusion of carriers that ensured discussion on the report “was not favourably disposed,” particularly since it pitted those who wanted a specialized anti-submarine warfare role against the supporters of a multi-task navy. It was clear that the latter had definitely gained the upper hand as Burchell listed the navy’s current priorities as: “1) Air Defence 2) Anti-Surface 3) Improved Anti-Submarine 4) Troop Lift, Landing and Support 5) Improved Logistic Support 6) Arctic Operations 7) Mine Warfare.”

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committee saw the A-4 as the best weapon system for the air defence, anti-surface and tactical air support roles. And that put it (followed closely by additional Sea Kings and Iwo Jimas) at the top of a sixteen-item list of procurement requirements.48

Burchell’s proposed fleet was true to the limited war concept of operations as each module was capable of responding to both mobile force and anti-submarine warfare situations. Yet the budget cap of $277 million made it impossible to provide all of Burchell’s modules with adequate air defence. For instance, both the first module (Bonaventure and 7 St. Laurents), and the second (1 Iwo Jima, 7 Restigouches and 2 Annapolis), would be stationed on the East Coast and so would receive protection from the A-4 Skyhawks flying off Bonaventure. The Pacific group (1 Iwo Jima and 4 Mackenzies) was not so lucky. The best the Burchell committee could muster for this module was a suggestion that the RCN should build three guided missile destroyers providing the funds were available. There lay the rub. The committee had already used up the money assigned to new programs and that made the destroyers a long shot.

More bad news followed. While not as extreme as the earlier suggestion to reverse the St. Laurent conversion, it was observed that the Iwo Jimas “reduced the requirement for helicopters to be carried by the DDEs [destroyer-escorts].” As a result, the Restigouche DDH conversion had “been given a low priority” because of “their adverse cost/ effectiveness ratio.” Rather than more DDHs, Dyer gave the Naval Staff instructions to prepare a study that considered some other type of long range anti-submarine warfare weapon systems – presumably ASROC, IKARA or DASH – for the

47 Davis “The DDH 280 Inception and Approval of a New Concept,” nd. DHH, Davis Papers, 2001/36.  
remaining destroyer-escorts. It was also suggested that the Tartar missile requirement be dropped along with the gun and helicopter facilities. The latter recommendation caught Rayner’s eye. Fearing that the RCN’s destroyer force was diminishing in importance he observed that: “As I see it, this would compromise the Restigouche’s A/S [anti-submarine] capability and we have far too few A/S vessels.” Fraser-Harris disagreed. The destroyers – particularly guided-missile ones – were an essential part of his force structure because of their ability to screen the carriers. But those destroyers could not come at the expense of a future carrier program, explaining why the Assistant Chief of the Naval Staff (Air & Warfare) preferred the Burchell Committee’s recommendation for new guided missile destroyers over “trying to turn the Restigouche into JACK’s OF ALL TRADES.” The irony was difficult to miss. The original idea to turn the Restigouches into missile carrying DDHs had, after all, come directly from Fraser-Harris himself. Dyer jumped on this contradiction. Arguments were not being well thought out and as a result the Vice Chief told Fraser-Harris that “We seem to be going in a circle. Please sort out.”

The destroyer men were not the only ones who should have been disappointed. The original Burchell report had all but ignored nuclear submarines, ranking them a distant eleventh on its priority list. Yet an odd trend suddenly emerged in the report’s immediate aftermath. On Rayner’s personal copy, the recommendation for guided missile destroyers was penned out and replaced in his handwriting with a requirement for two nuclear submarines. Once again the Chief of the Naval Staff was simply doing as he was told. A letter from Rayner to the minister – who was working on drafts of his White

49 Naval Board Meeting, 7 January 1964, RCNHS fonds, DHH, 81/520/1000-100/2, Box 26, file 3.
Paper on Defence – left little doubt that the sudden interest in nuclear submarines was not coming from the Chief of the Naval Staff. “In accordance with your direction,” Rayner told Hellyer, “I have examined the feasibility of constructing two nuclear powered submarines within approximately the present level of expenditure for ASW forces within the period covered by the White Paper.”51 Although Rayner wanted the RCN to have submarines, he had reservations about these vessels given the financial limitations that would soon be imposed on the navy. But from the Chief of the Naval Staff’s point of view, his political master had given him an order and he intended to follow it. With enough time and study (particularly cost comparisons) the minister’s interest in these expensive platforms was bound to wane. Rayner was right, of course, but his decision not to question the minister effectively threw fuel on the glowing embers of the force structure crisis. The naval air supporters had competition as the minister’s directive gave the submariners hope that their nuclear aspirations would finally be fulfilled.

The submariners had good reason to get excited. The navy usually had to sell concepts to their political masters. In this particular instance the paradigm was turned completely on its head as the new drive for nuclear submarines was coming directly from the minister’s office. Submarine advocates – such as Ed Gigg – evidently had got their message on the virtues of the nuclear submarine across to Hellyer during the earlier debate over the General Purpose Frigate. The argument that nuclear submarines had an extreme speed advantage over conventional surface forces had resonated with Hellyer. Arctic intrusions by the Soviet Union provided the minister with a more compelling reason to want these vessels. In August 1963 seismic detectors in Mould Bay on Prince

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Patrick Island picked up unusual “man-made” signals in M’Clure Strait and the Beaufort Sea. These objects were later identified as two Soviet nuclear submarines from the Murmansk-based Northern Fleet which, for the first time in their navy’s history, had made a complete transit under the Arctic ice cap in order to reach Russia’s Pacific Fleet. The idea that the Soviets would use Canada’s northern backyard as a shortcut for their nuclear submarines was a terrifying thought for the government. As explained in a draft of the upcoming White Paper, the Liberals planned to cut the military’s capabilities:

One exception has been made, however, due to special considerations. The government has decided to build two atomic submarines for employment in the anti-submarine role. The possibility of acquiring a third will be considered as the project develops. The case for acquiring atomic submarines is by no means categorical. There are other considerations, however, which have to be taken into account. In the patrol of our coastal areas we are limited by the fact that we have no system capable of penetrating large areas of our arctic archipelago. The government is convinced that it would be an advantage to have such a capability. The only vehicle available for this purpose is the atomic submarine.”

Benefits to Canadian industry, along with the fact that the RCN would not have to rely on nuclear submarines from other nations for anti-submarine warfare training, were also advanced as good reasons for their acquisition. With the minister making their arguments for them, the submarine advocates found themselves catapulted into a unique and commanding position.

The Naval Board’s reaction to this sudden interest in nuclear submarines was much the same as their response to the minister’s original appeal for a mobile force.

51 CNS to Minister, 3 February 1964, DHH, 91/297.
52 14th Senior Officer’s Conference 4-6 February 1964, DHH, 95/5, file 17.2; “SUBICEX 1962, USS Skate, Seadragon, and Burton Island go to the arctic. USS Sea Dragon, First submerged passage through North-West passage,” LAC, Rayner Papers, MG30 E 517, vol. 3 file 31; Norman Polmar, Chronology of the Cold War at Sea, (Annapolis: Naval Institute Press, 1998), 80.
53 Chiefs of Staff Committee, 19 December 1963, DHH, Raymont Papers, 73/1223, Box 64, File 1311D; Draft Copy of White Paper, nd, Hellyer Papers, MG 32 B 33, Box 84 file 10.
Instead of telling him that the navy had neither the finances nor manpower to commit forces to SACLANT, Mobile Force, and now sub-surface northern sovereignty patrols, the Naval Board simply observed that if Arctic operations were “considered a high priority, the requirement for a nuclear submarine would be increased.”

Rayner went even further. Burchell’s modules (task groups) would have a cruising speed of 18 knots and if the minister truly wanted faster platforms Rayner found it hard to escape the conclusion that “this probably requires nuclear submarines.” The Chief of the Naval Staff did not stop there. Getting the entire fleet up to a speed of between 30 and 35 knots would necessitate nuclear-powered surface ships as well. In fact, Rayner had even gone so far as to tell the Chiefs of Staff Committee that “building two nuclear submarines should be only the beginning of a continuing program for nuclear propulsion in the RCN, either in submarines or in longer term surface ships.”

The planned cuts to the military made it difficult to take any of this nuclear planning seriously, but since his boss had told him to look into atomic submarines Rayner felt obligated to find a way to pay for them. To do so, the Chief of the Naval Staff advised the minister that he would have to come up with yet another force structure that mixed Burchell’s recommendations with “the maritime forces enunciated in the draft White Paper.”

The idea of a new force structure worried Fraser-Harris. While the Naval Board agreed to officially drop the requirement for a guided missile destroyer program at its January 1964 meeting, the Assistant Chief of the Naval Staff (Air & Warfare) quickly recognized that the nuclear submarines represented the real threat to his Iwo Jimas.

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54 Naval Board Meeting, 8 January 13 January 1964, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 3.
55 CCOS meeting, 30 January 1964, DHH, Raymont papers, 73/1223, file 1311D.
56 CNS to Minister, 3 February 1964, DHH, 91/297.
new “tentative” naval program now consisted of 13 A-4E Skyhawk Fighters, 51 Tracker improvements, 24 Sea Kings, 2 Iwo Jimas and 2 nuclear submarines. It did not take long, however, before the costing exercises for this paper fleet revealed that it was well beyond the minister’s budgetary cap. The price for two Canadian-built American Thresher class – which were still the front runner for a nuclear submarine program – was set at $161 million, and that was just under $10 million more than the cost of a pair of Iwo Jimas. The Naval Comptroller had recently gone through the “painful process” of cutting the navy’s 1964/65 operating and maintenance budget down to $204 million so as to leave $70 million for the current capital equipment program. This annual budget would undoubtedly change in the years to come, but it provided Fraser-Harris with a good indication that the RCN could not afford the nuclear submarines, Iwo Jimas, and nuclear aircraft carriers over the next decade.57 Worse yet, some options being advanced in the new force structure suggested that the RCN could only afford the nuclear submarines providing the Comet class transports were selected over the Iwo Jimas for the Mobile Force role.58

Although his most strenuous assault would be left for the nuclear submarines, Fraser-Harris decided to attack the Comets first. The Assistant Chief of the Naval Staff (Air & Warfare) claimed that the task of transporting a battalion group was not nearly as easy as Rayner was implying. This was a bold assertion given that he was criticizing the Chief of the Naval Staff, but the Comet’s top speed was simply too slow. Moreover, the fact that they were “basically a single purpose ship” meant that they could not provide the essential fire support for troops landing ashore. These ships would also be required at

57 14th Senior Officer’s Conference, 4-6 February 1964, DHH, 95/5, File 17.2.
short notice and that further undercut Rayner’s idea of manning the Comets with Department of Transportation personnel. Providing what he considered the knockout blow, Fraser-Harris’s final conclusion was that there was “no practical alternative” to the Iwo Jima because it “is the only ship which meets the lift requirements” as well as “flexibility envisioned by the ministers [sic] directive.”

Having made his case against the Comets, Fraser-Harris then turned on the nuclear submarines. In fact, according to Sam Davis, the Assistant Chief of the Naval Staff (Air & Warfare) was actually against the conventional Oberons as well because “Cmdre ABF Fraser-Harris… was much more imbued with general purpose capability than with the prospect of vast sums being spent on anti-submarine submarines. He thus initiated a series of memoranda tending to down-play submarine requirements.” The nuclear submarines were more costly than the Oberons, and that not only made them a threat to the Iwo Jimas, but his Essex and nuclear aircraft carriers as well. His long-term dream of two task forces built around nuclear aircraft carriers would never come to fruition if the RCN continued to support nuclear submarines. Claiming that the nuclear submarine advocates were underestimating the true cost, Fraser-Harris charged that there would be “insufficient funds” left over “to maintain even one carrier in operation.” And as a result these specialized single-purpose submarines would lead to the demise of naval carrier aviation and rob the navy of “an essential element of maritime operations.” The nuclear submarines did nothing to improve the fleet’s flexibility and that allowed the

58 RCN Major Equipment, 13 January 1964, DHH, 91/297; Memo to VCNS, 14 January 1964, DHH, 91/297.
60 “The Nuclear Submarine” DHH, Davis papers, 2001/36, File 22.
Assistant Chief of the Naval Staff (Air & Warfare) to vent his frustration. “It is therefore my view, which I wish to record at this point,” Fraser-Harris shot at Dyer, “that we should not accept atomic submarines and should not compromise on the LPH (Iwo Jima) or heliporter issue, but should accept as an interim measure, one LPH only for immediate construction.”

The Assistant Chief of the Naval Staff (Air & Warfare) was not the only naval aviation supporter who saw the danger nuclear submarines posed to the carrier-based navy. Some began by attacking the idea that the nuclear submarine was the best anti-submarine warfare platform and reminded the Naval Staff that the “only effective means of destroying a modern submarine is by the use of two AS helicopters.” Others saw them as a “glamorous extravagance” that were “hard to justify” because the Arctic requirement “can only be described as very ‘far out’ and has not been thought through.” Nor were they the only ones to complain. One of the DDH’s greatest supporters, Rear-Admiral William Landymore, downplayed the nuclear submarines’ speed advantage. Calling it the “chink in their armour,” Landymore correctly observed that nuclear submarines were extremely noisy and easily detectable at high speeds. That made it unlikely that Soviet captains would operate at high speeds for sustained periods. This internal criticism was not the only source of opposition to the nuclear submarines. The air force, responding to Hellyer’s deep cuts as well as the operational reality that nuclear submarines could not work with aircraft – withdrew their earlier support of these vessels while the army had

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61 ACNS (A&W) to VCNS, 6 February 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, File 8885-15 vol. 1.
never liked them in the first place. Fraser-Harris was encouraged by the other services’ attitude, but not all the news was good – the army and air force were also critical of the Iwo Jimas. Months of pitching the Iwo Jimas and naval A 4 Skyhawks to his counterparts on the tri-service Mobile Force committee had not yielded the desired results. In fairness to Fraser-Harris, the army’s fixation with fighting a future “heavy battle” in northwest Europe meant that there was little interest among the General Staff for a Mobile Force geared towards limited war UN situations in the third world. This did not mean that the army was dead-set against a sealift capability. What the army questioned was whether the navy really needed assault carriers rather than cheaper cargo ships to perform this task.

Frank Miller and the RCAF were not buying it either. In his view, the likelihood that a Canadian group would operate without the participation of allies was remote, and that meant that the RCN would not need to provide all the elements of what would undoubtedly amount to a multi-national all-purpose fleet. Canada’s best contribution to a limited war situation, according to Miller, was to provide escort vessels for a UN force in which larger assault ships came from the United States or Britain. While this endorsement for escorts from the Chairman Chiefs of Staff Committee was welcome news to the destroyer men, Miller and the Chief of the General Staff had terse words for the naval air supporters. Having returned from an uncomfortable Chiefs of Staff Committee meeting to discuss a paper on options for the Minister’s Possible Force Structure, Dyer told Rayner:

63 Chiefs of Staff Committee, 30 January 1964, DHH, Raymont fonds, 73/1223, Box 64, File 1311D.
The Chairman and the CGS jointly condemned the LPH (Iwo Jima). The Chairman assumed the Navy was trying to get aircraft carriers and stated that we should not attempt to justify it for the lift forces, but for an ASW Helicopter Carrier, if that is what we wanted. The CGS stated that the LPH was too expensive and figured all we needed was ‘one of those British Logistic Support ships for a couple million’. My attempts at convincing the audience on the virtues of the dual purpose role of the LPH then followed, but I fear without much success. …At this stage, the Meeting broke up and I subsequently went back to the Chairman and asked him, if because of his dissatisfaction with LPH, whether it meant that the Chiefs were not recommending this to the Minister. He surprised me by saying ‘No, that CNS would have to carry the argument with the Minister’ or words to that effect. I found it difficult to know what we had really decided at the end of the Meeting.  

Miller had seen through the attempt to use Mobile Force as a means to get carriers, but he did not blame “the navy” for trying. It was the air force – Miller’s service – that deserved the greatest criticism for ignoring the minister’s cost-saving directives. And it was likely for that reason that Miller left it up to Rayner and the Chief of the Air Staff, Dunlap, to push the agenda of their respective services.

Although Dyer had shown much enthusiasm for carrier aviation, few believed that Rayner would present a good case to the minister. They were right. When pressed to justify the Iwo Jimas, Rayner’s response was weak and ineffectual. But so too was his argument for the Comets as the minister saw “no real purpose in building specialized troop-carrying ships.” This should not have come as a surprise. The Chief of the Naval Staff was not keen on spending the navy’s limited capital acquisition budget on sealift

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66 Dyer to CNS, Notes for CNS on Chiefs of Staff Committee meeting of 20 January 1964, 24 January 1964, DHH, 91/297.
67 VCNS to CNS, Possible Force Structure 1963-1972, 23 December 1963, DHH, 91/297. The Air Force was pushing for 217 Phantom fighters as well as 32 Hercules, 30 new Maritime aircraft, 3 DC 8 and 10 C141 Star-lifter troop transports, while the Army wanted a new battle tank, armoured personnel carriers and forward air defence weapons (Mauler). This led the VCNS to conclude that “in general the Navy and Army appear to have followed the Minister’s proposal literally while the Air Force have approached the proposal on a somewhat lavish scale.”
68 CCOS Meeting, 5 February 1964, DHH, NPCC Papers, 73/1223, Box 64, file 1311D
ships of any type. Even Dyer was starting to have second thoughts. Frustrated by his inability to get a consensus on the sealift role, the Vice Chief of the Naval Staff began to wonder “whether we should continue to strive towards this aim or just produce those [escort] forces which would be complementary to our probable allies.” The fact that Dyer was having doubts was not lost on Fraser-Harris who appreciated that his campaign was stalling:

It now appears evident that the emphasis which has of recent months been placed upon the requirement for troop lift is now receiving less emphasis, causing a back-off from the LPH [Iwo Jima] which your previous studies and those of the Burchell Committee had endorsed as being the best available vehicle to meet the two roles of Army support in limited war and the carriage of helicopters in ASW.

The Iwo Jima issue was clearly building towards its climax, and as a result Fraser-Harris told the Vice Chief that the time had finally come to decide whether the RCN planned to operate aircraft carriers after 1975. The Assistant Chief (Air & Warfare) had gone too far and Dyer warned him that it was time to back off and “leave the a/c [aircraft] carriers until later.”

Things only got uglier for Fraser-Harris once the Department’s civilian advisors got involved. Like Miller, the Scientific Advisor to the Chief of the Naval Staff, JC Arnell, was equally suspicious about the real aim behind acquiring the Iwo Jimas. The operational requirements were not only supposed to determine whether there was actually a need for Iwo Jima-type ships, but also they were to examine a range of vessels that

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69 Chiefs of Staff Committee, 06 January 1964; 30 January 1964, DHH, Raymont Papers, 73/1223, Box 64, File 1311D.
70 Naval Staff Meeting, 23 January 1964, DHH, RCNHS fonds, 81/520/1000-100/3, Box 38A, file3.
71 ACNS (A&W) to DNOR, 11 February 1964, and VCNS to N Sec. 12 February memo note on above, DHH, NPCC Papers, 79/246, File 203
could fulfil the desired role. What Arnell saw was an effort to acquire a particular class of ship by twisting the operational requirements:

…this prompts me to ask what are we in support of? The paper reads to me like an attempt to justify the requirement for a large AS helicopter carrier with a few auxiliary roles cranked in to make it more palatable. If this is the hidden aim, then other ASW systems must be discarded. In summary, I consider that this Staff Study started with the wrong aim. Notwithstanding this, the stated Aim has not been pursued in an entirely logical fashion. It could be a dangerous document in the future because, while arguing the AS helicopter case, it omits (probably by oversight) other components which will be necessary in a future ASW system.72

Sam Davis also sounded the alarm, telling Rear-Admiral Caldwell that the “Naval Staff… try and select a vessel – which we think is unwise because, particularly in the new environment, selection can hardly be made until a joint group defines the requirement.”73 Suggesting the carrier supporters had purposely tried to bypass DG Ships, Davis further warned the Deputy Chief of Naval Technical Services, Commodore J Deane, that various studies on the Iwo Jimas had been “prepared without our assistance” and that the current crisis “boiled up rather quickly and CNTS may wish to be aware of developments.”74 Like DG Ships, Dyer was also critical of Fraser-Harris’ method. From the Vice Chief of the Naval Staff’s point of view, Davis had good reason to complain, and pointing to the staff study he told Fraser-Harris: “Here we go! At this stage the ship is primarily lift. Secondly ASW. Now we wish to change it around. Para (P) indicates we are turning it into an a/c [aircraft] carrier!” Davis’ observations, along with Arnell’s brutal honesty, had exposed the carrier advocates’ true motives, and Fraser-Harris had little choice but to beat a fast retreat. Although he had provided his blessing to

74 Davis to D/CNTS, 6 February 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, File 8885-15 vol. 1.
both the Staff Study and Operational Requirements when they were first drafted, Fraser-Harris suddenly told the Director of Naval Operational Requirements that he was now unhappy with these documents.

While Arnell was busy criticizing the Iwo Jimas, another civilian advisor was doing the same to the nuclear submarines. Once again the minister turned to his trusted advisor from the defence research board, R.J. Sutherland, to comment on the desirability of building nuclear submarines for the RCN. The result must have come as a surprise for a minister who was planning to include nuclear submarines in his upcoming white paper on defence. Sutherland and his group had grave doubts about the whole concept, and according to Davis “somewhat against their will apparently, they were bidden, early in 1964, to report on a Canadian Nuclear Powered Submarine Program.” Davis was right. Sutherland did his best to appear balanced, but upon closer examination his report was extremely biased. The nuclear submarine’s strengths were quickly counter-acted by a string of negative commentary. Sutherland’s primary criticism dealt with costs. Fraser-Harris had warned that nuclear submarines would be more expensive than the advocates were predicting, and Sutherland took that argument even farther by suggesting that two improved Thresher class would cost $200 million. Putting this into perspective, Sutherland observed that with the same money the RCN could get one of either a light fleet carrier and aircraft, an Iwo Jima and aircraft, six Annapolis class destroyers, four guided missile destroyers, six to eight modern conventional submarines or three squadrons of maritime patrol aircraft. Even the benefits of the nuclear submarines were treated as drawbacks, with Sutherland further observing that the so-called “superiority” of these vessels compared “to conventional submarines in the role of attack on surface
targets is irrelevant because Canada has no interest in this particular mission.” In his view, therefore, the RCN would get more value out of alternate programs rather than acquiring nuclear submarines. But he left his most stinging conclusion to the end. Sutherland was willing to concede that the RCN would probably acquire nuclear submarines “sooner or later,” but that did not stop him from warning the minister that spending vast sums on the Threshers “is extremely questionable.” More to the point, Sutherland finished by observing that “the present Government would be ill-advised to commit itself to such a program and the Chiefs of Staff would be ill-advised to press for such a program.”

Despite attempts to emphasize that his conclusions were “incomplete” and “provisional,” as well as warning that they had to be “regarded as preliminary judgements requiring further investigation,” Sutherland’s report nevertheless set off a firestorm of activity. There is no doubt that Sutherland’s favourite platform was the destroyer. Ideally he wanted the RCN to acquire guided missile destroyers, but if there was no interest in such a program he was willing to accept some type of Repeat Annapolis. That his preference seeped into this new study angered the submarine advocates. They were not the only ones. Neutral staff officers were equally disturbed by the report’s obvious bias. For instance, while Captain Jack Pickford agreed with Sutherland’s conclusions, he had to admit that “There are numerous examples all through the paper of what we feel are half truths, or to state it more charitably, all the facts are not presented.” The “charity” did not end there. The fact that Sutherland had gone out of his way to demonstrate the high costs of the program suggested to Pickford that Sutherland had purposely cooked the

75 S.M. Davis, “Submarine Acquisition in the RCN from Nuclear to Conventional, 1955-65,” DHH, 88/51
numbers to make his version of a destroyer-based navy look more appealing. Davis agreed that Sutherland’s figures were a “little pessimistic,” while others claimed that “some members of staff consulted feel quite strongly that a thoroughly objective study of the question would show that there is a good case for acquiring nuclear submarines.”

The desire to produce a balanced assessment of a nuclear submarine program was strong, and as a result a committee was assigned the specific task of dissecting Sutherland’s report. Their final assessment, which was submitted under Fraser-Harris’ authority, was remarkable in that, while admitting that Sutherland was right in concluding that the nuclear submarine was wrong for the navy, his report nonetheless was useless because of its obvious bias towards destroyers:

It should be said at the outset that on the basis of the statements and arguments made in the paper there is no basic disagreement with the conclusions [on nuclear submarines]. However, we wish to qualify this by saying the conclusion cannot be escaped that the author has rather slanted his paper to fit his own view [of the need to acquire destroyers]. …There has not been time to prepare a critical analysis of all the arguments presented, but we do feel that if this paper is to be given serious consideration at the policy-making level, then an opportunity should be afforded STAFF to prepare a detailed criticism of it. It was apparent during discussion that there are a number of areas in this section of the paper which have been inadequately explored or which are open to attack.

Fraser-Harris’s support of these conclusions effectively accused Sutherland of covertly building a case for a new destroyer program by attempting to discourage the minister’s interest in nuclear submarines. The irony is hard to overlook since Fraser-Harris was guilty of the exact same offence on numerous occasions in the past. But the greatest criticism of Sutherland actually came from Arnell. Fresh from exposing Fraser-Harris

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77 Ibid.
78 A.F. Pickford for ACNS (A&W), 12 March 1964, and Annex A of above is from DG Ships, DHH, Gigg Papers, 88/64-8
and the carrier supporters’ biased attempt to acquire the Iwo Jimas, Arnell’s opinion of Sutherland was equally unforgiving. His choice of qualifiers throughout his critique said it all: Sutherland’s report was “disturbing,” “not properly substantiated,” “hardly analytical,” and even “quite dangerous.” Arnell had “an open mind on the subject” and in his final conclusion the nuclear submarine report solved little; there was still a “need of the proper analysis which has not been provided by Dr. Sutherland.”

Whether Sutherland’s preference for destroyers had led him to purposely torpedo the nuclear submarines remains a mystery. The belief that he had done so, however, provided the submarine advocates with further incentive “to push our cause.” The Canadian submarine service was still in its formative stages, and yet events (such as Sutherland’s report) would help foster a perception among the submariners that:

…very often our guys think that they don’t win anything, and is a very funny sort of a paranoia, but its true, and very often there’s a sort of a jaded view of the submariners within the Navy – its all a bit unfortunate because we are the 3rd to come along who claim to be the most professional group in the Navy. …we came along, and we’re here to stay.”

The submariners were not the only ones who felt this way, and it was this paranoid mentality that fuelled the force structure crisis. Losing a potential ship building program could be more than just a disappointment – it could also mean the end of a branch’s existence. The belief that naval aviation would not survive without a replacement for Bonaventure was certainly what motivated Fraser-Harris. The situation facing the nuclear submarine’s chief advocate was different only in degree. Gigg was not fighting for a replacement program – Canada did not possess nuclear submarines – but rather his

80 J.C. Arnell to CNS, 16 March 1964, DHH, NPCC Papers, 79/246, File 78A.
81 Keith Nesbitt, interview by Tony German, tape recording transcript, no location, no date, DHH, 90/292, Folder 16.
goal was to start the fledgling submarine service off on the right foot. Sutherland’s report was a threat to his cause and as a result it demanded a response.

Gigg’s approach was risky for the submarine service as a whole. His strategy was to make a case for the nuclear submarines by pointing out the weaknesses with the RCN’s planned acquisition of the three conventional Oberon class submarines. The decision to do so was easy for Gigg. According to Davis, Gigg’s participation on the Oberon Negotiating Team had been “an unhappy task, for he was totally committed to nuclear submarines and deeply opposed to OBERON’s.”

While the nuclear submarines had considerable strengths over their conventional counterparts, the results of FISHPLAY SEVEN – which it should be remembered graphically demonstrated the tremendous difficulty of differentiating underwater contacts as either friend or foe – still haunted Gigg’s campaign. Gigg’s response to this recurring criticism was somewhat emotional. “As the SSN [nuclear submarine] has better detection capability than DDE [destroyer-escort] and Helos and a/c [aircraft],” Gigg defiantly charged, “perhaps it is the DDE, helos and a/c who should be kept away except for close in convoy work.”

Gigg’s tit-for-tat comment was typical of the procurement games that were played at Naval Headquarters. With the stakes being so high and the competition for limited defence dollars fierce, it was easy to see why some advocates chose to gain points for their particular platform by running down their competitors. In fact, believing that he had just chalked up a victory against the conventional submarines, Gigg set his sights on his next

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82 “The Nuclear Submarine” DHH, Davis papers, 2001/36, File 22.
83 Submarines, nd, DHH, Gigg Papers, 88/64-2.
opponent by declaring: “Now for a comparison with DDE! [destroyer-escort]”\textsuperscript{84} This was as far as Gigg’s luck would carry.

Earlier interest in nuclear submarines had taught DG Ships that building these platforms in Canada would be a daunting – although not an insurmountable – task, and Davis later reflected how “fortunately perhaps, it all came to naught.” But it was the fact that a possible nuclear submarine program was back on the agenda that Davis found truly “astonishing.” Much like the Iwo Jimas, this renewed interest in nuclear submarines caught DG Ships off guard.\textsuperscript{85} It was a chaotic and confusing time where concepts were being sent to DG Ships at an incredible pace. One moment nuclear submarines were a priority, and yet almost overnight DG Ships was told to look at the American’s new Fast Unloading Amphibious Cargo Ship. The Chief of the Naval Staff was considering these vessels, which were a type of Landing Platform Dock (LPD), because they were a cheaper alternative to the Iwo Jimas [Landing Platform Helicopters (LPH)] and a better platform than the Comets. Davis did as he was told but Fraser-Harris was unimpressed. Although they could carry the required number of helicopters, the Fast Unloading Amphibious Cargo Ship (along with the entire Landing Platform Dock family) were more akin to a conventional warship design, and since they were not flat-topped carriers Fraser-Harris as well as his supporters rejected them outright.\textsuperscript{86} That did not surprise

\textsuperscript{84} Ibid.
\textsuperscript{85} “The Nuclear Submarine” DHH, Davis papers, 2001/36, File 22, p 68. In fact, one of Davis’ first indications came from a February 1964 article in the \textit{Financial Post}, which reported that Hellyer’s upcoming White Paper would contain a requirement for two nuclear submarines. Worse yet, the article contained insider information that Davis suggested had come from the minister’s office. Davis was not the first, nor would he be the last, to say so. On more than one occasion Hellyer would be accused of leaking information to the press as a means of gauging public reaction to potential policies.
Davis who was becoming more and more concerned that Fraser-Harris was still ramming the Iwo Jima through the staff process.

Fraser-Harris had good reason to fear Davis. There were a number of questions about the Iwo Jima that had not yet been answered. Whether a Canadian Iwo Jima would have stability problems was still unknown, as was the issue of the types of modifications required for North Atlantic operations. There was also a new concern. While investigating this design, a DG Ships officer discovered that the Iwo Jima possessed a limited number of landing craft. The reason was that Americans had “married” the Landing Platform Dock vessel – which carried the major portion of landing party and heavy equipment – to the Iwo Jima. The fact that the Iwo Jima transported the helicopters and troops made these ships “mutually interdependent,” meaning both types were required for the amphibious assault role. That led to some awkward questions.\footnote{Nixon DNOR to DNSR, 14 February 1964, LAC, RG 24 Accession 1983-84/167, Box 4030, file 8885-15, vol. 1; Farrell for Davis to ACNS (A&W), 28 February 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-15. vol. 1.}

The RCN obviously could not afford both types, and no one knew what would happen if this marriage of concepts could be subjected to a divorce. Some even wondered if the Iwo Jima was actually the better choice for the RCN, explaining why Davis and his team were ordered to look into the Landing Platform Dock as a possible option for a dual anti-submarine warfare and sealift ship.\footnote{Nixon DNOR to DNSR, 14 February 1964, LAC, RG 24 Accession 1983-84/167, Box 4030, file 8885-15, vol. 1; Farrell for Davis to ACNS (A&W), 28 February 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-15. vol. 1.}

DG Ships was not particularly enthused with the Fast Unloading Amphibious Cargo Ship, but Davis was no longer going to let Fraser-Harris manipulate events. As a means to balance the obvious bias of the Assistant Chief of the Naval Staff (Air & Warfare) toward carriers, Davis insisted that he co-author the report on this concept.
Davis’ influence on the joint report was immediate. While it was recognized that the Fast Unloading Amphibious Cargo Ship was a sub-standard design for the RCN’s particular needs, Davis did not allow Fraser-Harris to use this report to make yet another one-sided pitch for the Iwo Jima. The benefits of other concepts were also explored, and in a remarkable turn of events Davis took the entire debate back to its origins by re-introducing both the CVH (Small) flat-top and DDH (Large) heliporter frigate designs from the previous year. Fraser-Harris was not impressed, and that led to much concern about DG Ship’s involvement in an upcoming visit to an American Iwo Jima.

Fraser-Harris was well aware that two DG Ship officers had submitted a less than flattering report on the Iwo Jima after a trip to the United States in November 1963. That instantly made this new inquiry, which involved an inspection of the USS Okinawa between 23 – 27 February 1964, a controversial one. The fact that Fraser-Harris “invited” DG Ships to his office for “an informal discussion” on the composition of the eight-man mission only added to the sense that it was contentious. A true compromise emerged: Davis would “head the party” and select three technical officers to go with him, while the remaining members would consist of Fraser-Harris’ choices. It was an odd process that epitomized the tremendous difficulty Naval Headquarters was having in providing objective advice on ship concepts. The Naval Member in Washington, Commodore J.C. “Scruffy” O’Brien was involved in the mission’s work and his reaction to their investigation added to the intrigue. While he realized that the team would be

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90 Davis to DGFE, 10 January 1964, LAC, RG 24 Accession 1983-84/167, Box 4030, file 8885-15, vol. 1.
submitting a report to Dyer he nonetheless felt obligated to give his “personal opinion” on the ship. Overall, O’Brien’s impromptu report was fairly balanced. The Iwo Jima class certainly had its problems – it was “lively” in bad weather and would likely sink from a single torpedo hit – but with certain modifications it would be a suitable platform for the RCN he concluded.91

O’Brien’s report suggested that the DG Ships representatives were not impressed with the Iwo Jima. Although a copy of their final conclusions has not yet been found, the reaction at Naval Headquarters certainly implies that it was not good news for Fraser-Harris. Only days after the mission’s return the Director of Naval Operational Requirements was asked to consider a study entitled “Suitability of employing Iwo Jima.” His reply was significant. The study “has been now overtaken by events,” he told his superior, because of “more recent direction from VCNS for a smaller ship (heliporter) and the visit of a Headquarters team to an IWO JIMA.” Worse yet, the Operational Requirements for a Heliporter – which were released one week after these comments – recommended that the navy build the much smaller 10,000 ton helicopter carrier with a reduced lift requirement of 500 troops and a capability to carry 15 Sea Kings.92 This was a setback for Fraser-Harris, and while his Iwo Jima was not yet out of the running the concept was certainly taking a beating.

The smaller heliporter may not have been Fraser-Harris’ ideal choice, but at least he could take solace from the fact that the operational requirement was not recommending the DDH (Large). Although the 5000-ton DDH (Large) heliporter frigate was thought to be “marginal in design” and “lacking in fighting equipment,” Davis

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91 Naval Member, CJS to VCNS, 28 February 1964, DHH, 79/246, folder 59.
92 Operational Requirements for a Heliporter, 9 March 1964, DHH, 73/750.
nonetheless began to show a preference for these types of destroyer concepts.\textsuperscript{93} It was not that Davis had a particular inclination for destroyers, but rather he was tired of the internal squabbling and factionalism among the advocates:

[I] reflect the agony of indecision and vain groping which seems to beset us all. Wherever one looks, it seems, there are huddled groups busy preparing studies – all of which siphon off the efforts of some of our best people, in production of documents which few have an opportunity to read and upon which no one seems disposed to act. …Meanwhile, we see the Navy apparently at a complete loss to know what it wants and content, nay eager to accept any carrot (however irrelevant) which may be dangled by our Political masters.\textsuperscript{94}

Davis was right, of course, and his dramatic commentary made an important point. While input from the staff level was an essential part of the navy’s decision-making process, none of the various advocates were looking at the government’s re-evaluation of defence policy objectively. Instead, Hellyer’s exploration of limited war situations became the justification to push for an expensive multi-purpose carrier-based fleet. Although they wanted the navy to specialize in anti-submarine warfare the submariners also jumped at the minister’s interest in nuclear submarines. Those who wanted a specialized destroyer force were the only ones who saw the larger picture: despite all the bravado over Mobile Force and nuclear submarines, the Liberals were cutting the defence budget and would never pay for either a truly dual-purpose fleet or a nuclear powered one. Hellyer simply wanted to weigh up his options before making a final decision on force structure. For the advocates, however, the minister’s flirtation with these concepts represented an opportunity that they simply could not resist. And it was their willingness to jump at these types of “carrot” which Davis believed was causing all the confusion.

\textsuperscript{93} Joint letter from Davis and Fraser-Harris to VCNS, Amphibious Assault Ship, 5 February 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-15. vol.1; Farrell for Davis to ACNS (A&W), 28 February 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-15. vol.1.

\textsuperscript{94} Davis to ACNS (A&W), Constructive Thoughts – in despair, 13 March 1964, DHH, 79/246, File 78A.
Rather than reacting to Hellyer’s political whims and curiosities, Davis wanted the navy to start telling the minister what role it should play in defence policy and the ships it would require to do so. This type of sustained pressure was the only hope the navy had in getting Hellyer to stop procrastinating and make a decision. In Davis’ view, however, the navy had become its own worst enemy.

The advocates’ natural enthusiasms for their own design had to be tempered through strong executive leadership. Since neither Rayner nor Dyer was providing that direction, Davis decided to take the initiative. The only way to end the internal bickering was for the navy to unite behind one project, and it was for that reason he began to push for a new destroyer. While the shenanigans amongst the advocates may have been annoying, Davis also had more practical reasons for rallying around a destroyer design. Fearing that his team was falling apart, he pleaded with his superiors to “give us something to do.” The organization was losing its best and brightest through inactivity. Davis needed a new program fast, and his team’s experience with building destroyers meant that it was the only ship class that could be comfortably started up in a hurry. Left with few options, Davis told Fraser-Harris that, besides the DDH (Large) heliporter frigate, the RCN could also “fairly rapidly begin the creation of i) A destroyer escort ii) A destroyer escort carrying a helicopter iii) A general purpose frigate.” The return of the General Purpose Frigate was significant and Davis’ rationale for reintroducing the concept deserves attention to his further elaboration:

This, I suggest, demands the intuitive, smoke-filled room approach that generated and was so nearly successful in achieving the GPF. But we must have some agreed and accepted staff requirements and we must have them soon. …Here, I suggest, we need to turn our backs on the spirited and seat-of-the-pants approach that characterized our earlier joint effort. With humble duty, I suggest that this needs a special section of DNOR – suitably supported by DG Ships and DGFE
representatives, and directed by a capable Executive Captain who understands and has faith in what he is doing. If all this fails – perhaps you would care to hit the road together again – with straw hat and cane in attempt to sell say an ‘Organization Cruiser’ - some 400 ft. moderate speed, reliable gun, most modern medium and short range missiles, helicopter (landing) facilities… A rose by another name.  

That “rose” was, of course, the General Purpose Frigate. For some scholars this memo represents the beginning of a conspiratorial campaign to build this previously cancelled program. The reality was not nearly so sinister. Davis actually wanted to resuscitate the new guided missile destroyer program from the Burchell report because it would get his team back to work quicker than any of the other escort concepts. Moreover, while the navy would indeed consider a new guided missile destroyer program, the seeds of this idea were cultivated quite separately from the Repeat Annapolis and DDH (Large) heliporter frigate concepts that evolved into the DDH 280. As will be seen in chapter seven, the new guided missile destroyer and the embryonic DDH 280 were (and would always remain) competitors.

While the nuclear submarines had temporarily replaced them in the RCN’s force structure, the destroyer’s dramatic comeback was not due to Davis. An important report on the air defence of the fleet gave the guided missile destroyer an unexpected boost. This report, along with recommendations from a separate guided missile study group, made a strong case that these vessels were ideally suited for the fleet’s point (5 miles) and medium range (50 miles) defence needs. Criticisms of the report’s final recommendation – which was that a carrier with either the A-4 (or the more powerful F-4 Phantom fighter) was needed for the area air role (150 miles) – suggested that the guided missile destroyer

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95 Ibid.
96 Hennessey, “The Rise and Fall of a Canadian Maritime Policy,”
97 Davis, “The DDH 280 Inception and Approval of a New Concept,” DHH, Davis Papers, 2001/36.
was the only air defence platform that the RCN could afford. These criticisms were the product of a cost analysis comparison between the aircraft carrier and the guided missile destroyer. The aircraft carrier’s greatest strength over the destroyer was its range, but critics were quick to point out that the principle of “collective balance” meant that the RCN could expect fighter aircraft from “other nations to provide an air umbrella.” On the other hand, the guided missile destroyer could contribute a reasonable measure of air defence while at the same time fulfil secondary duties, such as anti-submarine warfare, at much less expense.  

98 And that put destroyers back into the force structure fray.

It is easy to see why officers like Davis were so frustrated with the question of force structure. In fairness to the senior staff, all the various service, tri-service, ministerial, and parliamentary committees, as well as working groups, had only led to more uncertainty and that made it difficult for the Naval Board to provide firm direction. Hellyer’s re-evaluation on defence policy may have been a prudent political move, but it provided the navy with a series of often contradictory hints as to its potential roles. While this lack of direction created fertile ground for the ship advocates to push their concepts, it was not beneficial to the navy as a whole. Frustrated that “no approved concept of maritime operations had yet been established,” Dyer summed up the senior staff’s predicament by observing that the navy’s studies “had run into the same almost insurmountable block. The planners had been unable to establish clearly the future requirements for Canadian Maritime Forces. Until such time as the way ahead was

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established, detailed planning was impeded.” The navy was trying to build a fleet based on advocacy planning as well as what they thought the minister wanted. The entire situation was out of hand, and as a result the Naval Board was hopeful that Hellyer’s White Paper (which was finally made public in March 1964) would lead to an “early resolution of the defence problem.”

They would be disappointed.

It was no accident that the White Paper’s discussion on the navy’s force structure was so vague. The Liberals wanted to keep their defence options open for as long as possible and Hellyer had delivered. Cabinet was happy with the wording on future roles, and agreed “that it would be unwise to use more explicit language that would bind the government to a particular formula which might prove an embarrassment [sic] in the future.”

The directions given to the navy were particularly obscure; nevertheless those who wanted a specialized anti-submarine warfare fleet had reason to be pleased. Hellyer recognized that the RCN’s primary role was to make an effective “Alliance contribution” to anti submarine warfare through a “modest” fleet of surface ships, submarines, helicopters, and fixed wing aircraft. Except for mentioning the government’s interest in nuclear submarines, Hellyer did not give any specific details on the ship types that would make up this “mixed force.” The reason was simple: more study was required “to determine as precisely as is possible the proportion of weapon systems which will provide the maximum intensity of surveillance and maximum defence potential for the least cost.”

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99 Naval Board Meeting, 7 January 1964, DHH, RCNHS fonds, 81/520/1000-100/2, Box 26, file 3; Naval Staff meeting, 17 March 1964, DHH, RCNHS Papers, 81/520/1000-100/3, Box 38A, file 3; Rayner to VCNS, 18 March 1964, LAC, RG 24 Accession 1983-84/167, Box 4030, file 8885-15, vol. 2.


101 White paper on defence, March 1964, DHH, 80/225, Folder 11.
While he still wanted to explore a potential United Nations role for the navy, the minister did not mention either a tactical air support or troop transport capability; instead he suggested that the sealift requirement would only need to “carry heavy equipment and supplies.” It was not difficult to read between the lines. The best ship to meet these requirements was Rayner’s specialized cargo ship, particularly since Hellyer emphasized that any “additional” sealift role would have to be kept “modest.” This clearly precluded the Iwo Jimas and flattop heliporter, but that was not how the naval air advocates interpreted events. Instead, they clung to a single line in the White Paper which observed that the sealift requirement “will be acquired either in conjunction with the anti-submarine force or independently.” That provided the naval air advocates with just enough hope to make one last stand over the Iwo Jimas.

An important staff study, entitled “the Means of Providing a Canadian Sealift Capability,” added more encouragement. This study concluded that – while a dedicated sealift ship was the ideal solution for the actual sealift requirement – building ships that combined this role with some other combat capability was the best way to enhance the fleet’s overall potential. While that made the naval air supporters happy, others were far less enthused. As a result, this study proved to be the powder keg that finally blew the entire Iwo Jima debate to the surface. According to Lieutenant Commander W.M. Ogle from Director Ship Design and Construction, the Naval Staff had rejected all the combined capability solutions at its 7 April meeting, and by doing so had left the specialized sealift vessel as the only option for the navy. That was exactly the outcome that Ogle wanted, the more so since he had made a strong pitch for the specialized vessels:
a) Any ship designed for a special well-defined purpose will be better suited to that purpose than the multi-purpose ship will be to any one of its purposes.
b) The independent ship also stands the best chance of being funded from joint resources and should at least not become a direct charge against ASW funds.
c) If the meeting did decide on the special ship concept, (as I thought it was) we could offer to support a tidy paper on the subject listing all existing solutions…

Nor was he the only one pushing for the single purpose sealift vessels, as Ogle told his boss, Captain Keith Farrell, that at least five other staff officers had shown strong support for this concept. Yet, that was not what the minutes reflected, leading Ogle to complain that the official record reflected “a different meeting from the one I reported.” Ogle went even further and claimed that Dyer and Fraser-Harris had purposely manipulated the minutes. Rather than ruling out dual-purpose ships, the minutes were critical of the specialized vessels and concluded that the entire question required further study.

 Altering the minutes of important staff meetings was not an uncommon practice at Naval Headquarters, and according to Rear Admiral Brock it was often done “deliberately” to give the appearance of unanimity. In this case, however, Dyer did not like what he was hearing from certain members of the Naval Staff. To some extent he had a point. Single purpose sealift vessels, such as Rayner’s Comet class (or DG Ships’ latest incarnations, the British Sir Lancelot and American Challenger classes) had legitimate weaknesses. By far the most common critique was that they were not cost-effective. How many times Canada would get involved in limited war situations was a mystery, and as a result acquiring specialized ships for a specific role was considered

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103 Naval Staff Minutes, 7 April 1964, DHH, RCNHS fonds, 81/520/1000-100/3, Box 38A, file 3; Brief for VCNS, Provision of a Canadian Sealift Capability, nd [7 April 1964], DHH, NPCC Papers, 79/246, File 203.
104 Brock to Davis, nd, LAC, Brock papers, MG 30 E 522, vol. 9, file 17.
risky because that task “may never have to be performed.”\textsuperscript{106} Although they were much cheaper than their multi-purpose counterparts, the Comet could potentially spend its entire career tied up to a jetty. The Iwo Jima’s dual purpose, however, ensured that they would always be employed.

The arguments against the multi-purpose design were not producing the consensus that Dyer so desperately wanted. In fact, the “only point of unanimous agreement” was that the naval staff had to “arrive at a clear view” soon. The Vice Chief of the Naval Staff had had enough. He had always sought and respected other officers’ opinions, but it was obvious that this approach was not working. Disappointed that the meeting was “inconclusive” the Vice Chief invited the Assistant Chief (Air & Warfare) as well as the Director of Naval Operational Requirements back to his office. Unilaterally rejecting the single purpose argument, Dyer instructed them both to continue with the drive for the Iwo Jimas. But that firmness was also mixed with caution. While he gave the Naval Staff a definite deadline by which they were to have “a good naval view,” that deadline was a full two months away.\textsuperscript{107}

This was particularly bad news for Davis and his efforts to save his organization. DG Ships may have wanted destroyers, but he also welcomed the prospect of specialized sealift ships because they, too, would get his team back to work. Captain Farrell and his Director Ship Design and Construction organization were equally disappointed with Dyer’s delay, and he said as much when the amended sealift capability study was discussed at the 27 April naval staff meeting. Farrell left little doubt that he wanted the specialized ships because of their short construction start up time, whereas an Iwo Jima

\textsuperscript{106} Operational Requirements for a Heliporter, 9 March 1964, DHH, 73/750.
or heliporter would take two to three additional years of development. That elicited an immediate response from Captain J.B. Fotheringham, who, after replacing Wilgress as the Director of Naval Aviation Requirements on 29 February 1964, assumed the unofficial mantle of being Fraser-Harris’ chief deputy in the campaign to save naval air. Fotheringham worried that the specialized ships would jeopardize a unique opportunity to acquire aircraft carriers, and he used this platform’s ability to contribute to the “enhancement of the Fleet” as a means to sell the virtues of the Iwo Jima. He was not alone. Other naval air advocates also focused on cost effectiveness. Attack carriers were not cheap, but they were the only platform that could turn the RCN into a balanced fleet and that made them worth their price.

It was also obvious that the Vice Chief of the Naval Staff and the naval air supporters had changed the sealift capability study so that it would favour the Iwo Jima. Dyer was happy with the alterations to that study, but found that firm substantiation of the Iwo Jima concept was lacking. He was right, and as Farrell had observed the new sealift paper went “off the rails” because it introduced the question of cost effectiveness without providing the data to support the case. It was not enough to simply say that the multi-purpose ships were more cost effective. What Dyer and Fraser-Harris truly needed was a study that compared every type of sealift method and then concluded that the Iwo Jima type vessel was the best option for the RCN. DG Ships was the only organization that could provide that evidence. The problem was that every study that DG Ships had

107 WM Ogle to DSDC, 8 April 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-15, vol. 2; Naval Staff Minutes, 7 April 1964, DHH, RCNHS fonds, 81/520/1000-100/3, Box 38A, file3.
done on this matter suggested that the specialized sealift vessel was actually “the best available solution to the task imposed in the White Paper.”

Farrell was impressed that these particular officers on the naval staff had not buckled under the pressure to acquire an aircraft carrier. Commander J.A. Fulton, from Director of Naval Operations was singled out for special recognition for his “valiant effort” to demonstrate that the single-purpose concept was the better bargain for the RCN. Dyer was not convinced, and he therefore gave DG Ships a direct order to determine the relative cost effectiveness of multi-purpose vessels. Much to the Vice Chief’s chagrin they refused to do so. “Even if we knew how to do this,” Farrell wrote to Davis after the meeting, “it would be impossible to do it without allocating a value to each form of weapon and to each combination of weapons.” Dyer’s frustration got the better of him, and in an uncharacteristic outburst he abruptly turned the staff meeting over to Fraser-Harris and promptly left.

Dyer was not the only one who was frustrated. Farrell knew what was going to happen next: “I was not surprised that VCNS left somewhat in disgust but unfortunately I feel there will just be waste [of] more precious time whilst Staff get into another huddle in the effort to cook up some cost effectiveness figures for him [Dyer].” Farrell was right. More time was “frittered away” on a concept that most technical officers knew was the wrong choice for the RCN. Despite the Vice Chief of the Naval Staff’s support for the Iwo Jima, Farrell finally said out loud what the naval staff should have realized some ten months earlier:

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108 Naval Staff, 27 April 1964, DHH, RCNHS Papers, 81/520/1000-100/3, Box 38A, file 3.
109 Ibid.
110 DSDC (Farrell) to DG Ships, 28 April 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-15 vol. 2.
We can say truthfully that no combined function vessel will be as cheap as a simple vessel. We can also say that the funds available in the 1966-68 time scale allow for no more than a simple vessel or vessels. In my opinion we never had such a simple clear-cut task before us but we need the Minister himself to impose it as the Navy alone appears to be prostrate.  

Farrell did not stop there. Having taken a good look at the minister’s planning and budgetary figures he made a remarkable discovery: after crunching the numbers Farrell was left with only $27 million for a sealift program. And that was well short of the approximately $150 million required to build two Iwo Jimas. It was a devastating blow to the Iwo Jima campaign, and for the first time Farrell saw a possible end to a fruitless debate that was preventing a coherent force structure plan.

Davis agreed. No longer wanting to waste more time with a dithering Naval Staff he turned to his boss, Rear Admiral Caldwell, and told him:

In the accompanying Memo DSDC [Farrell], quite appropriately, seethes with indignation and frustration in our ability to get anywhere with sealift. The theme of our argument is that, with the best will in the world we are not (in the next three years) going to be able to spend the available money on elegant programmes like Nuclear Submarines, Heliporters, etc. However, the money appears to be available and our plea is – let’s spend it.

The $27 million set aside for sealift could immediately be put to use on a program of British Sir Lancelots. There were some disadvantages to this design. It was slow (17 knots), could only take 400 troops, and the vehicle load of 1200 tonnes was less than what the RCN wanted. But Davis argued that he could use the Sir Lancelot drawings and modify them for a Canadian-designed vessel that better matched the requirements. The key, however, was for Caldwell to use his influence on the Naval Board. “If we want to do this, we can,” Davis told Caldwell, “but it will have to have firm action at Board Level now so as to ensure prompt Ministerial support – prior to integration. Also we must

111 Ibid.
have some army input.” 113 The bottom line was that the navy could never afford the Iwo Jima.

Money was not the only reason why the Iwo Jima and limited war concept of operations failed. The Naval Board had made it clear to the Burchell committee in January 1964 that the sealift role would only be considered if the army stated a definite need for this capability. Since that time both Dyer and Fraser-Harris had worked tirelessly to get that support. Unlike the air force, which had already announced their opposition to what they saw as a naval ploy to acquire aircraft carriers, the army had not rejected them outright. Adopting the same tactics that they had tried to use with the General Purpose Frigate, the Iwo Jimas were being sold as a joint service venture, and that meant it was essential to get the army’s requirements and input. Despite Dyer and Fraser- Harris’ best efforts, the army never warmed up to the idea. Constant requests for army representation on the Iwo Jima’s characteristic and requirement committees were met with vague responses and annoying stalling tactics. The fact that the White Paper had called for a possible sealift role meant that the navy would have to re-start these negotiations, but the army’s attitude helped to ensure that the Iwo Jimas would not be among the contenders.114

Experience at sea also worked against the Iwo Jimas as well as the limited war concept of operations. One of the problems with evaluating the sealift role was that the RCN had not performed this task since HMCS Magnificent transported part of Canada’s

112 DG Ships to CNTS, 29 April 1964, LAC, RG 24, Accession 83-84/167, Box 4030, file 8885-15 vol.2
113 Ibid.
UN contribution to the 1956 Suez mission. That suddenly changed on 7 March 1964, when *Bonaventure* received orders to return to Halifax so that she could load 40 tons of stores, 52 tons of ammo, 10,000 sand bags, 54 vehicles, and 98 army personnel for a UN mission in Cyprus. It was an eerie twist of fate. At the exact same time that the battle over the Iwo Jima was hitting its climax, the RCN found itself taking army materiel and personnel to a potential “limited war” situation. This should have been good news for Fraser-Harris, particularly since *Bonaventure* did well. Setting sail in rough North Atlantic weather followed by a gale near Gibraltar and finally a sand storm off North Africa, the carrier slipped into Cyprus on 30 March where the army’s personnel and stores were disembarked without incident.

For *Bonaventure*’s commanding officer, Captain R.W. Timbrell, Cyprus had “shown the important flexibility of the aircraft carrier to Canada’s Armed Forces.” In an interview later in life, Timbrell went even further in his analysis on the significance of Cyprus: “The role of the aircraft carrier in ‘brush fire’ wars was not new. The United States had built four Iwo Jima carriers, a class slightly smaller than BONAVENTURE, specially fitted out for this type of work.” At first glance, Cyprus appeared to make a strong case for the Iwo Jimas. From his command in Halifax, Rear Admiral Brock had told Timbrell that he wanted to send the RCN’s new supply ship, HMCS *Provider*, on the mission because he was “opposed to ‘disarming’ BONAVENTURE in order to turn her into a truck transport for the Army.” Timbrell’s counter-argument was that as a fleet supply ship, *Provider* did not have the deck space for the army’s heavy equipment, and to

115 Grove, *Vanguard to Trident*, particularly Chapter 7.
117 Bonaventure ROP, March 1964, DHH, RCNHS papers, 81/520/8000, Box 11, file 2.
118 Snowie, *Bonnie*, 181
alleviate Brock’s concerns of “misusing” Bonaventure he opted to carry 12 Trackers. Taking the Trackers, therefore, illustrated that the Mobile Force concept was valid. Timbrell’s case was straightforward. If “things turned sour” the Trackers could theoretically be used in a tactical role to support troops on the ground, while at the same time allowing Bonaventure “to carry out her assigned role as an ASW carrier if required.”

In reality, Cyprus torpedoed the limited war concept of operations. The army equipment and stores simply took up too much deck space and that made flight operations impossible. This stood as a perfect example of why the Americans had married the Iwo Jimas to the Landing Platform Dock vessel. Without a supporting assault ship, Bonaventure could not provide any air support to Canadian troops under fire until after she had unloaded her cargo. Nor was that the only criticism to emerge. At the time she was reassigned to the Cyprus mission, Bonaventure was actually participating in a large scale NATO anti-submarine warfare exercise. Brock had fought against Bonaventure’s withdrawal from MAGIC LANTERN (along with the destroyer HMCS Fraser which joined the carrier off Gibraltar), and her departure confirmed what the specialized anti-submarine warfare navy had feared all along. Dual purpose aircraft carriers could not be in two places at the same time, and unless the government was willing to buy enough ships to support both the DDH and the limited war concept of operations one would always drain the other. That was a pivotal conclusion. The fact that the government was slashing the military’s budget meant that the fleet would be

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119 Ibid.
120 Exercise Magic Lantern Operational Orders, LAC, RG 24, Accession 1983-84/167, Box 426, file 1640-12-17; Bonaventure ROP, March 1964,DHH, RCNHS Papers, 81/520/8000, Box 11, file 2; Brock to Timbrell, 13 March 1964, LAC, Brock Papers, MG 30 E 522, Vol. 9, File 9.
small, and as a result the direction of the RCN as a specialized anti-submarine warfare fleet was being cast in stone.

A closer examination of SNOW GOOSE’s (the name given to the Cyprus deployment) operational records further put the sealift capability into perspective. *Bonaventure* had carried roughly 10.5 percent of the army’s personnel and 38 percent of their vehicles, while the rest of the force had been transported by air lift. Two important facts emerge from the post-deployment analysis. First, although it would have taken longer, the air force could have handled the entire Cyprus deployment on its own. Second, the army appreciated *Bonaventure*’s ability to carry a fair portion of the larger vehicles and stores, but this was a task that Rayner’s specialized cargo vessels could easily perform. ¹²¹ Better yet, according to Lieutenant Commander Ogle, the specialized cargo vessels ensured that the sealift role would not “get mixed up with our ASW and Fleet Support ship philosophy.” According to his reckoning, another benefit was that specialized ships could be charged to the “new regime,” meaning that the Chief of the Naval Staff could easily make a case that Hellyer would have to cost these vessels above the navy’s stated role as an anti-submarine warfare force. But while some in the navy felt that specialized cargo ships would put “the RCN in the forefront of the ‘new thinking,’” the army questioned whether the navy really required any additional sealift ships at all.

In a glowing letter of appreciation Major General Moncel told Brock that “if all our joint

undertakings are as successful as Operation SNOW GOOSE, I think you will agree that
the future holds no problem for us.”

Some within the navy agreed. Contradicting Timbrell’s criticism of the
operational support ship, an internal document sent to the minister suggested that
*Provider* could not only transport 700 troops along with weapons, communications, and
vehicles for an entire company, but also that she could provide them with 100 days of
logistical support. An East Coast amphibious assault and anti-submarine exercise,
code-named MOHAWK, took the concept even farther. Held between 12-19 April 1964,
MOHAWK used *Cape Scott* [fleet maintenance ship] and four frigates to transport an
army force in an unopposed landing situation. None of the ships were designed for this
purpose, but MOHAWK demonstrated that *Cape Scott* could successfully land 400
soldiers, vehicles, and equipment. On the other hand, the frigates accommodated 50
troops each, and (with some interesting loading arrangements) could even carry vehicles
as well. Cramming so much army equipment onto *Cape Scott* and the frigates may not
have been aesthetically pleasing to the naval eye, but MOHAWK had certainly suggested
that the current fleet could cope with a sudden sealift requirement. Marking what was
perhaps the final blow to Fraser-Harris’ Iwo Jima campaign, MOHAWK’s final
recommendations actually argued that the RCN needed guided missile destroyers rather
than assault or cargo ships.

Aside from transporting the army, RCN forces involved in MOHAWK were also
assigned the task of protecting the deployment area from submarine and air threats. It

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123 Rayner to Minster, RCN Assistance in transporting the Canadian Army, nd, DHH, 91/297; Naval Staff Minutes, 7 April 1964, DHH, RCNHS fonds, 81/520/1000-100/3, Box 38A, file 3.

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was soon evident that the four RCN frigates were completely overwhelmed. Jet aircraft attacked the force with virtual impunity, while the “hostile” submarine was never detected. The exercise’s conclusion that more anti-submarine warfare vessels were required to protect such a force did not come as much of a surprise. The recommendations on the air threat were another matter. Representing a further critical blow to Fraser-Harris’ efforts to acquire new carriers, the MOHAWK report argued that the RCAF should be responsible for the RCN’s area-air defence needs in limited war scenarios. The navy’s best option, according to the report, was to concentrate on drafting up staff requirements “for new construction surface ships [to] include good air defence and Naval Gunfire Support capabilities.” It was a shattering conclusion that not only provided the operational justification for guided missile destroyers, but also sounded the death knell for the Iwo Jimas.\textsuperscript{125} In fact, Brock even went so far as to write to Rayner from Halifax on 27 April suggesting that it was finally time to put the entire sealift issue to rest. The current fleet could cope, Brock reported, and “SNOW GOOSE together with Exercises BOATCLOAK and MOHAWK have given us a very good start towards achievement of a flexible and quick response to contingencies involving amphibious operations.”\textsuperscript{126}

The end of the Iwo Jima and limited war concept of operations came swiftly. In early May a new force structure emerged, and it was one that – while not fully rejecting a general-purpose capability – certainly favoured more task specific ships:

- Two specialized lift ships (Sir Lancelot class)
- Four guided missile destroyers

\textsuperscript{124} HMCS Cape Scott; Employment in Troop Transportation Role, 2 April 1964, DHH, NPCC Papers, 79/246, File 203; “Exercise MOHAWK,” LAC, RG 24, Accession 1983-84/167, Box 478, file 1660-504.\
\textsuperscript{125} “Exercise MOHAWK,” LAC, RG 24, Accession 1983-84/167, Box 478, file 1660-504.\
\textsuperscript{126} Brock to Rayner, 27 April 1964, LAC, Brock Papers, MG 30 E 522, Vol. 9, File 9.
Two nuclear submarines
Tracker modernization
A4E Aircraft
Bonaventure modernization
ECM Procurement
Restigouche/ Mackenzie Anti submarine weapon improvement.\(^{127}\)

In many ways this new force structure appeared to be a compromise designed to appease all the advocates. The small ship clique were not happy that the Restigouche and Mackenzies were not being converted into DDHs, but the fact that the future fleet would be based around the destroyer flotilla leaders was appealing to them. Nuclear submarine advocates, like Gigg, were equally satisfied; while the specialized lift ships more than met Hellyer's requirements. However, the A4E Skyhawk and *Bonaventure* modernization was not nearly enough for Fraser-Harris. Without a designated replacement this new force structure had sent the same troubling message that the Brock Report had done: naval carrier aviation would again face the chop once *Bonaventure* was decommissioned. Fraser-Harris was not willing give up his campaign, but he was forced to admit defeat over the Iwo Jimas. In a remarkable reversal, Fraser-Harris suddenly argued that the specialized sealift vessel “provides a cheaper solution for the troop lift task and one that is more compatible with the Canadian requirement.” There was more. He had also changed his tone towards the entire heliporter concept, which he now argued were not the ideal platform for the anti-submarine warfare role. And with that the battle for the Iwo Jima was over.

Encouraged by the successful completion of the A4E Skyhawk trials on *Bonaventure* in May 1964, Fraser-Harris changed tactics. Having abandoned the Iwo Jima he instead focused on getting an Essex class for the RCN. Carrying Trackers and

\(^{127}\) New Capital Programme, 12 May 1964, DHH, NPCC Papers, 79/246, File 80.
Sea Kings for anti-submarine warfare as well as A4E Skyhawks for air defence, these large fleet-carriers were a much bigger prize. They also represented Fraser-Harris’ last great push to prevent the destroyer flotilla leader from replacing the carrier as the centrepiece of the RCN’s future force structure. The Assistant Chief of the Naval Staff (Air & Warfare) had enjoyed much success over the previous year: he had battled the Brock Report’s DDH-centric navy and brought the carrier replacement back to the forefront of RCN’s future planning. Yet all that effort had been for naught. The loss of the Iwo Jima left Fraser-Harris asking the exact same “burning question” he had posed one year earlier, and that was whether the RCN planned to replace Bonaventure with another carrier after 1975.128 The answer would not come for another six months and during that time the force structure crisis would enter a new phase. The RCN was not yet the specialized anti submarine fleet that Hellyer would approve in the fall of 1964, but it was certainly heading in that direction.

Sam Davis and his team had always tried to remain neutral towards force structure, yet he was troubled that the advocates within the navy were causing an unacceptable delay to the ship replacement program. This inactivity was threatening his organization and the indecision at the top turned Davis into an advocate himself. While Davis preferred a destroyer design, he also supported the specialized cargo ship because it, too, would get his team back to work quicker than either a carrier or nuclear submarine. The irony of Davis’ attitude is difficult to overlook. Davis, much like Brock when he was Vice Chief, had become an advocate despite his earlier protestations against the practice. He had been suspicious of the Iwo Jimas because he was against the

128 Fraser-Harris to DNSR, Interim future for the RCN, 6 May 1964, DHH, NPCC Papers, 79/246, File 78A.
practice of selecting a specific ship-type first and then justifying its existence second. Ideally, the navy should have pressured the minister to define its future tasks, which then would have allowed the senior staff to select the best ship-types for those roles. But the minister’s constant re-examinations and studies only fuelled the factionalism at Naval Headquarters.

The navy’s internal battle over the Iwo Jima should have provided important lessons about the dangers of advocacy. While it was difficult to devise a coherent force structure without firm direction from the political level, the navy would have been better off had it spoke with one voice. That voice should have come from Rayner, and yet his inability to prevent the disruptive Iwo Jima debate only succeeded in opening the gates for another debate. More to the point, however, these conflicts should never have happened. Important signs - such as the minister’s proposed cuts to the budget as well as Sutherland’s report - had already suggested the destroyer was the most cost-effective option for the navy and important operational considerations were making the same point.
Chapter 6 Victory over the Essex and the “poor man’s solution.”

Rather than marking the end of the naval aviators’ dream to find a replacement for Bonaventure, the loss of the Iwo Jima instigated a new campaign based on the possible acquisition of the larger Essex class aircraft carrier. It would be their most aggressive offensive yet, as well as their last. Designed to counter the navy’s current planning of specialized lift ships, guided missile destroyers, and nuclear submarines, the Essex campaign would result in a dramatic conclusion in which the question of whether the RCN would be a flexible or specialized anti-submarine force was finally answered. The news was not good for the carrier advocates, and Fraser-Harris as well as the other Essex champions cast a wide net over those who they held responsible for defeating the Essex. The army, air force, and Chief of the Defence Staff were all singled out for the role they played in destroying the dream of replacing Bonaventure with another carrier. Yet as this chapter will show, the rejection of the Essex and the end of the campaign to replace Bonaventure was actually the product of an internal naval decision. This chapter will also examine how operational factors, combined with the impact of the minister’s proposed cuts, were equally responsible for the growing consensus within the navy that the destroyer was the only realistic option for their future force structure.

Operational conditions on the Atlantic and Pacific Coasts painted a much different picture than the one that was being sketched out at headquarters. While the tides at Naval Headquarters were oscillating between nuclear submarines, aircraft carriers, destroyers and specialized lift ships, the voices emanating from sea were consistent and revealed a desire for more destroyers. For operational commanders such
as Brock on the East Coast and Landymore on the west, developments in anti-submarine warfare in conjunction with the minister’s cuts were dictating a force structure that left little room for new aircraft carriers or nuclear submarines. As a result, the operational commanders were happy that the DDH navy was making tremendous strides to becoming a reality particularly since the helicopter trials on *Assiniboine* would be complete by the summer. Although this would not produce the first operational DDH (that important pillar was still some years off) it did reveal important insights into the concept that brought it that much closer to becoming a reality. The anticipated commissioning of HMCS *Nipigon* in May 1964, and the expected arrival of *Annapolis* in December, along with the completion of two of *Assiniboine*’s converted sisters - *St. Laurent* (4 October 1963) and *Ottawa* (21 October 1964) - would leave the navy with a total of five DDHs by the end of the year. Phase one of the destroyer-escort modernization program, which it should be remembered consisted of the addition of variable depth sonar to the Mackenzie and Restigouche classes (along with the program of Ship-borne Jezebel) was proceeding and would greatly enhance the fleet’s detection ability. There were also other reasons to celebrate. The original four Sea King helicopters obtained from the Sikorsky plant in the United States had given the RCN much-needed experience with the type but the arrival of the first Canadian built aircraft in September 1964 meant there would be a steady supply until the production line was complete. Moreover, the plan to conduct trials between the fleet’s first operational support ship, HMCS *Provider*, and the destroyer HMCS *Yukon* in May (which would give this developing DDH navy the logistical support to operate well beyond Canada’s littoral waters) was providing the fleet with a considerable capability. And finally, the navy could also rejoice from the fact that the first of the Oberon
submarines, which would be named Ojibwa, was launched in February at the Chatham
dockyard in the United Kingdom.\(^1\)

Unfortunately, these highlights were overshadowed by the government’s recent
announcement that it would be declaring three of the four remaining Tribal destroyers
*(Nootka, Cayuga, and Micmac)* surplus as well as placing the escort maintenance ship
*Cape Breton* and all ten RCN minesweepers into reserve. Their logic for doing so was
well founded. The navy had already paid off Iroquois, Huron and Haida between
October 1962 and October 1963, and getting rid of three more of these over-aged ships,
along with the twenty year old *Cape Breton*, would help generate funds for new
equipment.\(^2\) There were, however, important operational implications. For instance,
while *Cape Breton* was deemed “inadequate” as a support ship for the new destroyers she
was nevertheless considered invaluable to the frigates.\(^3\) So much so, that the Flag Officer
Pacific Coast, Rear Admiral Landymore, found that “the loss of the CAPE BRETON will
make itself felt by the mid-year period and I am forecasting great difficulties to keep the
frigates up to a good state of operational readiness for they lean heavily on CAPE
BRETON for assistance in view of their own small technical complements.”\(^4\)

Although the Tribals were far too old to make any real contribution to the RCN’s
anti-submarine warfare effectiveness, their early decommissioning had an impact on the
East Coast. For instance, the Third Escort Squadron - which had already lost Haida as
well as the Second World War vintage V Class destroyer, HMCS Sioux, in 1963 - was
disbanded once Nookta was declared surplus. Likewise, the withdrawal of Cayuga and

\(^1\) 1964 in Review, Copied in *The Crowsnest* 17, No.1 (January 1965), 13-17.
\(^2\) Mothball 14 Warships By March, 8 January 1964, DHH, RCNHS fonds, 81/520/8000, Box 71, file 5.
Micmac left the First Squadron far below strength as the modern Mackenzie class destroyers, Yukon and Qu’appelle, were not enough to maintain the Squadron’s operational responsibilities. Had it not been for the return of the remaining Tribal, Athabaskan, (which had been temporarily assigned to the Third before it was disbanded) as well as the loan of the frigate Swansea from the Ninth, the First’s “requirements could not have been achieved.”

It was a time of “upheaval and disarray,” but like other Squadron commanders, Captain J.P. Dawson, the commander of the First Squadron, found the Tribals early departure a “disturbing but not entirely unexpected development… they were fine ships in design, spirit and efficiency but were undoubtedly becoming expensive old ladies to keep.” The real issue to the operational commanders was not that the Tribals were being decommissioned, instead it was the fact that these destroyers were being taken out of service without replacement. The addition of the Nipigon and Annapolis would not cover the loss of the Tribals, meaning that the navy would soon be two destroyers short of its 43-ship alliance commitment. Rather than reducing the 29 ships assigned to SACLANT it was decided to cut CUSRPG (Canada United States Regional Planning Group) from fourteen to twelve ships. This would result in further disruption on both coasts as it necessitated a reorganization that would see three Atlantic destroyers head west while five Pacific destroyers would be “chopped” to the East Coast command. Comments from the squadron commanders provide a good sense of how this reallocation affected them.

Jubilant reports from the First Squadron’s commander that the addition of two Mackenzie

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4 Brief by Flag Officer Pacific Coast, February 1964, DHH, 79/355
class ships had “heralded the beginning of [a] rejuvenation” were suddenly mooted when he lost one *(Qu’Appelle)* to the West Coast. The same was true for Captain G.H. Hayes, commander of the Second Escort Squadron, who was sadden to learn that his command would be losing the newly converted DDH, *St. Laurent*, to the East Coast. Comments from commanding officers also reflected the impact that acquiring new destroyers had on morale, as one observed that “after serving in older ships Mackenzie is a real joy. I’m still amazed by the amount of gear she carriers and what her capabilities are as far as A/S warfare is concerned.” All this was a clear sign that the destroyer squadrons needed more destroyers but the greatest common criticism among the First, Second and Fifth during this turbulent period of reorganization and consolidation was that it was impossible to maintain cohesion with so many ships either joining or leaving their commands. In the words of one Squadron commander, the situation made “it difficult to advance the overall efficiency of the Squadron as a unit. The day is early awaited, when the operational ships in the Squadron can proceed to sea in company for a period of concentrated exercises. We have been too long away from such essential training.” Simply put, the destroyer squadrons were crying out for more destroyers.

The squadron commanders were not the only ones to complain as such moves led the Flag Officer Pacific Command to tell the senior officer’s conference that he often felt his command “is the substitute’s bench for the team in the Atlantic.” Planning for MARPAC’s first exercise of the year, JETEX 64, seemed to amplify this point. This yearly Commonwealth exercise, which was to be held in the Bay of Bengal, offered an important opportunity for MARPAC to operate with other Pacific Rim nations. Unable

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6 Fourteenth Senior Officers Conference 4-6 February 1964, DHH, 95/5, file 17.2.
to attend the 1963 exercise, Landymore was anxious for MARPAC to show off the capabilities of its newer destroyer-escorts. However, putting together a respectable contribution to the exercise proved a challenge. With the destroyers Saguenay, Skeena, St. Laurent and Ottawa in various stages of the DDH conversion, Flag Officer Pacific Coast was left with only Fraser, Margaree, Mackenzie, and Saskatchewan for the exercise. Acting as an indication of the serious shortage of destroyers on the West Coast, it was quickly determined that the command could not send all these ships because the Fourth Squadron’s frigates were insufficient to meet MARPAC’s operational and training commitments. As a result, the active ships of the Second Squadron were split into two divisions with Fraser and Mackenzie going to JETEX while Saskatchewan and Maragre (and later Qu’Appelle) remained behind. Although HMCS St. Laurent would bolster the RCN’s commitment to JETEX her addition was merely a matter of convenience as she would continue to sail to her new home on the East Coast once the exercise was done.

The request for the new replenishment ship HMCS Provider to temporarily leave the East Coast so as to provide much needed logistical support to MARPAC’s JETEX contribution further indicated that the Pacific coast was forced to operate under greater restrictions. That this request was denied not only robbed the division of “a faster transit time,” but it also underscored the West Coast’s lack of sea going maintenance support particularly since all three destroyers experienced some type of breakdown en route to the operational area.8

Insufficient destroyer numbers and logistical support was not the only complaint that suggested the Pacific coast was a backwater. The fact that he was facing such “a bleak year operationally” (there were no West Coast ASW exercises planned between JETEX, which began in January, and HARDSHOT in September) further indicated that the vast majority of the cuts to the operating budget had come at the expense of Landymore’s command. Moreover, St. Laurent’s sailing for Halifax was merely part of a larger reallocation that sent an equally powerful message to the Flag Officer Pacific Coast. By the time these transfers were complete in 1965 the five West Coast St. Laurents would join their sisters in MARLANT in exchange for two Mackenzies and a Restigouche. Every single DDH was going to serve on the East Coat, leaving the West with a mixture of destroyer-escorts and frigates. While the net loss of two destroyers “was a serious blow to our effectiveness” Landymore was further disappointed that the RCAF had reduced its 407 Squadron contribution from 12 to 8 Neptunes. The lack of air support to MARPAC was a particularly thorny issue. Earlier pleas to either reassign RCN Tracker aircraft or RCAF Argus to help MARPAC deal with the Soviet cruise missile submarine threat were met with sympathy but resulted in little action because “MARLANT has just sufficient forces to meet his requirements.” The best that could be offered was naval participation in an air force study into the possibility of exchanging six East Coast Argus aircraft for all the Neptunes on the West Coast. Landymore admitted that this “would be some considerable help to our effectiveness” but it was not nearly enough. He also wanted a SOSUS station in the Queen Charlotte Islands and ultimately a surface force that would consist of two groups of seven “first line A/S ships”

each as well as four submarines and two replenishment vessels. At the very least, the
cuts had to stop as he warned his colleagues that:

    I hope that further reductions in strength will not be necessary for now we are far
below a reasonable state. Moreover, our effectiveness as indicated by major
exercises in 1963, leaves a great deal to be desired and with reduced forces,
reduced exercise opportunities and reduced “in contact” submarine time there is
little hope of significant progress.\textsuperscript{11}

The lack of submarine time was a problem (HMCS \textit{Grisle} was undergoing an extensive
refit), and complements paid to the RCN - such as being singled out for its “vigorous”
participation in exercise SADDLE SOAP or the ease with which Canadian and American
ships operated together in Hunter-killer Task Groups - were overshadowed by the paucity
of its forces. MARPAC ships were doing their job well but there were not enough of
them to make a proper contribution to Canada’s Pacific alliance commitments.

    Operational conditions on both coasts should have demonstrated one thing well:
the navy did not have the money or manpower to maintain its current fleet of destroyers,
frigates, and a small carrier, let alone a theoretical one that included numerous aircraft
carriers and nuclear submarines. The easiest solution to relieve this pressure would have
been to cut the RCN’s current force goals and design a smaller fleet based around
destroyers that could focus on the ASW role. Yet, as JETEX 64 had recently identified,
the RCN could not simply ignore the fact that Third World instability was all around
them. The forces assigned to JETEX would take passage near an area that Indonesian
claimed as their own but which Britain saw as international waters and thereby illustrated

\textsuperscript{10} Brief by Flag Officer Pacific Coast, February 1964 DHH, 79/355; CNS to CAS, 24 June 1963, and CNS
to CAS, 26 April 1963, DHH, NPCC Papers, 79/246, folder 67.
\textsuperscript{11} Brief by Flag Officer Pacific Coast, February 1964 DHH, 79/355.
“the problems facing United Nations forces in the Orient.”

Orders issued to Royal Navy units, namely that they were to challenge any Indonesia vessel that tried to interfere with shipping in this area during the course of their transit, caused some concern in Canada. Indonesia’s forces, which were heavily supplied by the Soviet Union, possessed jet aircraft and submarines that could do considerable damage to the ships participating in JETEX. In order to avoid Canadian entanglement in an international incident, RCN forces were told to respect Indonesia’s claims. More to the point, while all three RCN ships could have dealt with the two Whisky class submarines, their 3-inch guns could do little to stop Indonesian attack aircraft.

These operational considerations did not resonate with everyone. The navy’s most senior officers remained hopelessly divided with Rayner and his operational commanders (Brock and Landymore) continuing to advocate a specialized anti-submarine warfare destroyer navy (capable of some limited war operations) while men like Dyer and Fraser-Harris were still pushing a truly multi purpose fleet. It should not be surprising that Brock and Landymore were siding with Rayner’s position. As operational commanders they had first hand experience with the impact that the manning situation and minister’s financial cuts were having on the fleet. Although the Vice Chief and Assistant Chief (Air & Warfare) did visit the coasts periodically, they lacked the day to day exposure that would have shown them that the setbacks over 1963 were a recipe that would soon threaten the navy’s current reputation as a first rate anti-submarine warfare navy. That further suggested that the minister’s desire to explore a serious limited war capability for the navy was equally flawed since true dual purpose ships, such

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12 DDE participation in Jet 64, 23 May 1963; Naval Secretary to FOPC, JET 64 - Indonesia Territorial Waters, 25 November 1963, LAC, RG 24, Accession 1983-84/167, Box 461, file 1650-26, vol. 39
as the Iwo Jima, were large, expensive, and required sizable crews as well as destroyers to protect them. The simple reality, as Landymore and Brock had continually emphasized, was that the navy needed more money just for anti-submarine warfare and to illustrate that point Rayner invited Hellyer to join the Fifth Escort Squadron during exercise GOOEY DUCK in January 1964.

GOOEY DUCK was a large area ocean surveillance exercise conducted in the Bermuda area that was specifically designed to discover what naval air and surface forces were required to detect a submarine using Jezebel as the primary intelligence source. The RCN’s resounding success during FLATROCK, which it should be remembered was the product of Jezebel, had caught the Royal Navy’s attention and had led to direct requests to Brock from Madden for more information and exercise results involving the use of this promising detection system.14 Exactly how the Americans would feel about Brock funnelling information to the British is uncertain, but the RCN was buoyed by this attention and was naturally anxious to fine-tune Jezebel - particularly since it was to form a major part of the destroyer’s detection network. GOOEY DUCK would give them that opportunity. To facilitate this aim the Alcide and Auriga from the Sixth submarine squadron (operating against the Canadian force of Bonaventure, Restigouche, Chaudiere, Gatineau, Columbia, Terra Nova, Kootenay and Algonquin) were told that they would be working with few restrictions so as to mimic wartime conditions.15 And that added realism made GOOEY DUCK a particularly good exercise to demonstrate the complexities and nuances of modern anti-submarine warfare to the minister.

14 CinC EASTLANT, 29 April 1964, LAC, Brock Papers, MG 30 E 522, file “Correspondence Part I 1964.”
The navy gave the minister a complete tour. Beginning with his flight to Bonaventure on a Tracker (an experience Hellyer likened to “landing on a postage stamp in the middle of the Atlantic”), he was also strapped into a harness for a jackstay transfer between ships as well as being treated to a helicopter flight. The navy had certainly caught Hellyer’s attention with these adrenaline-filled experiences, and he was equally impressed by the “professionalism of the sailors and airmen in locating their quarry with the help of some very sophisticated gadgetry.”

His understanding of what that “gadgetry” was actually doing, along with an explanation of the various important issues related to anti-submarine warfare, was furthered through a briefing provided by the Senior Canadian Officer Afloat (Atlantic), Commodore Welland. Some officers felt that Welland had gone too far and had exaggerated the navy’s anti-submarine warfare capabilities and these accusations eventually reached the minister’s office as Hellyer later recalled:

I was particularly impressed with Commodore Welland, the officer in charge. Months later, after Welland had been promoted Rear Admiral, one of his staff officers was to allege that the exercise had not been as successful as portrayed, and that the Commodore had “cooked” the log of the operation in order to “impress the minister.” I must admit I was surprised.

Of course, this was not the first time Welland had been charged with rigging an exercise. As should be remembered, British authorities, unaware of the tremendous potential of Jezebel, had been quick to falsely accuse him of cheating during FLATROCK. Unlike that exercise, however, Jezebel was far from perfect during GOOEY DUCK.

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16 Hellyer, *Dawn the Torpedoes*, 60.
17 Ibid.
It is strange that the navy chose not to emphasize these limitations to the minister. Here was a chance to show Hellyer why it needed more money to correct deficiencies with its anti-submarine warfare equipment, yet as was exemplified by Welland’s brief their strategy was to stress the navy’s strengths rather than its weaknesses. While there is currently no evidence that Welland willingly misled the minister with his GOOEY DUCK brief, it is clear that the navy was trying to impress him. Although Brock was happy that the RCN had had a chance to show off its anti-submarine warfare prowess to the minister, he was worried that the navy had gone too far. In his view, the minister was “uniquely aware” that there was a group of senior officers - namely himself, Rayner and Landymore - who wanted the navy to remain primarily an anti-submarine warfare force. “I must admit,” Brock told a group of senior RCN officers, “to a certain fear that we may have caused him to over-estimate our success in some areas, particularly our detection capability.”\footnote{Fourteenth Senior Officers Conference, 4-6 February, DHH, 92/5, file 17.2} If there was any exaggeration in capabilities it was most likely incidental. The RCN had good reason to be proud of the strides and contribution it was making to the alliance in the realm of submarine detection.

It was the navy’s work with variable depth sonar where Canada had gained a true reputation for innovation in the development of detection systems. The variable depth sonar’s ability to penetrate the ocean’s thermal layers made it an invaluable addition to the RCN’s destroyer concept of operations. The idea was rather simple. Detections from methods such as Jezebel, Julie (an explosive echo ranging system) and SOSUS only gave a rough area from which a ship could begin its search and as a result destroyers towing the current incarnation of variable depth sonar, the AN/SQS-504, were considered an invaluable tool to help localize a contact at long range. Unlike hull mounted sonars, such
as the SQS-501 (bottom classifying), 502 (short-range attack) and 503 (medium-range search), the SQS 504 was the only sonar that had the range (5,000 to 7,000 yards) to vector a helicopter to a distant contact. And that made it an attractive partner for the destroyer-launched helicopter, particularly since there were growing complaints from the seagoing fleet concerning the SQS 503. As the RCN’s primary hull-mounted sonar, the SQS 503 had an important role to play in detecting submarines above the thermal layer. It never lived up to its expectations and word was quickly spreading throughout the fleet that it was a “poor buy.” Operational statistics supported the scuttlebutt. Whereas the British equivalent, the Type 177, was detecting submarines at 6,000 to 8,000 yards, the SQS 503 average was closer to 2,500 to 3,000 yards. And according to the Commander of the Fifth Escort Squadron, Captain C.P. Nixon, these “shortcomings and limitations of the SQS 503 Sonar so seriously handicap RESTIGOUCHE Class ships in the execution of their primary [anti-submarine] role.”20 The answer was to find a sonar with a consistent detection and classification ranges over 10,000 yards.21 That should have made a more powerful argument for the acquisition of the SQS 504 variable depth sonar, but this set was also encountering problems.

Although the SQS 504 had finished trials on HMCS *Crescent* in May 1963, this important piece of the RCN’s ASW team continued to encounter problems throughout the year. Operational experience had revealed that its slow sweep rate had a “serious effect”

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20 Reid to Commander 7th Canadian Escort Squadron, 28 December 1962, Nixon to FOAC, 5 August 1963, LAC, RG 24, Accession 1983-84/167, Box 3734, file 8100-1, Vol. 11; IKARA for the Royal Navy: Project Study Report, 1963, PRO, ADM 256/129. Under rare conditions the Type 177 was said to achieve remarkable ranges of up to 20,000 yards.

21 Pratt to Naval Headquarters, 10 October 1963, LAC, RG 24, Accession 1983-84/167, box 3734, file 8100-1 vol. 11.
upon the SQS 504’s range. Moreover, complains from sea that the SQS 504 was “useless” and “couldn’t even be launched without serious damage” caused further concern among senior officers. But it was a failure of HMCS St. Laurent’s hydraulic hoist, which prevented the ship from recovering her variable depth sonar for eighteen hours during her transit to JETEX 64 that proved to be the final straw. For some, like Rear Admiral Landymore, the immediate solution was to establish a “VDS Get Well team” whose goal was to fix the current incarnation of the SQS 504. Others believed that it would be better to abandon the SQS 504 as soon as practicable. In their view, the SQS 504 variable depth as well as hull based sonars were capable of dealing with the slow (15 knot) and shallow (600 feet) submarine but “lacked the growth potential” to provide the required accuracy to vector a long-range helicopter to attack a high speed nuclear boat.

Project DIANA ONE, whose roots went back to 1960, represented an attempt to produce a satisfactory medium-range variable depth sonar. No one disagreed with the fact that a variable depth sonar capability for the RCN’s destroyer force was “essential,” but the key question was what could be done to improve the situation. Rather than focusing their entire attention on fixing the SQS 504, the DIANA ONE program was now geared towards exploring new technologies that would allow the integration of the SQS-505 variable depth sonar (which had been under development for fitting into the General Purpose Frigate) with a hull mounted one. This combination, it was believed, would give
the SQS-505 an estimated range of 10,000 yards above the thermal layer and 7,200 yards below it. The SQS 505 promised reliability and a superior performance and it was an opportunity that the Naval Board was not going to pass up. Although the SQS 505 was not scheduled for evaluation until late 1965, it was decided to add this equipment to the Restigouche and Mackenzie class conversion while the St. Laurent and Annapolis class would have to make do with the SQS 504 (this decision on the latter class was later reversed). A lack of funding (combined with the fact that work had progressed too far on these ships) explains why they were going to keep the less capable SQS 504, but despite this setback the Naval Board was able to approve the acquisition of eighteen additional Jezebel systems to cover the remaining St. Laurent, Restigouche and Mackenzies over the 1964-65 fiscal year. And once Jezebel was also fitted into the Trackers, the RCN could boast that they were one of the most up to date surveillance forces in NATO.

Rayner’s goal in inviting Hellyer to attend GOOEY DUCK was to show him that the navy was good at anti-submarine warfare and needed more money so that it could continue to perform this task well. He failed. Hellyer had found GOOEY DUCK a “rewarding, informative, and interesting experience,” but as he told the navy “it had not resulted in changing his mind regarding his concept of the fundamentals of defence.” Anti-submarine warfare would remain the RCN’s primary focus, the minister continued, but money for new equipment would be coming from reductions to the operations and maintenance budget. Hellyer also re-iterated his belief that - “even though it may never be used” - the RCN still needed to develop some type of a sealift capability, and that

25 Implications of Sonar AN/SQS-26 in a DDG, 20 July 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-16.
meant the navy was in the exact same position as it had been before they took the minister to sea. Somehow they were to find economies so that the RCN could both maintain its current anti-submarine warfare capability and make deep cuts to its budget while at the same time adopt a new, and potentially expensive, sealift role.  

Whether Rayner had erred by focusing on the navy’s strengths rather than its weaknesses is a matter of speculation, but it is hard to escape the conclusion that the Chief of the Naval Staff might have had better luck opening the minister’s purse strings had he emphasized the unique problems that anti-submarine warfare was posing to his current fleet. A new internal report released in March 1964 under the authority of the Director of Naval Fighting Equipment Requirements captured these problems perfectly and led to a renewed flurry of discussion over whether the navy could deal with the Soviet nuclear submarine threat. Entitled “The Anti-submarine Weapons system requirement for the Royal Canadian Navy,” this report was the product of a Director of Naval Intelligence assessment that found the navy’s trouble was not with detection - the RCN clearly had a good surveillance capability - but rather weaponry:

The trend in RCN ASW development during recent years has been towards sonar improvement. The stage has now been reached where sonar ranges exceed ship-launched A/S weapon range by a factor of about 6:1, and sonar improvements under development (SQS 505) can be expected to further increase this ratio. …Past cognizance of the limitations in RCN A/S weapons effectiveness has brought about certain measures to improve our underwater weapons capability. Such measures include DDE-borne helicopter, the Mk 44 A/S torpedo and the INSIGHT proximity fuzed [sic] A/S Mortar projectile. …Regardless of these improvements, in relation to advances in Soviet submarine performance and weapon technology, the limitation of RCN underwater systems place our ASW forces at a serious disadvantage in the ASW contest and severely prejudice the probability of survival of our Naval forces in both Global and Limited War.  

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27 Fourteenth Senior Officers Conference, 4-6 February, DHH, 95/5, file 17.2.
28 Anti-submarine Weapon System requirement for the RCN, March 1964, DHH, 120.003 (D33).
It was a sobering statement but the concept that the RCN did not have the weapons to
counter the Soviet submarine threat was hardly new.

Comments, such as the belief that the destroyer-escort had “little capability” to
defend North America from missile launching nuclear submarines, were not hard to find
in the early 1960s. The problem was simple: the RCN was still suffering from what
one member of the Naval Board described as a “gap” between the weapons and detection
ranges of the Canadian destroyer-escort. Thanks to the SQS 504, the destroyer-escort’s
detection capability was slightly better than the Russian nuclear submarine’s attack range
of 6000 yards; yet there was nothing the former could do until the latter fell within the
Mk10 Limbo and Mk 43 torpedo umbrella. Of course, the helicopter was suppose to
correct this deficiency as its ability to operate some 20,000 yards from its parent unit led
many to believe that it was the ultimate extension of the destroyer’s weapon system. The
“ASW systems requirement” report rejected this logic and its reasons for doing so turned
the current thinking behind the DDH concept of operations on its head.

Although the report agreed that the “DDE borne helicopter” would form an
integral part of the surface ship’s weapons system, it also warned that the RCN was
placing too much faith in the Sea King’s ability to restore the destroyer’s tactical
advantage over the nuclear submarine. The destroyer-helicopter concept had weaknesses
that were not being properly addressed and as a result the report wasted little time listing
them. First there was the question of availability and utilization rate. The DDH’s
effectiveness was dependent on its ability to get its helicopter airborne and that required a
high level of maintenance (of which more will be said later). While the ongoing trials on

30 Naval Board Meeting, 8 April 1964, DHH, RCNHS fonds, 81/520/100-100/2, Box 26, file 3.
Assiniboine would provide the definitive answer, it was estimated that it would require seven hours of maintenance for every hour the aircraft spent in the air. This would translate into a thirty-hour utilization rate per month which, with more familiarity and training, the RCN hoped to increase to 60 hours. In terms of availability this meant that each DDH could expect its helicopter to be ready for operations 35 percent of the time on any given mission. As with the utilization rate, the RCN was optimistic that this figure would rise to 50 percent once its crews got more experience, but the fact remained that the DDH would not have a long-range weapon while the helicopter was being maintained.  

Moreover, the RCN would be left with only the nine DDHs to take the Sea Kings to sea once Bonaventure was decommissioned, and at least one staff study at Naval Headquarters questioned whether this fleet would have the numbers to get the job done. Even if every DDH sailed in company, which was unlikely due to refit and maintenance requirements, the RCN could keep only one Sea King airborne continuously. And that would put the RCN at odds with current NATO thinking that it took two helicopters to prosecute a nuclear submarine. To meet that standard the RCN would have to place time limits on the operational employment of its Sea King. Based on a four helicopter cycle (in which one was on task, a second was on immediate standby, a third was on serviceable backup and the forth under maintenance), the RCN estimated that it could keep two out of eight Sea Kings airborne for a period of seven to ten days.  

More problems with the helicopter-carrying destroyer emerged in the “ASW systems requirement” report. Environmental factors that would prevent the launching or recovering of aircraft were explored, as was the question of the helicopter’s “activation

31 Anti-submarine Weapon System requirement for the RCN, March 1964, DHH, 120.003 (D33), 14.
32 Ibid.
time.” This term, which was used to describe the period required to get the aircraft airborne, could range anywhere from three minutes to one hour. Depending on the state of readiness, therefore, the Sea King could take a considerable amount of time to get airborne and that was problematic given the nuclear submarine’s high speed. Nor was that the only delay the navy could expect. There was also the important issue of “dead time” which was the period between the aircraft’s launch to the point it reached the datum. This period could vary significantly as it depended on the distance that the helicopter had to travel. But the anti-submarine warfare systems requirement report nevertheless concluded that the aircraft had to be airborne and within 10,000 yards of the contact to be effective. An independent Research and Development report supported this conclusion by arguing that helicopters (as well as Trackers) had to rely on “fortuitous circumstances” to catch a submarine beyond “its lethal range to the surface ship.”

The news was even worse if the helicopter was on deck, as it was suggested that in these instances “the dead time becomes unacceptably long allowing the submarine to close to attack range and initiate an attack before weapon delivery can be effected.” The list did not stop there as a host of other weaknesses were identified. The impact of harsh weather on flight operations received its fair share of commentary, as did the problem of controlling helicopters during attacks. This latter point requires some elaboration. Helicopters at extreme ranges painted a small radar signature and that made it difficult for destroyers to control their aircraft. In fact, the entire concept of ship-directed helicopter attacks was under some scrutiny. “With present sonars and radars, the rudimentary method of helicopter vectoring employed in the DDE [destroyer-escort] and

33 Operational Requirements for a Heliporter, 9 March 1964, DHH, 73/750.
34 Anti submarine Research and development, March 1964, DHH, Rayner Papers, 99/31-V-3.
the lack of a computer to predict drop position,” the Naval Board was told, meant that the “DDE controlled weapon drops are very much a hit or miss proposition.” In some measure that should not have mattered since the Sea King dipping sonar and Mk 44 torpedoes made it a self-contained unit that was capable of detecting, classifying and attacking a contact on its own. Yet tests with the Sea King identified that the aircraft had its own flaws. While it was hoped that the development of a Sea King radar reflector would solve the destroyer’s command and control problem, errors in computing drop position, drop errors and insufficient navigation equipment (along with the poor performance of the Mk 44 torpedo) all conspired to reduce the helicopter’s performance.36

The purpose of the anti-submarine warfare systems requirement report was not to denigrate the DDH concept, but rather to shake the prevailing view that the helicopter was the only weapon system the RCN’s destroyers needed to meet its long-range requirements. Its final recommendation, therefore, was to add either a rocket-assisted torpedo system, such as IKARA or ASROC, or a drone helicopter such as DASH, to the RCN anti-submarine arsenal. As a drone helicopter, DASH suffered from many of the same shortfalls that the report had attributed to the helicopter and as a result the concept never received serious consideration. Thanks to their short activation and dead times, as well as all-weather capability, the choice of systems therefore fell between IKARA and ASROC. In a remarkable stroke of luck the RCN also had a platform available for these systems. Thanks to the recommendations of the Burchell committee, the Restigouche and Mackenzie class conversion was effectively starting from scratch. A shrinking

35 Anti-submarine Weapon System requirement for the RCN, March 1964, DHH, 120.003 (D33), 14.
36 Ibid.
budget had forced Burchell’s committee to reconsider the plans of turning the
Restigouche and Mackenzie classes into DDHs and after some deliberation it was
decided that this type of conversion was not a cost effective use of RCN’s available
funds. Nor was Burchell’s committee impressed with the idea of improving their air
defence and anti-surface capability through the addition of a missile system and larger
guns. Rather than wasting $ 18 - 25 million on ships approaching their mid-life
conversion, Burchell felt that this money could be better spent on a possible program of
new guided missile destroyers. That effectively left the Restigouche and Mackenzies
without any weapons for its conversion.37

Dyer was not happy. Brief after brief was sending him the same troubling
message:

Out of these studies develop the following conclusions. Canadian ASW forces do
not have the weapon system capability to counter the high speed, deep diving
submarine. Moreover, the probability of survival of RCN ASW forces in an
engagement with this type of submarine, armed with fast, long-range torpedoes, is
problematical. A medium/long range weapon system is required. This
requirement is not met by the DDE/CHSS-2 [Sea King] combination.38

The Vice Chief of the Naval Staff was fully persuaded by that argument and emphasized
that the tactical advantage gained through SQS 505 would be lost without a parallel
weapon system to exploit the improved detection capabilities.39 Simply put, the
ASROC, helicopter and SQS 505 shared a symbiotic relationship that had to be
distributed among the Restigouches, Mackenzie, St. Laurents, and Annapolis classes.
And it was for that reason that Dyer became one of the chief proponents for giving the
Restigouche and Mackenzies either an ASROC or IKARA capability as part of their

37 Naval Staff Minutes, 7 January, DHH, RCNHS fonds, 81/520/1000-100/3, Box 38A, file 3.
38 Brief for VCNS, 6 April 1964, DHH, NPCC Papers, 79/246, File 103.
39 NPCC Meeting, 03 March 1964, DHH, NPCC Papers, 79/246, Folder 5.
conversion program. This would fill a real gap in the RCN’s anti-submarine warfare arsenal and would make the destroyer-escort a good partner for the helicopter-carrying destroyer on the East Coast as well as the only long-range ship-borne weapon on the West. As a result, he immediately ordered a more specific study that would select the best option for the Restigouche and Mackenzies and gave it the firm deadline of 1 July 1964. In the meantime, Phase I of the conversion would continue with the addition of the SQS 505/502 variable depth and hull mounted sonar system while Phase II would commence once a weapon system had been selected. Dyer firmly believed in the concept of combining the SQS 505 with ASROC or IKARA into the destroyers that were not going to be converted into DDHs. Accepting the findings of the “ASW systems requirement” report, Dyer also believed that the Restigouche and Mackenzies would fill much-needed roles by adding an extended detection and quick fire dimension to the RCN’s anti-submarine warfare team. Yet as influential as that report was, there is evidence that operational factors had a greater impact on Dyer.

Critical comments from commanding officers at sea underscored the need for an additional long-range quick firing weapon. One report in particular - written by the commanding officer of HMCS Lanark Lieutenant Commander Reid - had captured the mood of his colleagues particularly well. A twenty year veteran with considerable experience - including three years at the sonar and weapon system evaluations in the United States Navy’s operational test and evaluation force - Reid knew what he was talking about. He was also candid:

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40 Naval Staff Minutes 13 February 1964, DHH, RCNHS fonds, 81/520/1000-100/3, Box 38A, file 3; NPCC Minutes, 4 March 1964, DHH, NPCC Papers, 79/246, folder 5; Dyer to Fraser-Harris, 10 March 1964, DHH, NPCC Papers, 79/246, file 103.
I feel that I would be shirking my duty if I failed to present my views before you. The failure of the SQS-503 Sonar to even approach its design capability after some five years in the fleet, the intention to continue fitting this sonar, the questionable ability of the new HSS-2 Helicopter as a primary A/S weapon, and the popular belief that Variable Depth Sonar is going to solve most of our initial submarine detection problems, has prompted me to forward these comments.  

Reid was troubled by “the popular consensus” that the variable depth sonar was the solution to the RCN’s long-range detection needs as well as the faith that was being placed in the helicopter. Having served in Ottawa during her helicopter trials, Reid’s comments on the DDH’s effectiveness stood as a reflection of the yet-to-be released anti-submarine warfare system’s report. “My opposition to the helicopter concept,” Reid told his superiors in December 1962, “lies in the time between initial submarine detection and weapon drop.” Reid had the “greatest regard” for the helicopter when it was employed as a self-contained unit, and even went so far as to claim that the Sea King’s SQS 10 dunking sonar would prove the most powerful set in the fleet due to the aircraft’s speed and mobility. However, operational experience in Ottawa as well as DASH experiments in the United States Navy had indicated that the RCN could expect the Sea King to have a dead-time of up to 20 minutes for a target that was only five miles away. This was “unacceptably high,” explaining why Reid made a specific plea for the RCN to acquire ASROC as soon as possible.

A number of senior officers in Halifax agreed with Reid’s position and throughout 1963 and early 1964 they filed critical comments of their own. After extolling the virtues of the helicopter and the way it would enhance the destroyer’s effectiveness, Commodore

41 Fraser-Harris to D/CNTS, 23 March 1964, LAC, RG 24, Accession 1983-84/167, Box 3734, file 8100-1 vol. 10.
42 Reid to Commander 7th Canadian Escort Squadron, 28 December 1962, LAC, RG 24, Accession 1983-84/167, Box 3734, file 8100-1. vol. 11.
43 Ibid.
J.C. Pratt, was forced to admit that the concept did have limitations. He, too, was concerned that the destroyer would be left to the mercy of its Mk 10 Limbo and Mk 44 ship-borne torpedoes when the helicopter was unavailable. The acquisition of the vastly superior Mk. 46 torpedo would improve the effectiveness of the latter, but it was still not enough. ASROC was the only viable solution; yet Pratt was one of the first officers to observe that this system had weaknesses of its own. So much so, that Pratt argued that the destroyers should keep its Mk 10 Limbo and Mk 44 torpedoes because of the estimation that ASROC would have trouble prosecuting shallow, bottomed and close-in targets. In a larger sense, Pratt was making an important observation. The key was not to determine a weapon system’s usefulness in isolation, but rather to view its contribution as part of the larger anti-submarine warfare team. There was no single wonder weapon as the effectiveness of a system was determined by the characteristics of the situation. Pratt was right. The RCN at this time was suffering from a myopic mentality in which anti-submarine warfare detection and weapon systems were being assessed through a two dimensional prism that pitted one surface vessel against a single submarine. This did not reflect reality since the complexities of battle would undoubtedly lead to situations where close weapons such as the Mk 10 Limbo and Mk 44 ship-borne torpedoes would have a considerable advantage over ASROC.

Captain C.R. Nixon understood this point all too well. Having been supplied a copy of Reid’s account Nixon did not necessarily disagree with the “bright picture” that was being painted regarding ASROC’s capability. In fact, Nixon appreciated the USN’s efforts to marry ASROC to the powerful SQS 23 sonar and believed that the RCN should

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44 Pratt to Naval Headquarters, 10 October 1963, LAC, RG 24, Accession 1983-84/167, Box 3734, file 8100-1, vol. 11.
keep its eyes on this developing technology. However, he was concerned that the attempts to acquire ASROC were coming at the expense of the helicopter destroyer. As a sea-going commander he realized that the prevailing view of the Sea King as a weapon carrier was a mistake. In his view a force of “five or six HSS-2-carrying escorts” would be sufficient to keep one helicopter continually on task while a second would be on deck ready to assist in the prosecution of targets. This would allow the Sea King to act as a screen and make the best tactical use of its SQS 10 sonar, which “will provide an excellent aid to the problem of classification, which is becoming more significant with increased sonar and weapon delivery ranges.” And as a result, Nixon’s plan was to use “helicopters on task as much as possible, not only to reduce dead time to a minimum but also to employ their excellent detection capabilities to the limit; they are as good hunters as they are killers.”

In his capacity as the Senior Canadian Office Afloat (Atlantic) Commodore Welland had read all the correspondence regarding Reid’s submission and he fully supported Nixon’s position. Emphasizing that the points raised by Reid were “known by Command and Naval Headquarters,” Welland saw value in the ASROC program but believed that the RCN had to get as many helicopters to sea as possible. Although the DDH was a welcome addition to the RCN’s anti-submarine warfare team, Welland knew that the aircraft carrier was the best platform to take aircraft to sea. In fact, current RCN plans were to form the first six Sea Kings into a new squadron (HS 50), which, after a period of pilot training at Shearwater, would operate as replacements for Bonaventure’s older HO4S helicopter by early 1965. These aircraft would subsequently be transferred

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to the first DDHs (Assiniboine, St. Laurent, Nipigon and Annapolis) when Bonaventure went into refit, but there were certain operational benefits to flying helicopters from aircraft carriers that no DDHs could ever match. Numbers alone ensured that Bonaventure would enjoy utilization and availability rates well above the DDH’s average. Space was also a factor as the cramped conditions on the destroyers hindered aircraft maintenance and that also made the DDH’s aircraft less reliable than the ones operating from the carrier.  

Bonaventure had other tactical advantages over the DDH as well. For instance, an earlier report on the effectiveness of fixed wing aircraft found that a force protected by destroyers and a “limited number of helicopters” would always be at the mercy of the submarine. It was the inability to take offensive action against such a force that gave tactical advantage to the submarine and allowed it to operate with “virtually complete freedom of action as long as they can keep about 10 miles or more beyond the screen. This means they can easily get into attack position, can attack with missiles with impunity and have a very good chance of launching a torpedo attack before the defences are alerted.” The key to denying the submarine this advantage rested with Bonaventure’s Trackers which were faster and could carry a heavier payload than the Sea King. Critics were quick to note that the Trackers also suffered from dead time. Yet as Captain H.A. Porter would later observe, Bonaventure’s strengths lay in the fact that she was a “moving airfield,” and as a result carried enough aircraft to reduce dead time to a

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minimum through her ability to saturate an area in which a submarine was operating.\textsuperscript{49}

And it was for this reason that the navy was seeking to strengthen the Tracker’s position in the RCN through a mid-life modernization program that included the fitting of Jezebel, Tactical Navigation equipment, depth control units and radar as well as Magnetic Anomaly Detector improvements. Due to a lack of funds, however, the navy was left with no choice but to defer this program until 1965.\textsuperscript{50} Therein lay the rub. Money was tight and no matter how invaluable \textit{Bonaventure} was to the ASW team, carriers were quickly becoming a luxury that the RCN could no longer afford.

There were operational commanders who had a hard time coming to grips with this reality. In fact, some operational officers, such as Welland, even went so far as to argue that the RCN had to acquire larger and faster carriers to meet the RCN’s anti-submarine needs.\textsuperscript{51} Others supported this view and considered it fortunate that the RCN had not acquired the Iwo Jimas because of their smaller size. What the RCN truly needed was a fleet based around the Essex fleet carrier, which, through a mixture of Sea King, A-4 Skyhawk, Tracker, and Tracer (electronic warfare) aircraft, could meet all the RCN’s requirements. Those who understood the scope of the minister’s cuts realized that the RCN was in no position to expand in this fashion. The fleet that they were exploring was preparing for a future without \textit{Bonaventure}, and as a result represented a cost-effective alternative that spread various anti-submarine capabilities among a force of destroyers, conventional submarines, supply ships and maritime patrol aircraft.

\textsuperscript{48} A Staff Study of the Requirement for fixed Wing ASW aircraft, 15 July 1963, DHH, NPCC Papers, 79/246, folder 28.
\textsuperscript{49} HA Porter to CP, 13 August 1964, DHH, Rayner Papers, 99/31-IB-25.
\textsuperscript{50} Fourteenth senior officers conference, DHH, 79/355; Anti-submarine Weapon System requirement for the RCN, March 1964, DHH, 120.003 (D33).
\textsuperscript{51} HA Porter to CP, 13 August 1964, DHH, Rayner Papers, 99/31-IB-25.
Each of these platforms complemented the other by filling an important piece of the anti-submarine puzzle. In its simplest form, the nine DDHs (St. Laurent and Annapolis classes) allowed the RCN to take advantage of the Sea King’s self-contained ability to detect, classify and attack contacts, while the Restigouche and Mackenzie conversion would cover off the DDH’s dead time through the acquisition of ASROC. By doing so, ASROC effectively closed the weapon-detection gap, particularly since that system would be assisted by the long-range detection capability of the more powerful SQS 505 variable depth sonar in addition to the fleet wide fitting of ship-borne Jezebel. Although this force could never compensate for the eventual loss of the carrier and its ability to bring a concentration of Trackers to suspected submarine positions, it would nevertheless have the requisite air support from shore-based ones along with Neptune and Argus aircraft. With the Trackers covering inshore waters and the Argus performing long range penetrations into the Atlantic, the RCN could lay Nutmeg fields as well as bring MAD, airborne radar, Mk 46 torpedoes, Julie and airborne Jezebel to bear on suspected targets. Ship-borne Mk 46 torpedoes and Mk 10 Limbo with project INSIGHT proximity fuses would assist by contributing to any “close in” ASW situations, while friendly submarines would work on the periphery through their long-range barrier operations. Protection from air threats as well as a shore bombardment capability would be provided through a new program of guided missile destroyers with medium range missiles and 5-inch-54 guns. Moreover, some thought was being given to adding an ASW capability to these destroyers, especially since the United States Navy’s trials to mate their powerful SQS 26 sonar to the ASROC were proving so successful.\footnote{ACNS and DGFE to VCNS, 20 July 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-16.}
But it was the final member of this team that gave this destroyer-centric force a true blue water capability. The addition of the operational support ship, HMCS *Provider*, which was undergoing her final trials with the destroyer HMCS *Yukon* in May 1964, would greatly extend the fleet’s range and on station time.\(^{53}\) A staff appreciation on the operational support ship’s ability to provide “on station” time to the destroyers perfectly captures how this class was an instrumental part of the RCN’s anti-submarine network:

Number of AS Ships which can be maintained continuously on station with or without an operational support ship.

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The need to keep this ASW fleet at sea for extended periods was essential, explaining why the RCN would eventually seek permission to build another two support ships.

These ships, which were to become HMCS *Protecteur* and HMCS *Preserver*, would take time to build, but once completed their ability to carry three Sea Kings each also made an

\(^{53}\) HMCS Provider RofPs, May 1964, DHH, RCNHS fonds, 81/520/8000, Box 83, file7.
important contribution to the fleet’s helicopter-carrying strength. And finally, with room to accommodate troops and army equipment these supply ships could also contribute to limited war situations. Some officers, such as Fraser-Harris and Welland, did not accept the idea that the operational support ship could meet the minister’s sealift requirement. Despite the loss of the Iwo Jima, therefore, Fraser-Harris, and later Welland, were willing to fight a renewed battle at Naval Headquarters. This time, however, they would argue that the larger and faster Essex class aircraft carrier was the only ship that could meet all the RCN’s requirements.

The “mark document” outlining the navy’s latest force structure had sent a troubling message to those who wanted to see Bonaventure replaced with another carrier, but the situation was far from hopeless. While the available funds for new programs appeared to be earmarked for the acquisition of nuclear submarines, guided missile destroyers and Sir Lancelot sealift ships, the plan to upgrade Bonaventure along with the procurement of A-4 Skyhawk aircraft nevertheless represented a significant investment in the current commitment to naval aviation. Moreover, the purpose of the mark document was merely to seek the minister’s guidance by showing him what could be bought with the money allocated to navy, and as a result it did not represent a firm procurement strategy. It was instead an attempt to match possible ship types to the tasks outlined in the White Paper with the financial limitations imposed by the minister, which was exactly the way the RCN should have been pursuing its force structure all along.54 From that perspective, the fleet in the mark document represented a successful compromise that was designed to answer a particular need: the nuclear submarines would contribute to anti-

54 Chief of Staff Committee, 9 April 1964, DHH, Raymont Papers, 73/1223, file 1311D; Armstrong (DM) to CNS, 13 April 1964, DHH, NPCC, 79/246, file 80.
submarine warfare while the A4s would take care of the fleet’s air defence and tactical support roles. The guided missile destroyers, on the other hand, would participate in both, leaving the Sir Lancelots to respond to any sealift requirements.

The problem was with the advocates. For some, such as the nuclear submarine proponents, the issue was numbers; two submarines were simply not enough to make an effective contribution to anti-submarine warfare. For others, like the naval aviators, the lack of a firm long-term commitment to their platform led to feelings of extreme vulnerability. These kinds of insecurities got the better of them. In the advocates’ opinion, acquiring their particular ship-type was in the service’s best interest and that justified attempts to disrupt approved procurement plans especially when it came at the expense of their rivals. It was this type of thinking that convinced Fraser-Harris to argue that an Essex aircraft carrier should take the place of the nuclear submarine in the current mark document. “I cannot personally support the requirement for nuclear submarines,” a defiant Fraser-Harris told his officers, explaining that the conventional Oberons would effectively counter the ASW threat. Although he would not deliberately target the nuclear submarines for another six weeks, his arguments on the need for an Essex had merit. The Essex was a much better platform, which, unlike Bonaventure, could accommodate a sizeable complement of A-4 Skyhawks for the attack and air defence roles as well as helicopters and Trackers to meet the fleet’s anti-submarine warfare needs. There would also be room for Tracer electronic warfare aircraft to give the RCN a long-range surface and air threat detection capability. But while Fraser-Harris had no qualms about sacrificing the nuclear submarines, he was unwilling to surrender any naval aviation assets to get the Essex. Claims that he was forfeiting the Iwo Jimas for the
“cheaper solution” of the Sir Lancelots were merely a ruse designed to give the appearance of a compromise. His new plan, which was to convert Bonaventure into a helicopter carrier (supplemented with V/STOL aircraft at a later date), would keep the carrier improvement in the mark document while at the same time permitting him to pursue the Essex.55

Fraser-Harris’ Essex campaign soon gained headway. A request from the Chief of the Naval Staff to update the January 1961 Staff Study on air defence produced an extremely ambitious plan that included the retro-fitting of Mauler missiles in all RCN escorts as well as the procurement of new guided missile destroyers. While not going as far as Fraser-Harris had wanted, the study suggested that the RCN had two choices for its short-term carrier needs; it could either buy A-4 Skyhawks and Tracers for Bonaventure or it could get an Essex with the powerful (and expensive) F4 Phantom fighter. This would cover the RCN’s air defence requirements for another fifteen years and give the service the time it needed to design and build a new carrier. Where the navy was going to get the funds for these ships was never explored, but Dyer was intrigued and subsequently ordered an “in-house” study to determine the maintenance requirements and financial implications of operating an Essex.56

Even better news for naval aviation followed. On the same day that the naval staff considered the air defence study, the Assistant Chief of the Naval Staff (Plans), Commodore R.W. Murdoch, himself a member of the naval staff, told Dyer that:

When CINCEASTLANT visited Ottawa in 1963 he left the impression that he considered BONAVENTURE extremely vulnerable to air attack in the

55 ACNS (A&W) to DNSR, 6 May 1964, DHH, NPCC Papers, DHH, 79/246, file 78A.
56 A Staff Study of the Operational Requirements for Air Defence of the Fleet, 1964-1974, 2 March 1964, DHH, NPCC Papers, 79/246, file 74; Naval Staff Meeting, 16 April 1964, DHH, RCNHS fonds, 81/520/1000-100/3, Box 38A, file 3.
EASTLANT area and therefore a doubtful asset because her escorts might be more gainfully employed on other duties. This impression was reinforced by the papers sent by Admiral Madden to CNS setting forth the assessed vulnerability of ASW carriers in the eastern Atlantic. More recent discussions at the staff level between RCN and EASTLANT officers suggest that the impressions left in Ottawa by Admiral Madden are not in agreement with EASTLANT staff thinking.  

As will be remembered, Admiral Madden’s July 1963 visit had been a pivotal moment that not only solidified Rayner’s belief that the escort carrier’s days in SACLANT were numbered, but also reinforced his decision to build a surface fleet of DDHs and General Purpose Frigates. Now, however, there were signs that some EASTLANT officers did not share Madden’s pessimistic view of the escort carrier’s value. To further confuse the situation, others in EASTLANT wanted to base an anti-submarine warfare carrier group in the Azores to make up for “the paucity of forces in the southern part of his area.” And that provided the naval air advocates at Naval Headquarters with a new justification for their carrier plans.

Although the idea of basing Bonaventure in the Azores never came to pass, the new voices emanating out of EASTLANT gave some much-needed balance to Madden’s earlier position on the tactical requirement of anti-submarine warfare carriers. These types of tactical considerations, however, were not enough to convince everyone of the need to replace Bonaventure with another carrier. Operational experience may have proven that Bonaventure was a star performer in the RCN’s anti-submarine team, but for some officers it was the expense of carrier aviation that was going to get it yanked from the starting line-up. Comments on the air defence study observing that “cost is an overriding factor” or that the “Essex is expensive,” attested to a fragmented naval staff

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57 Visit of Chief of Staff to CINCEASTLANT, 16 April 1964, DHH, Joint Staff fonds, 2002/17, file 120, vol. 8.
that found many “areas of controversy” and was “divided between exponents of missiles [from destroyers] and support of aircraft.”\textsuperscript{59} Although the staff study had recommended the acquisition of both guided missile destroyers and aircraft carriers, costs made it obvious that one design would have to face sacrifices at the expense of the other. For Fraser-Harris the choice was easy. Much like his earlier approach when the General Purpose Frigate had threatened his campaign for the Iwo Jima, Fraser-Harris again tried to generate funds for a new carrier (the Essex) with the suggestion that Canada could build a cheaper “standard type” American-designed guided missile destroyer. And just like that earlier approach, the Chief of Naval Technical Services was unhappy with this interference and reminded the senior staff that it was wrong to pick a particular ship class and then define the requirements. “There is considerable doubt in my mind as to the propriety of A/CNS (A&W)’s observations in regard to matters of ship production or procurement,” Caldwell told Rayner, continuing that “it would have seemed more appropriate to state a requirement whose fulfilment would be the concern of Technical services.”\textsuperscript{60} Fraser-Harris’ carrier advocacy was once again treading on Caldwell’s turf - recommendations on the best destroyer platform for the RCN came exclusively from the Chief of Naval Technical Service’s office - but it is easy to see why the Assistant Chief (Air & Warfare) tried to do so. The idea of acquiring the current American design (the Charles Adams class) was in the process of being rejected because it was not “in accord with current thinking.”\textsuperscript{61}

\textsuperscript{58} Ibid.
\textsuperscript{59} Brief for VCNS, 15 April 1964, DHH, NPCC papers, 79/246, file 74.
\textsuperscript{60} CNTS to CNS and VCNS (cc ACNS A&W), nd, DHH, 79/246, file 78A.
\textsuperscript{61} Brief for VCNS, Air Defence of the Fleet, 1964-74, 25 June 1964, DHH, NPCC Papers, 79/246, file 74; Brief for VCNS, Air Defence of the Fleet, 15 April 1964, DHH, NPCC Papers, 79/246, file 74; ACNS (A&W) to DNSR, 6 May 1964, DHH, NPCC Papers, DHH, 79/246, file 78A; ACNS (A&W) to DNOR, 15 April 1964, DHH, NPCC Papers, 79/246, File 78A.
Fraser-Harris was not the only one who was trying to manipulate events. Having lost some of his best and brightest through inactivity, Sam Davis wanted a design that would both challenge and re-invigorate his flagging DG Ships organization. This was something that a Repeat Charles Adams class (which at this juncture had been in commission for four years) would not do. He therefore told Caldwell (his immediate superior) that they had to work “outside our authority” to get the RCN to design its own guided missile destroyer. This conjured up images of a revived General Purpose Frigate program and in many ways that was exactly what this initiative was. More importantly, however, Davis was no longer exploring all the possibilities objectively and while he was still interested in the other aspects of the Mark Document, he was clearly one of the leading champions of a new Canadian guided missile destroyer program.

Davis’ enthusiasm that this new program would soon lead to work for his engineers was hard to hide, but not everyone who worked with him shared his optimism. When brought before the Defence Supply Naval Shipbuilding Panel – an interdepartmental committee responsible for coordinating shipbuilding activities – the Department of Defence Production’s representative, Jack Rutledge, found the proposed fleet strangely “obscure.” More to the point, he had a hard time believing that it could be built with the available funds. There had been five different force structures in as many years and Rutledge had little faith that the Mark Document would fair any better. He therefore convinced his colleagues that the Naval Board needed to be told of the Panel’s “concern with the present unsettled state of affairs of the RCN new construction

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program.\textsuperscript{63} Davis agreed to do so, and his letter captured the Panel’s desire for the senior staff to finally take control of the situation:

It must be observed that the tempo of the Navy’s production machine began to slow down some twelve months ago – and was greatly retarded by the GP Frigate cancellation in October. Since that time, we have lacked clear direction for the new construction which the WHITE PAPER implies is important. A thoughtful synthesis of Staff Requirements has given way to an amiable browsing through Jane’s with ESSEX, LPH, a variety of LPDs, DDGs, M of T [Ministry of Transport] and MARITIME ADMINISTRATION Transports, all enjoying a brief notoriety. Without welcoming the prospect of integration, our hesitancy almost makes one ashamed to be in the RCN. If, therefore, the MARK Document – or indeed, the WHITE PAPER, are to have any validity at all in regards to date – we must have decisions this summer.\textsuperscript{64}

Davis’s comments perfectly capture the RCN’s predicament. In fairness to the Naval Board, the government’s White Paper did not actually give the navy much direction other than stating what it already knew: the navy was to produce a anti-submarine warfare fleet with some sealift capability. It was also well known that Sutherland was still working on a report for the minister that was intended to find the most cost-effective way to match specific platforms to the tasks outlined in the White Paper, and there was little chance of Hellyer making any firm decisions until it was done. But despite this lack of political direction the navy needed firm leadership, and that was something the retiring Chief of the Naval Staff was not providing. Although he, himself, had become an advocate, Davis nevertheless recognized that the confusion over force structure was creating a void that various champions were trying to fill. “There is a tendency, in Naval Staff,” he told a superior, “to try to select a vessel – which we think is unwise, because, particularly in the new environment, selection can hardly be made until a joint group defines the


\textsuperscript{64} Davis to Caldwell, 19 May 1964, LAC, RG 24, Accession 1983-84/167, Box 465, file 1650-36, vol. 3.
requirement." With the naval aviation advocates unwilling to give up their campaign for an Essex, the tendency of staff officers to “select” vessels was about to undercut yet another force structure.

The expense associated with naval aviation was, by far, the naval advocates’ greatest obstacle to getting an Essex included in the mark document program. Rather than downplaying or hiding costs, as had been done in the past, the Director of Naval Aviation, Captain J.B. “Pops” Fotheringham, argued that naval aviation supporters had to meet this challenge head on. Fotheringham’s submission on this matter may have been “rushed and unedited,” but it was also brutally honest. The true price of carrier aviation did not just involve a new platform:

The operation of naval aircraft at sea necessitates overhead in the form of administration facilities, an airfield ashore, inspection and maintenance organizations, stores and logistic support and to varying degrees, training facilities. From this it may be assumed that the operation of one aircraft carrier by any services requires the most uneconomical overhead. …The outstanding unattractive feature of a programme which includes an ESSEX carrier is the stated price of about $ 130 M.

Nor was cost the only problem. The untimely release of a staff study on “the means of providing a Canadian Sealift Capability” also complicated the carrier campaign, as it furthered the argument that the military’s sealift needs could be met with a fleet of specialized cargo vessels such as the Sir Lancelot. This not only disputed the carrier advocates’ argument that the carrier was the best platform to support the army and respond to limited war situations, but it additionally gave their competitors the courage to

65 Davis to D/CNTS, 21 May 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-15, vol. 2. 66 DNAR to ACNS as well as minute note attached to same, 9 June 1964, LAC, RG 24, Accession 1983-84/167, Box 465, file 1650-36, vol. 3.
push for the more expensive Challenger class support ships. Fortunately for the naval aviators, Rayner’s upcoming retirement would lead to the arrival of an officer who would prove one of the most vocal Essex champions of them all.

Rayner was well aware that he was a lame-duck Chief of the Naval Staff, but he was unable to leave the service early. Naval regulations on retirement, as well as a promise to minister, meant that he would have to remain Chief of the Naval Staff until 20 July. This led to a unique situation where Rayner not only gave Dyer the status of “CNS-in-waiting,” but also allowed him to appoint Commodore Welland to the position of “Acting Vice of the Chief of the Naval Staff [A/VCNS].” This was good news for the naval aviators. Although Welland was an executive officer who had specialized in gunnery, his actions as Senior Canadian Officer Afloat (Atlantic) revealed that he was a firm believer in the value of naval aviation. In fact, a closer examination of his career shows exactly how strong his attachment to this branch was.

It should not be surprising, given his past experiences, that Welland became one of the most ardent supporters of the campaign to acquire an Essex. Welland, who had “always wanted to be a flyer,” first tried to become a pilot during the Second World War. After having his application “torn up by Captain Frank Houghton,” it was explained to Welland that he was “too well-trained in what I was doing in the destroyer business to waste me in a God damn airplane.” Welland was undeterred. Never one to lose out on an opportunity, he took advantage of a posting to HMCS Venture (which was introducing naval cadets to aviation through a deal with the Victoria Flying Club) to obtain his

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private pilot’s license. But Welland’s passion for flying did not end there. While serving as the Commanding Officer of the Navy’s airbase in Halifax, HMCS Shearwater, Welland, who at this time was a Captain, believed that he could better understand the men under his command if he went through their training. At first greeted with “suspicion,” Welland’s efforts, which culminated in qualified flights in a Tracker as well as T-33 jet aircraft, made him extremely popular with the naval aviators. His ship-driving colleagues, however, were another matter. In their view, there was no need for an executive officer to fly, explaining why Rayner rejected Welland’s request for his “wings” with the observation that he had been “employed to run Shearwater and not horse around like a sub-lieutenant.”

Welland was also influenced by operational experience. A veteran of the Second World War, Welland was a firm believer in the need for attack aircraft to support ground troops and inshore naval operations. The same was true for his service in the Korean War. Blasting North Korean supply trains with 4.7 inch guns from a pitching deck – while a difficult and competitive task – left Welland with the sense that the RCN’s contribution in that conflict “was close to zero.” The real assistance, Welland explained in a post-war interview, came from the Americans who “operated two small carriers throughout the war and also later on, operated the big ones, the Essex.” Welland understood that the growing Soviet submarine threat meant that the RCN had to specialize in anti submarine warfare throughout the 1950s, but the altering strategic environment and emphasis placed on potential limited wars operations suggested that it

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70 R Welland, interview by Hal Lawrence, tape recording transcript, Ottawa, Ontario, 25 May 1983, DHH, Biog W, 40-41; Barry M Gough, HMCS Haida: Battle Ensign Flying (St. Catherines: Vanwell Publishing,
was time for a change. And it was for that reason Welland, while serving the Senior Canadian Officer Afloat (Atlantic), wrote a memo to the Flag Officer Atlantic Coast, Rear Admiral Brock, suggesting the RCN could afford an Essex if it immediately scrapped all its older Prestonian Frigates. His argument had some merit. The list of the outdated Frigates’ shortfalls was extensive, but Brock was not buying it. “It would be a great mistake to move prematurely in this matter,” Brock warned Welland, believing that “delays, reviews and cancellations invariably occur when Ministers change or when Governments change.” 71 Of course, Brock did not want a carrier, but his argument was logical:

I would be very concerned, therefore, about giving up anything now in the hope that such a reduction would increase our capability in the future. While the frigates may not be all that we would wish for, they were the best ships of their type available at the time… Certainly the frigates in their existing configuration are better than no ships at all. At this particular stage in our affairs I believe it would be best to leave the question of timing, type of replacement, etc, to CANAVHED [Canadian Naval Headquarters], who assure me that they are aware of the problem and are prepared to act at the first opportune moment. In the meantime, I will pass your thoughts to VCNS [Dyer] when next I talk to him…” 72

Brock’s caution made sense. Offering up an entire fleet of frigates without a firm replacement to a cost-cutting government was a considerable risk, particularly since the RCN was already under-strength thanks to the early retirement of the Tribals. Unlike Brock, however, Dyer obviously liked what he had heard as Welland was then told that

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71 Welland to Brock, 20 April 1964, LAC, Brock Papers, MG 30 E 522, file “correspondence Part I 1964.” Welland observed that they had no fire control capability against aircraft or surface targets; their ASW equipment was “antiquated and ineffective; they were slower than most conventional submarines; their radar was incapable of detecting aircraft, and the mechanical reliability of the ships is a constant problem.” 72 Brock to Welland, 4 May 1964, LAC, Brock Papers, MG 30 E 522, file “correspondence Part I 1964.”
he was going to Ottawa to serve as the Acting Vice Chief of the Naval Staff along with a promotion to Rear Admiral.73

Welland was entrusted with the task of getting the mark document fleet ready for approval. He had little time to spare. The date for the integration of the military into a single service had been set for 1 August 1964, and the navy was anxious to have a firm ship replacement program in place before the three services were merged into a single headquarters. The RCN was right to be concerned. Rather than having chiefs and individual staffs representing each of the three services, the new headquarters would be organized along functional lines under the authority of a single chief of the defence staff. This position – which would be assisted by the Vice Chief of the Defence Staff, Personnel, Technical Services, and Comptroller General branches – would rob all the services of their power to consult the minister directly or develop policy in isolation.74

Put simply, in six weeks time the Naval Board and Staff would cease to exist, and as a result Dyer and Welland had to move quickly. The race to get approval for the fleet outlined in the Mark Document was on.

Welland first addressed the guided missile destroyers. As far as he could ascertain from a perusal of the files, the RCN’s options appeared limited to either a British designed Type 82, an American Charles Adams, the old General Purpose Frigate, or an improved General Purpose Frigate. Although he had been forewarned that opinion was divided between an original Canadian design and repeating a foreign one, Welland found that there was a remarkable degree of unanimity among the naval staff on this matter. A consensus had indeed been hashed out before Welland gathered his officers

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73 Welland, *This will have to do*, 12.
74 Lund, “The Rise and Fall of the Royal Canadian Navy,” 432.
together. Amazed by the “considerable body of opinion, particularly in Technical services… [who were] opposed to the acquisition of the CHARLES ADAMS Type,” Fraser-Harris had decided to back down from his earlier support of this class. Realizing that he was not going to find saving for his Essex carrier through a cheaper guided missile destroyer program, Fraser-Harris now instructed the Director of Naval Operational Requirements to re-examine the issue.\textsuperscript{75}

The Assistant Chief of the Naval Staff (Air & Warfare)’s reversal had gone a long way in clearing the roadblock surrounding the choice of guided missile destroyers, especially since he finally admitted that the Adams class design was indeed too old to meet the RCN’s requirements. The British Type 82, on the other hand, was not even in the production phase and that led to fears that this advanced design would not be ready in time. There were also concerns that a Canadian version would require a major re-working of the drawings and fittings because the Type 82 was not being built to North American standards. That left the two Canadian concepts as the best options. Of course, resuscitating a program that the Liberals had cancelled would not be easy, explaining why Fraser-Harris argued that “One thing is quite certain, and that is the words ‘G.P. Frigate’ must never be used again.”\textsuperscript{76} Yet the fact that there were going to be a number of differences between this new guided missile destroyer and the earlier version actually gave the improved General Purpose Frigate concept the upper hand.

At an estimated cost of $250 million, the four new guided missile destroyers were not going to be cheap, and that put considerable pressure on Fraser-Harris to make room for the Essex by intensifying his attacks on the nuclear submarines. Welland was

\textsuperscript{75} DNSR to ACNS (A&W), 11 June 1964; and ACNS (A&W) to VCNS, 15 June 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-16.
receptive to his arguments, and as a result the fate of the nuclear submarines was sealed at a special meeting that the Acting Vice Chief had convened to discuss the naval program. The nuclear submarine took a beating, the more so since none of its champions were present. The fact that this platform would do little to support limited war and peacekeeping operations was emphasized. So, too, was their conclusion that the concept of operations for nuclear submarines in total war – which ensured that these platforms would always operate “under the orders of a foreign government” – was “hardly in keeping with Canadian objectives.” The only way to avoid this “undesirable” situation was for Canada to build the specialized radio stations that were required to operate nuclear submarines independent of its allies. At a cost anywhere between $80 and 120 million each, these radio stations were well beyond the RCN’s financial means. But the greatest criticism was reserved for the question of the costs of the platforms themselves, where it was observed that the price tag attached to “only two submarines was extremely high.” This was its greatest weakness, and, copying Sutherland’s earlier tactic, Welland directed Fraser-Harris to prepare a paper on the acquisition of nuclear submarines that placed “particular emphasis on the full cost implications.” The conclusion of this report was never in any doubt. Anti-submarine training had always formed the prime justification for a Canadian platform, but this was a requirement that could be met through a combination of new conventional Oberons as well as special arrangements with the USN and RN to provide nuclear boats when needed. Canadian nuclear submarines were “therefore not recommended,” and that conclusion allowed Fraser-Harris to achieve

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76 Ibid.
77 Details on the SSN radio stations can be found on Minutes of an Ad hoc Committee, 21 August 1964, DHH, Rayner Papers, 99/31-IB-25 Box 5.
his ultimate goal as it was determined that “funds for a carrier might be provided by using those funds now allocated to a nuclear submarine programme.”  

The costs associated with both an Essex program as well as new aircraft required further pruning from the overall program, however, leaving the specialized sealift ships as the only platforms left for Fraser-Harris to target. This was not going to be an easy task. Opinions expressed at the same meeting that had removed the nuclear submarines from the navy’s program, clearly indicated that the staff was still deeply divided over the best means to provide the RCN with a sealift capability. But there was one important difference between this meeting and the earlier ones. Welland was now serving as Vice Chief of the Naval Staff. Unlike Dyer’s attempt to build a consensus on the Naval Staff, Welland took an autocratic approach, telling the Assistant Chief of the Naval Staff (Plans) that the Essex was “to be an alternative to the lift ships – a better alternative on the ground of versatility.” There was more. Welland also wrote a memorandum in which he laid out his case against the heavy lift ships, arguing that it would be cheaper for the army to buy or store tanks in Europe rather than having the navy transport them from Canada. Recent French and American experience in Indo-China further suggested that any sealift ship would have to have a tactical support capability, and that led to a powerful conclusion. “If we build the wrong ship now, it would be really stupid,” Welland explained to Dyer and Fraser-Harris, continuing with the warning that “we sailors would fall heir to the credit we deserve. I am not happy about the lift ships.” Needless to say, Fraser-Harris was pleased, explaining to a subordinate that he detected

78 Minutes of a special meeting held in ACNS (A&W)’s Office, 18 June 1964, DHH, NPCC Papers, 79/246, folder 56; Staff Study of the requirements for nuclear powered submarines in the RCN, 14 July 1964, DHH, Gigg Papers, 88/64-8. Sam Davis, “2nd Study: The Nuclear submarine,” DHH, Davis Papers,
“a wind change” at Naval Headquarters, and that the naval aviation advocates “must trim sheets accordingly. I feel it is a favourable breeze!!” And with that yet another force structure began to emerge; the nuclear submarines and specialized sealift ships would be omitted and replaced with an Essex (and sixty A-4s) that would be acquired alongside the four guided missile destroyers.80 As for the other aspects of the original program, Welland suggested that the Bonaventure’s improvement program should continue while the Restigouche and Mackenzie conversion were once again put in doubt as it was observed they would be carried out only “if funds permitted.”81

Work on the Essex acquisition began immediately and there were a number of important questions that Welland needed answering. For instance, the United States Navy was in the midst of their Fleet Rehabilitation and Modernized [FRAM] program, which, for the Essex, involved extensive alterations such as an angled flight-deck that permitted simultaneous take off and landings.82 Welland’s notes give a good sense of what he wanted to know, asking his staff to find out: “whether we could buy one, how much, when and where available?” The answers painted a confusing picture. The Americans were not converting all their Essexes in the same manner. Out of the 24 ships in the class, seven were modified to attack standards83; three were turned into helicopter carriers (LPH); eight were transformed into escort carriers (CVS); and the remaining six

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80 Welland to Fraser-Harris and Dyer, 22 June 1964 and Fraser Harris minute note to Nixon on same, 26 June 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-15 v.2.
81 Minutes of a special meeting held in ACNS (A&W)’s Office, 18 June 1964, DHH, NPCC Papers, 79/246, folder 56; A/VCNS to ACNS (P), Aide Memoire, nd, DHH, NPCC Papers, 79/246, file 80.
82 Muir, Black Shoes, 78. The Americans were also facing block obsolescence as in 1963 almost half of their fleet was average.
83 Out of the seven modified to attack standard only three were employed in this role while the rest were serving as escort carriers.
were placed in reserve. Those latter ships suggested that the United States Navy could
make an Essex available to the RCN, and, according to the Canadian Naval Member in
Washington, it would cost $126.7 million for the attack carrier conversion or $109
million for the escort carrier (CVS). These figures were similar to the ones that “Pops”
Fotheringham had already provided, yet a memorandum circulating around headquarters
told a different tale – claiming that an Essex “converted to Canadian standards to operate
anti-submarine warfare aircraft and A-4E fighters” would only cost $65 million.
Although there were suggestions that the Americans were willing to cut the Canadians a
deal, this total was overly optimistic. More to the point, however, it was still too
expensive. When added to the guided missile destroyer’s updated estimate of $256
million, the Essex would exceed the navy’s five-year $273 million capital acquisition
cap.

Where the navy was going to get the money to pay for the destroyers and an
Essex was not explained, but there was something that was even odder about this
program. Despite the fact that the staff had been working on this new force structure
since mid-June, it was not the one that Rayner presented to the Chiefs of Staff Committee
on 2 July 1964. Instead, the Chief of the Naval Staff was asking his counterparts to
consider the original slate of four guided missile destroyers, two nuclear submarines and
two lift ships. Rayner was trying to sell one fleet at the same time that his staff was out
shopping for another, and as a result it is hard to escape the conclusion that the Chief of
the Naval Staff was working from a page that his staff had already turned.

84 Welland hand written notes, nd, LAC, RG 24, Accession 1983-84/167, Box 465, file 1650-36 vol.3;
Canadian Naval Member Washington, 19 June 1964, DHH, NPCC Papers, 79/246, folder 59.
85 Estimated annual costs for Bonaventure and Essex type carriers without aircraft, nd, DHH, NPCC
Papers, 79/246, file 78A.
Correspondence between officers at Naval Headquarters further suggests that the retiring Chief of the Naval Staff had been cut totally out of the loop on the Essex program, and although it had been his desire to have a firm naval program in place prior to integration the advocates were again muddying the waters.86

A lack of staff work had hindered Rayner’s ability to defend the General Purpose Frigate to the Sauvé committee in 1963, and it appeared that this was an experience he was about to repeat. Much like that earlier occurrence, Rayner once again lacked the required staff work to make an effective pitch. With current expenditures having slashed the CUSRPG commitment from 14 to 12 ships (as well as placing all ten minesweepers into reserve), Rayner warned that further cutbacks scheduled for 1965 would force the RCN to reduce its contribution of 29 escorts to SACLANT by four escorts. And that led to a desperate plea for the Chiefs of Staff to approve both a new construction program (as well as more money to keep the frigates) and maintain the RCN’s force goals. It was a weak performance. Rehashing the same tired arguments about force goals received little sympathy from the other service chiefs who were also being asked to make considerable sacrifices. The Chairman, Frank Miller, was particularly unimpressed. The White Paper had clearly stated that the minister intended to find money for new capital equipment by cutting existing forces, and yet Rayner was obviously ignoring this directive. Miller was firm, and suggested that the only way the RCN could maintain its SACLANT force goals was to earmark ships from the West Coast to the East in times of crisis. Robbing one commitment to pay another was no solution and Rayner let Miller know as much. This approach was not only unrealistic given the nature of modern global war, but as Rayner explained, it also “would be quite unsatisfactory to SACLANT.” It was for this reason

86 See correspondence on DHH, NPCC Papers, 79/246, file 78A.
that Rayner continued to push for new construction that consisted of destroyers as well as submarines. He even went so far as to suggest that the navy would be willing to give up the specialized sealift ships if it ensured that the Restigouche and Mackenzies were converted.\textsuperscript{87} This was, of course, a hollow offering – Rayner never liked the idea of wasting anti-submarine warfare resources on sealift ships – but the importance of this point is that it further illustrates how some naval air advocates’ willingness to sacrifice the conversion program put them at odds with their chief’s position.

The Restigouche and Mackenzie conversions were important. Their ability to help plug the weapon-detection gap was seen as a key element to balance the RCN’s anti-submarine team. That was certainly Dyer’s thinking when he had ordered the Directorate of Naval Fighting Equipment Requirements (DNFER) to produce a comparative study to determine whether ARSOC, IKARA or DASH was the best mate for the Restigouche and Mackenzies. The DNFER report should have cleared the path for phase two of the conversion program, particularly since its findings conclusively argued that extended range ASROC was a better weapon than Australian/British IKARA venture “by at least a factor of two.” Described as the more effective and less costly option, the ASROC would give the RCN the final piece of “a mixed bag of weapon systems,” and act as “a complementary capability to those systems currently being fitted (i.e., HSS/2 conversion)” which was “a primary factor in this choice.”\textsuperscript{88} This conclusion should never have been in doubt. Comments made as early as January 1963 suggested that IRAKA was not the right match for the Mackenzies and Restigouches because of its “size

\textsuperscript{87} Chiefs of Staff Meeting, 2 July 1964, DHH, Raymont Papers, 73/1223, file 1311D; Rayner to DM, 29 May 1964, DHH, NPCC Papers, 79/246, file 80.
and cost.” Moreover, the fact that Dyer continually spoke of the RCN’s acquiring ASROC well before the report was concluded is highly suggestive and raises the possibility that he had a bias for the American program.89

It is difficult to say with any degree of certainty whether Dyer had influenced the selection process, but there was at least one officer who nevertheless raised the alarm. After taking a close look at both systems, Sam Davis came to the rather blunt conclusion that IKARA was “the only weapon carrier available in the foreseeable future that in any way approaches the Staff Requirements.” Davis was right to be concerned. The current incarnation of ASROC was a substandard design that was fraught with technical difficulties and poor performance results. The fact that the Americans were pouring money into assisting the Royal Australian Navy with IKARA (presumably in anticipation of ASROC’s failure) appeared to bear this out. And it was for that reason Davis made the extraordinary recommendation that the RCN fit DASH (Drone anti-submarine helicopter) into the Restigouche and Mackenzies as an interim measure until IKARA was ready to hit the production lines. 90 This idea, however, was quickly rejected. ASROC was a disappointment, but it was the vastly superior improved and extended version - which was estimated to have an impressive range of 18,000 yards as well as a much higher kill ratio - that Dyer was actually eyeing.91

Despite enjoying the support of the Chief of the Naval Staff and acting Chief of the Naval Staff, the ASROC-armed Restigouche and Mackenzie conversions were still in

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88 Study of Long range Anti-submarine weapons delivery systems for Restigouche/ Mackenzie Class DDEs, DNFER, July 1964, DHH, NPCC Papers, 79/246, file 103; Ikara anti-submarine system: project and approval, 1 June 1964, PRO, ADM 333/2; Ikara for the Royal Navy, 1963, PRO, ADM 256/129.
89 Brief on the RAN IKARA, 22 January 1963, LAC, Brock Papers, MG 30 E 522 vol. 3; Dyer to Fraser-Harris, 10 March 1964, DHH 79/246, file 103.
90 DG Ships to D/CNS, 9 April 1964, LAC, RG 24, Accession 1983-84/167, Box 3734, file 8100-1 vol. 10
91 Dyer to Fraser-Harris, 10 March 1964, DHH, NPCC Papers, 79/246, file 103.
trouble. With the Phase one plan to add SQS 505/502 variable depth sonar having already hit $23,870,000 and rising, the addition of ASROC for Phase two of the conversion program threatened to consume a sizable sum of the navy’s budget.\footnote{Naval Board meeting, 28 July 1964, DHH, RCNHS Fonds, 81/520/1000-100/2, Box 26, file 63.} While that made the Restigouche and Mackenzie conversion a direct competitor to the Essex, the naval aviators were not the only ones who were questioning the value of adding ASROC to these ships. Various voices from within the navy were still suggesting that it would be better to convert the Restigouche and Mackenzies into DDHs. Although operational experience as well as a number of reports had convincingly argued that the ASROC equipped destroyer-escort was the best solution to the Sea King and Tracker’s dead time, a new argument emerged which claimed that helicopter-equipped Restigouches and Mackenzies could make a contribution to limited war operations where the ASROC fitted ones could not. And with that the Restigouche and Mackenzie conversion was dragged into the specialized versus dual purpose debate as there “was considerable discussion” that “in the realm of limited war, the helicopter would seem to be more versatile.”\footnote{Chief of Staff Committee, 2 July 1964, DHH, NPCC Papers, 73/1223, file 1311D; Minutes of meeting to discuss staff action indicated on the Report of the Maritime Systems Studies group, 31 August 1964, LAC, RG 24 Accession 1983-84/167, box 3734, file 8100-1 vol. 10.} More to the point, the Restigouche and Mackenzie conversion, like so many of the RCN’s programs, was heading in a complete circle as the idea of turning them into DDHs was once again under consideration.

The only new capital program where there was even a hint at unanimity was the guided missile destroyer. Work on the guided missile destroyer design had proceeded smoothly and it did not take long before DG Ships had three concepts ready for approval. The first two designs were similar to the General Purpose Frigate, but the third, which
was the one ultimately accepted by the Naval Policy Coordinating Committee, was unorthodox and based on the need to provide a better electronic arrangement. Other important differences with the General Purpose Frigate were also considered. Rather than possessing a general-purpose capability, this new destroyer would place greater emphasis on air defence. Specifically, it was observed that there was no need for a utility helicopter since the seven St. Laurents and two Annapolis DDHs, along with Bonaventure and Provider, would provide the fleet with all the helicopters it needed.

That furthered earlier arguments that the guided missile destroyer was an ideal contender to join the Restigouche and Mackenzie class as an ASROC carrier. Other important innovations followed. To get the desired speed of thirty knots, it was further suggested that the navy explore gas turbine engine technology. Troop lift facilities were also omitted, which further divorced the guided missile destroyer from its predecessor.

Fraser-Harris nevertheless remained nervous. There were still many similarities that could easily make the guided missile destroyer “politically unacceptable,” and he therefore warned that “the words General Purpose Frigate” were to be avoided “at all costs.”

Welland was not nearly so concerned – the guided missile destroyer was in good shape and the case for its acquisition strong – but it was important for the navy to be prepared. Nothing could be taken for granted, and Welland told his staff that “it is vital that the Navy has its position concerning the DDG well established and plans sufficiently advanced to proceed with the construction of the ships as soon as the opportunity arises.”

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94 Minutes of a special meeting held in ACNS (A&W)’s Office, 18 June 1964, DHH, NPCC Papers, 79/246, folder 56; ACNS (A&W) to VCNS, 15 June 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-16.

95 Welland to Sec Naval Board, 13 July 1964, DHH, Rayner Papers, 99/31-II-13.
Welland laid out his proposed force structure eight days before integration went into effect. The composition of the current fleet – which in July 1964 consisted of *Bonaventure*, 23 destroyers, 17 frigates, one training submarine, one supply and two escort maintenance ships as well as 33 RCAF Argus and 25 Neptune aircraft – was, with the exception of the frigates, a “reasonably up-to-date” specialized anti-submarine force. He therefore argued that the navy had to immediately switch its attention to finding solutions for the following issues:

a) The force goal problem which is caused by the ageing Frigates  
b) The Lift Ship Problem  
c) The Anti-aircraft problem at sea  
d) The Cost/Effectiveness problem of the Naval Air Arm. 96

Welland’s answer to these shortcomings perfectly captures how he had effectively usurped Fraser-Harris’ role as the aircraft carrier’s chief champion and, had it succeeded, his plan would have guaranteed the future of naval aviation well into the 1980s as was shown in the document “Capital Equipment Program for the Navy”:

a) Acquire an Essex class Carrier from the US Navy and modify it to the standard whereby it can operate the following aircraft types: (i) CS2F-2 [Tracker] (ii) CHSS-2 [Sea King] (iii) A4E-5 [Skyhawk] (iv) AEW Tracer. This cost of buying the carrier, modifying it… would amount to about $140M [Million].  
b) Retain Bonaventure in commission and operate her in the ASW role whenever the ESSEX Class is laid up for servicing. When the ESSEX Class is operational, operate BONAVENTURE as a Lift Ship…  
c) Cancel the nuclear submarine requirement  
d) Commence the DDG building program  
e) Cancel the Lift Ship requirement  
f) Build a second PROVIDER  
g) Acquire the necessary aircraft to make the ESSEX fully operational. It is noted that the cost of these aircraft is included in the $140 M. above. 97

97 Ibid.
There were advantages to this fleet and Welland did his best to sell them. His arguments were mostly operational. Experience at sea had shown that on average Bonaventure was only available six out of twelve months of the year, meaning that a second carrier would virtually guarantee that one would always be serviceable. His second point, however, was harder to substantiate, arguing as he did that SACLANT would accept the Essex as a replacement for the older frigates. SACLANT’s desperate shortage of destroyers had led to repeated requests for escorts, and future events would go even further to prove Welland wrong. Welland’s last argument, while true, also missed its mark. His force structure could do something that Rayner’s fleet of specialized lift ships could not. Besides its ability to transport 1200 troops and 300 vehicles, as well as provide those forces with tactical air support and a suitable degree of air defence, the Essex and guided missile destroyers was the only team that satisfied “all or most of the requirements called for at present.”98 That may have been accurate, but the Naval Board was unwilling to commit to the expensive carriers.

Rayner’s desire to have a firm program in place at the time of integration was never realized. His final day in the navy, which came eight days before the last Naval Board meeting and eleven days prior to integration, was characterized by the same infighting that had dogged his efforts to develop a cohesive force structure throughout his four years as Chief of the Naval Staff. The fleet that emerged at the 28 July 1964 Naval Board meeting was the product of the pulling and hauling between the advocates and as a result it satisfied no one. The champions of the carrier had done a good job of undercutting the specialized sealift ships and nuclear submarines contained in Rayner’s mark document, but they failed in their attempt to get an Essex substituted in their place.

98 Ibid.
Instead, the Naval Board only managed to proceed with recommendations for Phase One of the Restigouche/ Mackenzie conversion, the guided missile destroyers, and the A-4 acquisition. It was a hurried and disorganized effort that would leave the navy with few options to counter Sutherland’s Maritime System Study Group. At least one officer had foreseen this fate well before this report’s release, arguing that the navy would need a “sound logical military (and political) argument” to use with the minister if its force structure differed from the one Sutherland offered. This point was rendered moot, however; thanks to the factionalism at Naval Headquarters there was no single force structure to measure against what Sutherland was about to propose.

Sutherland began his study by addressing the issue of versatility. By doing so he identified that his group had a firm grasp of the problems associated with trying to create a force that was both cost-effective and capable of meeting Canada’s maritime needs. For over six years the RCN had been wrestling with the key question of whether it should build a specialized or versatile fleet, and Sutherland’s group wasted no time weighing into the debate. “An important question, which must ultimately be decided on the basis of judgement,” Sutherland asked in his report, “is the extent to which it is feasible and advisable to purchase versatility in the operating forces.” His answer represented a total vindication of the approach that Rayner had tried to take as Chief of the Naval Staff. Canada’s need to fulfil anti-submarine alliance commitments to SACLANT far outweighed any requirement to UN and limited war operations, and therefore the RCN’s best path was to work a small measure of versatility into a specialized anti-submarine warfare force. But Sutherland did something that Rayner had failed to do. He was bold

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99 Naval Board Meeting, 28 July 1964, DHH, RCNHS Fonds, 81/520/1000-100/2, Box 26, file 3.
100 Aide Memoire for VCNS, nd, “Future Fleet Requirements,” DHH, NPCC Papers, 79/246, file 78A.
and convincing. The RCN, in his view, had not come to terms with an essential truth, which was that “versatility is expensive and it is a question of fact rather than rhetoric how much versatility one can achieve upon a strictly limited budget.” Money, rather than capabilities, was the key determinate that would shape the RCN’s next force structure. The RCN should have come to terms with this reality long before Sutherland and his group put pen to paper. And had they done so the navy would not only have avoided much internal conflict and confusion, but also it would have realized that there was just one type of force structure it could afford.  

Sutherland’s study was extensive. Eleven possible programs were explored and by placing them into three broad categories – which consisted of a force structure centred around aircraft carriers, nuclear submarines, or “small ships [destroyers] and maritime patrol aircraft” – Sutherland managed to frame his analysis in a context that the RCN could easily understand. The battle between the advocates had rested at the core of the RCN’s troubles with force structure (a point that he inadvertently drove home by observing that these platforms “must be regarded as competitors”), and Sutherland once again had no problem taking sides. His opinions had only solidified since writing his General Purpose Frigate study the previous summer and this was bad news for the submariners. Although he recognized that they were the best anti-submarine platform, it was soon apparent that his report was not going to form a base from which the nuclear submarine advocates could make a comeback. His reasons were the same as the ones the

102 Sutherland summary, DHH, Raymont Papers, 73/1223, file 1502, Box 74.
The fact that such views were being freely expressed at Naval Headquarters made it much easier to dismiss the nuclear submarines, but the aircraft carrier took more substantiation. These platforms created “a rather special problem” which Sutherland explained as follows:

There is no doubt that fixed-wing aircraft will remain an important, indeed an indispensable component of the total ASW mix. What this boils down to is that there is no prospect of any other system which is a more economical producer of square miles of surveillance and attack capability. In operations close to shore-bases fixed-wing shore-based aircraft possess an economic advantage over fixed-wing carrier-based aircraft. At some distance from shore bases which may be between 700 – 1000 miles, the carrier-based fixed wing aircraft acquires an economic advantage owing to its greater rapidity of response and the fact that much less time is lost in transit.  

The fact that the Trackers and Sea Kings could bring a massive concentration of firepower on a suspected submarine position had gone a long way in countering earlier criticisms of the aircraft carrier’s vulnerability to torpedo attack. But it was the dollar sign, rather than any weapon system, that was the carrier’s greatest enemy, and no tactical argument was going to change the fact that the RCN had to work within a future proposed budget of $ 375 million.

Excessive references to that specific dollar amount must have made for annoying reading for those who read this document, but it illustrated an important point all too well:

…namely that the budget available for maritime systems over the next ten years will be stabilized at $ 375 millions… [O]nce this assumption is accepted the conclusions are, to a large extent, inevitable. … It seems clear that within a defence budget of $ 375 millions we simply cannot afford light carriers.  

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104 Ibid.
must abandon our fixed-wing carrier-based aviation when BONAVENTURE and the present outfit of trackers reach the end of [their] useful life. The procurement and modernization of an ESSEX class hull is no solution to this problem. It would permit us to retain and improve our carrier aviation [but] at the expense of serious deterioration in the destroyer force. In the year 1975 we should still be faced with the immediate demise of carrier-based aviation.

Things only got worse for the naval air supporters, particularly since Sutherland’s recommended force structure was exactly what Fraser-Harris had been dreading. Sutherland, who had always supported Rayner’s DDH concept operations, argued that a post-Bonaventure fleet in which the DDHs would work with guided missile destroyers while being assisted by long range maritime aircraft was the RCN’s best option. Given the limited money available his logic, like Rayner’s, was undeniable. While the carrier-based Trackers and shore-based long range maritime patrol aircraft were essential parts of the ASW team, the RCN simply could not afford both. Since the latter could also provide a greater surveillance capability to protect Canadian sovereignty it was deemed the more “cost-effective” option.

The same reasoning also applied to the destroyers. Although it was the “poor man’s solution,” the navy would nevertheless get good value from basing its fleet around guided missile destroyers serving as ASW Flotilla leaders. As a “highly versatile ship” the destroyers could play a useful role in almost any kind of naval operation, and, according to Sutherland, it was the best platform to meet Canadian national interests and alliance commitments with the available funds. This led to a recommended force structure that would consist of 8 guided missile destroyers, 30 to 36 replacement aircraft for the Argus, 8 to 10 minesweepers, (which were deemed as another cost-effective way to assert national sovereignty in littoral waters) and an extra Tanker vessel similar to
Moreover, he also included some current projects – such as the Restigouche and Mackenzies conversions, Bonaventure’s refit, the procurement of the Oberons, as well as the modernization of the Trackers – into his procurement plan. And that force structure, with its central assumption that the navy’s post-Bonaventure anti-submarine aircraft needs could be met by teaming up destroyers with the long range shore-based aircraft, was devastating news for the naval aviation advocates.

Despite Welland’s best attempts the campaign to acquire a replacement for Bonaventure was drawing to a close. The minister himself had commissioned Sutherland to write his report, and it was therefore a foregone conclusion that it would carry much weight with Hellyer. Moreover, a number of naval officers were finally starting to see what Rayner had long been trying to tell them: the RCN could no longer afford carrier aviation. So much so, in fact, that Sutherland’s report, which was presented to the first meeting of the Chief of Defence Staff committee on 19 August, was greeted at the newly integrated headquarters with little criticism from naval circles. The comments offered by Dyer’s assistant, Captain H.A. Porter, were typical. Although he disagreed with many of Sutherland’s tactical assumptions on the carrier, Porter found that the report was “very good” and was “much more in line with current naval thinking than I had been led to believe.”

Nor did it help that Davis began to openly question Welland’s Essex plan. After explaining that he had been “spurred on by A/VCNS” to investigate the costs of an Essex conversion, Davis told Rear Admiral Caldwell that such a program was possible, but “where the money would come from to do this work in Canada, is far less easy to

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105 Sutherland summary, DHH, Raymont Papers, 73/1223, file 1502, Box 74.
comprehend.” Other officers went even further, particularly since there were indications that the navy could no longer dither over force structure.

The release of Sutherland’s report, the integration of the forces, and signs that the government was under intense pressure from the shipbuilding industry to get a program started, all conspired to convince the naval air advocates that they were in trouble. There was only enough time for one last desperate push, and the key to snatching victory from defeat rested in their ability to discredit Sutherland’s “interpretation of a cheap anti-submarine force of declining strength and increasing specialization.” While this strategy was uniformly accepted, the tactics to achieve this aim were not. Some advocates chose to focus on money. Since Sutherland had done such a good job of showing that the navy’s budget was fixed these advocates found themselves in the all too familiar position of having to make room for the carriers. Arguing that intelligence reports had given little credence to the mine threat, one officer proposed that the navy could generate the money for a carrier by ignoring Sutherland’s recommendation for minesweepers as well as scrapping one of the proposed guided missile destroyers. The minesweepers were an easy target. Sutherland’s operational arguments were weak, and there were few minesweeper champions left at headquarters to capitalize on this sudden interest in their platform. Welland, however, took a different tack. In his view, the best option was to simply ignore Sutherland’s strict adherence to the fixed budget. Procurement was a game of give and take, and it was his belief that the navy was setting itself up for further cuts by agreeing to build a fleet within the confines of a yearly ceiling of $375 million. Instead, Welland, who previously had developed a rapport with Hellyer during GOOEY

DUCK as well as another a ministerial visit to the East Coast in June, was convinced that sound military logic would loosen the minister’s purse strings. Welland had little choice but to make such an argument, especially since his fleet of a carrier, A-4s, and guided missile destroyers could only be built providing the navy took “some license… to exceed the imposed financial ceiling.”

Fotheringham also continued the fight, and even staged a minor revolt against the new integrated nomenclature by referring to himself as the “ex-Director of Naval Aviation Requirements.” Realizing that there was little new ammunition to support a new naval aviation offensive, Fotheringham chose to focus on the carrier’s ability to meet the tasks assigned to the navy in Hellyer’s White Paper. This was the carrier’s strongest characteristic, and it was one that he believed Sutherland had purposefully downplayed to make a case for the destroyers. Fotheringham therefore emphasized that the navy was at a precipice and accepting Sutherland’s destroyers would both “complete our identity with the ASW force” and serve as “a clear rejection of a desire for flexibility.” Unable to hide the fact that he was an advocate, Fotheringham admitted that he was biased yet that did not change certain truths:

Knowing the author makes the sequitur obvious - the greatest flexibility that is obtainable in a naval vessel is that possessed by an aircraft carrier. …Can the minister really approve a DDG program when he disapproved a GP Frigate programme having the backing of government and ship-builders which that programme had? … This has been a hurried and urgent proposal for the time of decision is here. …If we rush into a construction programme now in the interests of laying down hulls quickly, it will determine the character of service for the balance of this century. Therefore it is strongly recommended that the matter receive urgent and cautious consideration.

110 COR to VCDS, 18 August 1964, DHH, NPCC Papers, 79/246, file 78A.
111 Fotheringham, Future Naval Programme, 4 September 1964, DHH, NPCC Papers, 79/246, file 78A.
Although most naval aviators had wanted both carriers and guided missiles destroyers, it was clear to Fotheringham that the time had come for them to sacrifice the latter to save the former. He thought it would be easy to do so. Sutherland had not explored the political dimensions of a guided missile destroyer acquisition, and therefore offered no suggestions on how Hellyer could embark upon a new program without conceding that the earlier decision to cancel the General Purpose Frigate had been a mistake. This was the perceived chink in the frigate’s armour and the naval aviators could have easily exploited this weakness to the destroyer’s disadvantage.

That chink was much bigger then the naval aviation advocates ever realized as Hellyer dropped a bombshell on the new chief of the defence staff by telling Miller that:

The alternative of building some LPHs [Iwo Jimas], however was not fully explored and too lightly dismissed [in Sutherland’s report]. You may be aware that the RCN recently set up an ad hoc group to determine the size and shape of the Naval force 1964-1974 [Burchell]. This group recommended the procurement of 2 LPHs in priority over DDGs which were recommended, if sufficient funds are available. A factor which should clearly be borne in mind is the ability to support the helicopters carried on our DDEs after the Bonaventure goes out of service.112

Hellyer had made a good point. The destroyer, unlike the carrier, had neither the space nor the personnel to conduct proper maintenance on their helicopters.113 Hellyer therefore wanted the Iwo Jima’s value as a maintenance platform re-examined. The minister was also unimpressed with Miller’s suggestion that the retention of Bonaventure negated the requirement special sealift vessels:

The contention that the carrier provides adequate sealift is not, in my opinion, “clearly brought out in the [Sutherland] study.” It is merely flatly asserted. The question of additional sealift is not optional; it is a requirement set out in the White Paper to improve the cost effectiveness of our forces as a whole. LPHs

112 Hellyer to Miller, 2 September 1964, DHH, Raymont papers, 73/1223, file 402.
could provide this capability, or failing that, we might acquire two or three LSL (Landing Ship Logistical).\textsuperscript{114}

It was fortunate that Miller never passed these views onto the navy. Suddenly revisiting a dead carrier concept like the Iwo Jima would have thrown the maritime force structure into further chaos at a time when some order was finally being restored. The more so since Hellyer was not actually saying that he wanted Iwo Jimas but rather that the operational arguments against this design were not enough to eliminate them. That was where Sutherland had failed. In his view the financial case against acquiring carriers of any type was so strong that there was no need to raise the operational factors. But Miller understood something about the minister that Sutherland did not. Hellyer had to exhaust every possibility before he was willing to make a final decision, and Sutherland had left too many questions unanswered. Miller knew that the cost of carriers was not congruent with the current cuts to the defence budget, but there can be no doubt that the naval aviation advocates would have been angry had they known the integrated headquarters had prevented them from exploiting the minister’s apparent interest. In reality, however, it would not have mattered: the carrier’s future had already been decided.

The end for naval aviation’s campaign to replace \textit{Bonaventure} came suddenly, and Fraser-Harris cast a wide net over those that he held responsible. Two men in particular caught his accusing eyes, arguing later in life that “In 1964 AVM [Air Vice Marshal] Miller put the last nail in the coffin of naval aviation [and] the naval uniform… and Herby Rayner played the flute at the funeral.” Similar comments further suggest that he was charging the Chief of the Defence Staff with being the key architect of the navy’s inability to acquire a replacement carrier, while claiming Rayner was guilty of neglect

\textsuperscript{114} Hellyer to Miller, 2 September 1964, DHH, Raymont Papers, 73/1223, file 402.
because of his failure to protect naval aviation. Unlike the chiefs of the army and air
force, who Fraser-Harris found “were both dynamic personalities,” Rayner’s greatest sin
was that he had lost touch with reality.\footnote{Fraser-Harris to Robbie, 25 July 1993, IWM, Fraser-Harris Papers.} It pained Fraser-Harris to watch Rayner getting
bogged down on trivial issues, such as “the number of buttons to be worn on Wren
uniforms,” rather than saving naval aviation and fighting the minister’s plans to unify the
three services into a single entity called the Canadian Armed Forces.\footnote{Fraser-Harris to Ralphe, 13 September 1993, Fraser-Harris to Robbie, 25 July 1993, IWM, Fraser-Harris
Papers.} On that latter
score Fraser-Harris had a point. Prior to his departure as Chief of the Naval Staff, Rayner
had instructed Rear Admiral Landymore - who was one of the first to understand the full
implications of Unification - not to act on his desire to take immediate and drastic action
to stop the minister. “I read Bill Landymore’s letters, which are very much to the point,”
the cautious Rayner wrote to Brock, “but this is not the time to be making it; it is
premature and too soon to play the hand (if such should prove to be necessary).”\footnote{Rayner to Brock, 14 May 1964, LAC, Brock Papers, MG 30 E522, file “Correspondence Part I 1964."} Whether or not Rayner should have taken a stand against Unification when the idea was
first proposed in the White Paper can be questioned, but Fraser-Harris’ was wrong to see
Rayner as the principle architect behind the decision not to replace \textit{Bonaventure}.

Rayner’s views on force structure make it clear that he did play a large part in
diminishing the requirement for a replacement carrier, yet it is a simple matter of fact that
he was no longer in the navy when the final decision on naval aviation was made. Fraser-
Harris’ charges that Miller was the mastermind behind this campaign against the carrier
were equally baseless. Comments to the minister on Sutherland’s report effectively
exonerate Miller:

\begin{itemize}
\item \footnote{Fraser-Harris to Robbie, 25 July 1993, IWM, Fraser-Harris Papers.}
\item \footnote{Fraser-Harris to Ralphe, 13 September 1993, Fraser-Harris to Robbie, 25 July 1993, IWM, Fraser-Harris
Papers.}
\item \footnote{Rayner to Brock, 14 May 1964, LAC, Brock Papers, MG 30 E522, file “Correspondence Part I 1964."} \end{itemize}
I believe that the conclusion with regard to our carrier are generally correct: namely, that we cannot afford to contemplate replacement at this time, but that we should plan to continue the operation of Bonaventure in its present role to the end of its useful life. This will include a refit within the next two years and the continued use of Tracker aircraft and helicopters, but does not appear to warrant the procurement of fighter type aircraft.\textsuperscript{118}

The important of this statement cannot be over emphasized. Miller was obviously driving nails into a coffin that had been shaped for the navy’s A-4 acquisition, but the Chief of the Defence Staff’s assertion that a carrier replacement could not be explored “at this time” was hardly slamming the door shut on naval carrier aviation as a whole. Indeed, Miller’s comments left the navy’s current commitment to *Bonaventure* intact, as well as giving aviation advocates the flexibility to re-present a case for a new carrier if more funds from the government became available at a later date.

The Chief of the Air Staff, C.R. Dunlap was also one of Fraser-Harris’ targets. The Assistant Chief (Air & Warfare)’s scars from fighting the Argus acquisition in the late 1950s ran deep, and ever since losing that battle Fraser-Harris knew that it was only a matter of time before the navy would face another confrontation with the air force over a replacement program.\textsuperscript{119} The fact that *Bonaventure’s* life expectancy coincided with the Argus’s airframe limits, meant that the air force would be shopping for their replacement aircraft at the same time the navy was looking for a new carrier. Unlike the earlier battle, however, the government’s cutbacks ensured that only one of these platforms would survive. As a result, some naval aviators got nervous when Dunlap suggested in August 1963 that the RCAF might have to act on an Argus replacement program sooner than they had anticipated:

\textsuperscript{118} Miller to Hellyer, 21 August 1964, DHH Rayner Papers, 99/31-1A-8.  
\textsuperscript{119} Charles Dillion, interview by Hal Lawrence, tape recording transcript, Lawrence home, 10 February 1983, DHH, BIOG D.  

374
The Chief of the Air Staff advised the Committee that he had had correspondence with the Chief of the Air Staff of the Royal Air Force concerning replacement for maritime aircraft. The RAF’s SHACKLETON’s were due to go out of service about 1972, and the RAF were interested in having Canadair do a design study for replacements. Since the RCAF itself would need to replace its ARGUS aircraft shortly after 1972, it was proposed to take the matter up with DDP. 120

Possible British interest in acquiring a Canadian design for their ageing Shackletons obviously gave Dunlap good reason to propose the RCAF advance its own ambitions. But where the RCAF saw an opportunity of convenience, Fraser-Harris saw collusion. Dunlap’s recommendation had come at the exact same time that EASTLANT was openly questioning the escort carrier’s value, and this type of coincidence was hard to overlook. Other events over the ensuing year further sparked Fraser-Harris’s mistrust of Dunlap and the air force. So much so, that at the time of integration he believed Dunlap - “solidly backed up by the Chief of Defence” and buoyed by Sutherland’s report (which went so far as to recommend the American P3 Orion) - was determined to get the new patrol aircraft at the expense of the carrier replacement. 121

Fraser-Harris had good reason to be suspicious of Dunlap and the air force. They, too, were under considerable pressure to find an acceptable force structure. The RCAF had already let the alliance down when they were unable to match SACLANT’s original request for forty-eight aircraft, but now the government’s cutbacks were making it impossible for Dunlap to maintain the air force’s agreed commitment to the Atlantic (which stood at forty aircraft). 122 The air force was in trouble and their initial plan was to increase the unit strength of the three East Coast squadrons from eight to ten Argus while

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120 Chief of Staff Committee, 1 August 1963, DHH, Raymont papers, 73/1223, file 1311.  
121 Fraser-Harris to Robbie, 4 August 1993, IWM, Fraser-Harris Papers; Report of the Maritime Systems Study Group, 31 July 1964, DHH, Sutherland Papers, 87/253-II-20.10; Aide Memoir for VCNS, nd, DHH, NPCC Papers, 79/246, file 78A.  
122 Chief of Staff committee, 22 March 1962, DHH, Raymont collection, 73/1223, file 1311.
robbing ten Neptune aircraft from the West Coast. This would effectively lead to the deactivation of 407 Squadron and Pacific air operations as a whole. Dunlap was unhappy with that prospect and instead argued that considerable savings could be achieved by deploying Argus aircraft to the West Coast in lieu of the Neptunes.\textsuperscript{123} It was wishful thinking that only confused matters and ignored an essential truth: Hellyer’s budgetary targets could not be met by simply reshuffling forces. Sacrifices would have to be made and for the air force that meant scrapping all twelve of its Neptunes, even though it “would degrade the RCAF contribution to ACLANT to the point where only 58 % of the originally requested contribution, or 70 % of the presently agreed contribution would be met.”\textsuperscript{124} Fraser-Harris recognized that the air force was going through the same gut-wrenching experience as the navy and that made them dangerous. Presumably, giving up the Neptunes would put more pressure on the air force to secure the future of their remaining maritime patrol squadrons by acquiring a replacement for their fleet of thirty-three Argus. While this logic made sense, Dunlap and the air force never pushed the Argus replacement as aggressively as Fraser-Harris implied.

Despite Fraser-Harris’ suspicions, the air force was actually in no mood to embark on a rushed replacement program. The air staff was still assessing the potential roles that these future aircraft would have to perform in the 1970s and 1980s, and as a result Dunlap did not intend to sell aggressively a new patrol aircraft program until after this study was done.\textsuperscript{125} The air staff had shown little concern about having to wait. Air Council minutes identify that the need for new transport aircraft, such as the C-130, as

\textsuperscript{123} Paper at DHH on Argus on West Coast; Minutes of Air Council, 20 May 1964, DHH, Raymont Papers, 73/1223, Box 101, file 1952; Dunlap to Minister, 29 July 1964, DHH, Raymont Papers, 73/1223, file 357.

\textsuperscript{124} Possible Reductions to RCAF Defence Program, nd [circa 1963], DHH, Raymont Papers, 73/1223, file 1926, Box 100.
well as a replacement tactical fighter were by far the air force’s top priorities throughout 1963 and early 1964. That left little time for discussion on other aircraft procurement plans, explaining why the Argus replacement was barely mentioned at these meetings. Put simply, finding a replacement for the long-range maritime patrol aircraft effectively had been put on the backburner. As a result, there was no substantial or conspiratorial effort by Dunlap and the air staff to specifically torpedo a replacement carrier, but rather it was the aircraft itself - mixed with the government’s cutbacks - that represented the true threat. Sutherland’s recommendation to buy thirty Orions came with an estimated $307 million price tag and that left little room for a naval carrier program. Worse yet, thanks to Sutherland’s report, Hellyer was about to be told that the patrol aircraft and carrier performed many of the same tasks, and that this type of redundancy meant that the Canadian military did not necessarily require both. “Since each depended in those days upon the doctrine of filling the mid-Atlantic gap in the anti-submarine war,” Fraser-Harris later explained, “the two programmes were almost certainly mutually exclusive in terms of Canadian budgetary expenditures…. It was a financial battle Fraser-Harris could never win, and he finally conceded defeat in his private little war against the long-range maritime patrol aircraft:

At this time, as A&W [Air and Warfare] I was left to fight the war against… an aircraft development which needs no discussion here, but which, if accepted by Government as the re-equipment Coastal Command anto-submarine [sic] aircraft would undoubtedly sound the death knell for naval aviation. …it was unquestionably going to be an RCAF expenditure which was so great as to make the retention of a carrier highly unlikely. …So finally came the crushing defeat of the navy. It never soon a chance.

126 Air Council Minutes, 1963, DHH, Raymont Papers, 73/1223, file 1311.
128 Fraser-Harris to Robbie, 6 November 1993, IWM, Fraser-Harris Papers.
In the end, therefore, while the long-range patrol aircraft did play a role in the carrier’s demise, Dunlap and the air force cannot be considered the prime culprits for making the final decision.

The same was true for the army. The naval aviation champions had always hoped that the sealift role would prove the carriers indispensable by showing how they performed tasks that long-range patrol aircraft could not. However, few would take this claim seriously if the army refused to acknowledge a need for naval platforms that both carried troops and provided tactical support. Despite being one of the White Paper’s stated goals, the Mobile Force and limited war concept of operations did not appeal to army. United behind their current NATO commitment to a land war in Europe, the army did not want to get distracted by an additional tasking that it could neither afford nor man. This was never expressly stated, but rather the army chose to string the navy along by their constant refusal to layout their sealift requirements. Their decision not to back the Essex’s sealift capability undoubtedly hurt the program’s chances, but this setback, while serious, was not enough to kill the carrier advocates’ aspirations. \(^{129}\) Instead, the events leading up to the decision to abandon the Essex as well as a replacement for Bonaventure identifies that Fraser-Harris had it all wrong. The ultimate demise of naval aviation came not from Miller, the air force or even the army, but rather was the product of a decision from the remnants of the old Naval Board itself.

On the afternoon of 21 August, Dyer, who was now the Chief of Personnel, gathered his former board members in his office to compare Welland’s force structure to

\(^{129}\) VCGS (Bernatchez) to VCNS, 22 May 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-15 vol.2; Meeting to discuss Means of Providing a Canadian Sealift Capability, 4 June 1964, DHH,
Sutherland’s Report. The result was a climatic meeting that finally produced a single force structure that effectively drowned out the influence of the advocates. The sparks flew almost immediately. Like Fraser-Harris, Welland also saw the long-range maritime patrol aircraft as the key threat to the Essex and the meeting opened with his criticisms of this air force program. His comments were direct. Sutherland was wrong to advance an aircraft program that Welland claimed did not actually need replacing for another three years. Nor was it right for Sutherland to name a specific aircraft type because there were smaller and cheaper alternatives to the P3 Orion. That was as far as Welland would get. Like so many other naval aviation supporters, he was building a case for the Essex at the expense of the long-range maritime aircraft but this time he was interrupted. The former Chief of Naval Personnel, Vice Admiral M.G. Stirling, saw the same old arguments being played out. Wanting the navy to move ahead he therefore “suggested that by destructively criticizing the proposed Maritime Aircraft replacement program, the impression might be gained that the RCN were trying to hold onto the existing Carrier Borne Aircraft Organization.” Stirling was worried that the navy’s force structure would not be taken seriously if it was perceived as being nothing more than a biased campaign to save the carrier replacement, rather than a clearly thought out fleet designed to meet Canada’s needs.  

Welland backed off the maritime patrol aircraft, but things only got worse when the meeting turned to the acquisition of an Essex. Welland’s figures, which now ranged

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130 Minutes of an Ad Hoc Committee held in Admiral Dyer’s Office, 21 August 1964, DHH, Rayner Papers, 99/31-IB-25, Box 5.
from between $30 to $60 million, appeared low and his claim that the Essex would solve “the sealift problem” were hollow without the army’s support. His argument that the alliance would accept an Essex in place of the Prestonian frigates was also unconvincing, particularly when “Admiral Dyer commented that SACLANT might not want the RCN to get into the carrier business. He also noted that Dr. Sutherland considered that the RCN could not afford to keep BONAVENTURE running.” Although that latter observation was twisting Sutherland’s actual position, the remnants of the navy’s senior staff had got the message - there was not enough money in the new defence environment to keep naval aviation afloat after Bonaventure was decommissioned. And that led to the inevitable conclusion that “after some further discussion the meeting agreed that they were not in support of the provision of a ‘FRAMED’ [Fleet Rehabilitation and Modernization] ESSEX.”131

Testimonials from key naval officers reinforce the conclusion that the decision not to replace Bonaventure was self-inflicted. For most officers it was simply a question of economics. “Naval aviation is [a] very expensive business [and] gradually the Navy couldn’t afford less and less,” reported Captain R.A. Creery in an interview, while another officer mimicked this message by recalling how senior naval officers came to realize that “the size of the Defence Budget” made the end of the “Carrier-Aviation business… just a matter of time.”132 Even one of the most ardent carrier advocates, Vic Wilgress, was forced to admit that “as a Naval Aviator, of course, I didn’t ever appreciate it was obviously a costly thing, and the demise of it was probably inevitable.”

131 Ibid.
132 Captain R. Creery, interview by Tony German, tape recording transcript, location of interview unknown, 6 October 1984, DHH, 90/292, folder 17; Admiral RF Falls, interview by Tony German, tape recording transcript, location of interview unknown, 28 January 1985, DHH, 90/292, folder 28.
Wilgress did not stop there. His ship type was also vulnerable to the helicopter-carrying destroyer and long-range maritime patrol aircraft team because these platforms could “to some degree, do the same job as the Carrier borne ones.” That comment was indicative of an emerging consensus: shrinking defence budgets meant the Canadian navy’s best force structure was to operate shore-based aircraft with DDHs, which, in turn, would be protected against air threats by guided missile destroyers. Rayner had had it right all along and with the navy having gone full circle a number of old arguments began to reappear. Distributing the fleet’s helicopters among a number of destroyers was once again seen as a wiser strategy when compared to placing a large number of them all on a single high-value unit such as a carrier.\(^\text{133}\) The more so since hunting submarines and screening carriers required more destroyers than the RCN could afford. Certainly, that was the way Captain F.C. Frewer interpreted events:

> I think the smartest thing that the Navy ever did was to do away with Aircraft Carriers, because we just couldn’t put enough into it in the form of… gadgetry and what-not to make the thing work properly, and its - I shouldn’t be speaking like this, but the RCAF have always contended that shore-based aircraft could do the job better than Carriers, and I have to agree with them, because we spend so much God Damn time trying to protect the Carrier…\(^\text{134}\)

This argument was resonating with other officers as well, and with that the naval aviation advocates’ grip over the navy’s force structure finally slipped away.

Fraser-Harris had seen the defeat of the Essex coming. The faces in Ottawa were changing and not in a way that was favourable to naval aviation. Hardcore destroyer men, such as Commodore J.A. Charles (who not only took over from Fraser-Harris as the Assistant Chief (Air & Warfare) but also would become the new Director General

\(^{133}\) VJ Wilgress, interview by Tony German, tape recording transcript, location and date unknown, 9 January 1985, DHH, 90/292, folder 24.
Force Development in the integrated headquarters), were taking up the key positions responsible for the navy’s future composition. These new appointments altered the dynamics among the senior naval officers at Canadian Forces Headquarters, because as Sam Davis observed: “inevitably, it seems, there is an ebb and flow of personnel all of whom tend to bring in their own biases, inclinations, and aspirations.” This new tide was drawing Fraser-Harris away from the inner-circle of power and he realized that it was time to jump ship. Despite claiming that he got a personal offer of “further promotion in due course” from Paul Hellyer, the eccentric Fraser-Harris gave up his navy blues in mid-August for tropical attire which he planned to wear while captaining a 100-foot Antiguan charter ketch in self-imposed exile. But Fraser-Harris was not the only advocate whose dream ended at Dyer’s special meeting.

The end of the Essex had lead to a glimmer of hope for the nuclear submarine advocates. Suggestions that the naval aviators had unfairly driven the navy’s agenda towards carriers led to questions and “some argument” over “whether the Nuclear Submarine Programme was being turned down, not only because of costs, but because it would prejudice other programmes.” There was much truth to that accusation, but the impact of naval aviation advocates was not nearly as significant as the expense attached to a nuclear submarine program. Undergoing the same catharsis experienced by some of the carrier champions, the nuclear submarine advocates finally realized that the game was over. In fact, one submariner even so far as to later admit that “as a tax-payer, I have to

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134 Welland Memoir, p 6; Frederick Frewer, interview by Tony German, tape recording transcript, location of interview unknown, 3 October 1984, DHH, 90/292, folder 13.
135 Charles General Officer List, nd, DHH, BIOG C.
136 Davis, Submarine Acquisition in the RCN, DHH, 88/51.
137 “Career Dates after retirement,” IWM, Fraser-Harris papers; Fraser-Harris to Robbie, 6 November 1993, IWM, Fraser-Harris collection.
say there’s one heck of an advantage in the cost of a conventional class submarine.”

Yet another officer gave these lethal underwater hunters a more fitting epitaph “nuclear submarines is an enormous expense, we… decided that it really wasn’t for Canada, much as I would like to see it happen… I just think practically its [sic] probably not achievable…”

The defeat of both carrier and nuclear submarine aspirations finally cleared the way for the destroyer to become the centrepiece of the navy’s next force structure. It was a difficult and painful process. The aircraft carrier was a valuable asset and the navy would have gladly proceeded with a replacement for *Bonaventure* had they had the money to do so. Although individuals such as Fraser-Harris were quick to blame a host of candidates for the demise of carrier naval aviation, the simple reality was that the actual decision not to replace *Bonaventure* with another carrier had come from within the navy itself. It was the right thing to do under the conditions the navy faced in August 1964. Sutherland’s description of the destroyer as the “poor man’s solution” perfectly captures why the navy turned to this platform for its future force structure. Although the nuclear submarine was by far the best anti-submarine vessel and the aircraft carrier was the ideal multi-purpose ship, the government’s cutbacks to the navy’s budget left no room for either. The destroyer, on the other hand, was not only affordable, but it also provided the best return for those limited funds. It was by no means the perfect solution as operational experience had identified that the helicopter-carrying destroyer had weaknesses. Thanks to the development of the ASROC-equipped destroyers those

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138 Minutes of an Ad Hoc Committee held in Admiral Dyer’s Office, 21 August 1964, DHH, Rayner papers, 99/31-IB-25, Box 5.
139 Keith Nesbitt, interview by Tony German, tape recording transcript, location and date unknown, DHH, 90/292, Folder 16
shortcomings were, to a large extent, mitigated. And once mixed with replenishment
ships, Oberon submarines and maritime patrol aircraft, it was determined that this was the
best the Canadian navy could to do (with the funds available) to make an effective
contribution to its NATO partners in the 1970s.

140 Robert Falls, interview by Tony German, tape recording transcript, location and date unknown, DHH
90/292, Folder 17.
Chapter 7 A poor cousin on a picnic.

The end of the force structure crisis brought some much-needed focus to the RCN’s shipbuilding program. The Sutherland report, along with firmer direction from the minister and the integrated Canadian Forces Headquarters, in combination with the dwindling influence of the advocates, allowed the navy to produce a force structure in a remarkably short period of time. The change was phenomenal. For over a year the navy had been virtually paralyzed by indecision and chaos, but now the old remnants of the Naval Staff produced a force structure that met little resistance within Canadian Forces Headquarters and was embraced by the minister. In a remarkable turn of events, none of the platforms that had been vying for a place in the RCN’s force structure would survive. Instead, it was the all-but-forgotten Repeat Annapolis – which it should be remembered was first proposed in August 1963 as a possible alternative to the General Purpose Frigate – that would suddenly emerge as the centrepiece of the RCN’s future building program. Explaining how these helicopter-carrying destroyers put an end to the force structure debate by beating out all other competitors is the key point of this chapter.

The ultimate defeat of both the Essex and the nuclear submarine cleared a path for the acquisition of guided missile destroyers. The timing was ideal. Sutherland had provided the navy with a good workable plan when they needed it most. Although Hellyer had not yet read the report, it was well known that pressure from the shipbuilding industry was creating a sense of urgency within the government to get some type of program started. Hellyer was about to learn that Sutherland strongly endorsed an immediate program for six to eight guided missile destroyers, and by doing so effectively resuscitated a large portion of the fleet that Rayner had been advancing between 1960 and
1963. It was an incredible opportunity that Dyer was not going to squander. His Naval Advisory Group (which was a demi-official organization designed to provide a strong naval voice in the integrated headquarters) united behind a hybrid force structure that combined elements of both Sutherland and Welland’s proposed fleets:

- 8 Guided Missile Destroyers
- 1 replenishment ship (Provider type)
- 11 Restigouche/Mackenzie Conversions
- 19 Sea Kings
- Bonaventure improvement
- CS2F-2 [Tracker] Mid-life Modernization
- Jezebel on all Surface ships
- 21 A4E
- 8-10 Minesweepers

As Chief of Personnel, Dyer no longer had direct access to Hellyer in the integrated headquarters and the job of selling this fleet therefore fell to Miller. That was bad news for the A-4E acquisition. Despite enjoying a high degree of support from Dyer (who wanted to sell the program as a joint navy-air force venture of forty-eight aircraft), Miller drove the final nail in the A-4E coffin by refusing to explore it with Hellyer.2

Sutherland’s minesweepers were also in trouble as Miller told Hellyer he had “serious doubts” about these vessels. The minister shared his concern; going so far as giving specific instructions that the minesweepers were to be scrapped from the navy’s program.3

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1 Minutes on a meeting to discuss staff action indicated on the report of the maritime systems study group, 31 August 1964, LAC, RG 24, Accession 1983-84/167, Box 3734, file 8100-1 vol. 10; Minutes of an Ad Hoc meeting to determine the projects and priorities to be included in the 1965/66 RCN Estimates, 2 September 1964, DHH, NPCC Papers, 79/246, folder 5.
2 Minutes on a meeting to discuss staff action indicated on the report of the maritime systems study group, 31 August 1964, LAC, RG 24, Accession 1983-84/167, Box 3734, file 8100-1 vol. 10.
3 Miller to Hellyer, 21 August 1964, DHH, Raymont papers, 73/1223, file 1502; Hellyer to Miller, 2 September, DHH, Rayner Papers, 99/31-IA-8; Minutes on a meeting to discuss staff action indicated on the report of the maritime systems study group, 31 August 1964, LAC, RG 24, Accession 1983-84/167, Box 3734, file 8100-1 vol. 10. This was a relief to the vast majority of naval officers in Ottawa who were not keen to fulfil this requirement. Arguments that it was “not possible to make a clear cut requirement for
Miller and Hellyer agreed on other aspects of the emerging force structure as well. Despite his earlier interest in nuclear submarines, Hellyer now backed Miller’s suggestion that these platforms were too expensive, while on the other hand both men found the idea of building an additional Provider class “logical” (a third would soon follow). They also shared an enthusiasm for the long-range maritime patrol aircraft with Hellyer actually going one step further than Miller by observing that Sutherland’s argument on this platform “was quite convincing.” But it was their willingness to build destroyers that led to the greatest activity among Canadian Forces Headquarters’ naval planning staff. 4

Thanks to Sutherland’s report, Dyer, along with many advocates, reluctantly began to see what Rayner had been trying to tell them all along. Rayner could never reconcile the paradox of how the navy was expected to acquire expensive platforms for an improved anti-submarine capability as well as an expanded limited war function at the same time that the government was drastically slashing the defence budget. It was an essential truth that led Dyer to accept the fact that only the destroyer could give the navy the widest range of capabilities with the funds being made available for new equipment. A snapshot of the situation in late August 1964 identifies how various factors had all conspired to make the decision to acquire destroyers a relatively easy one. In study after study Sutherland consistently recommended the acquisition of these ships, but his Maritime System Study Group effectively clinched the deal. One sentence in particular from his report perfectly captured what Dyer had now come to accept: “given a budget of no more than 375 millions, Canada’s basic policy in so far as naval forces are concerned,

mine clearance,” were common around headquarters, as was Welland’s suggestion that the navy explore “a mixed Canadian/US minesweeping force with the US providing the ships and Canada the men.”

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must be to concentrate upon destroyer-type ships. There can be no great argument upon
this matter.\textsuperscript{5} Ship commanding officers backed up Sutherland’s conclusions as the
destroyer squadrons on both coasts were still making specific pleas for more destroyers.
So, too, was SACLANT, and he was not the only allied officer pushing Canada to adopt a
destroyer program. Taking advantage of a trip that Hellyer took to the United Kingdom
in June 1964, a number of British officials had “heavily influenced” the minister to the
point where he was seriously considering a Canadian version of the Royal Navy’s Type
82 guided missile destroyer. That, at least, was the conclusion drawn by Dyer who
realized that the time to push for a slate of destroyers had finally come.\textsuperscript{6}

Dyer had good reason to take immediate advantage of the minister’s apparent
interest in the Type 82. While the navy had been making dire predictions about the
fleet’s block obsolescence since the late 1950s, those warnings paled when compared to
the situation they were facing over the summer of 1964. The commissioning of HMCS
\textit{Nipigon} on 30 May marked a pivotal moment as it emphasized the fact that the current
destroyer construction program had just ended without a successor. Worse yet, as it was
explained to Hellyer in June, the financial ceilings he was imposing on the navy would
likely lead to a reduction of “the number of ships to SACLANT by 4.” The thought of
letting down Allies was just as unacceptable to Dyer as it had been to Rayner, and
Hellyer’s attitude towards the Type 82 suggested that the British had succeeded in
convincing the minister that such a reduction would be a mistake.\textsuperscript{7} Buoyed by this
interest and wanting to lay down a program of destroyers as soon as possible, Dyer gave

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\textsuperscript{4} Miller to Hellyer, 21 August 1964, DHH, Raymont Papers, 73/1223, file 1502.
\textsuperscript{5} Report of the Maritime Systems Study Group, July 1964, DHH, 87/253-II-20.10; 96; CDS meeting,
Raymont Papers, 73/1223 file 1503, Box 75.
\end{flushright}
hurried and specific instructions to Rear Admiral Jack Caldwell to investigate the possibility of building Canadian Type 82s.8

Caldwell, who was still serving as the Chief of Naval Technical Services, was unimpressed with what he saw. Like Brock, Caldwell always had had concerns about introducing too many new technologies into a single program, and the Type 82 was no different. Its primary missile system, the CF 299 Seadart, remained in the development stage and had made little progress since some officers had tried to get it included in the General Purpose Frigate. The design’s propulsion, which consisted of a combined steam and gas turbine plant, was also experimental. Moreover, as a British design, the Type 82 would have to be adapted to North American standards and that made it “something of a pig in the poke.” Caldwell’s final assessment was blunt: “while a most interesting design, it embraces in its main propulsion, and its principal AA [Anti-Air] weapons systems a mix still in the main to be fully developed and proven as individual systems.”9

But its most unattractive quality was that construction of these vessels could not begin until early 1968.10 That was far too slow for a navy that was facing a shortage of four ships to its alliance commitments, and the Type 82 was subsequently removed as a contender for the replacement program.

The better option, according to Caldwell, was to tailor fit the new Canadian design that the officers at DG Ships had been developing. Of course, Caldwell had a self-serving reason for pushing the Canadian design. Since the General Purpose Frigate’s

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6 Minutes of an Ad hoc committee held in Admiral Dyer’s office, 21 August 1964, DHH, Rayner Papers, 99/31-IB-25, Box 5.
9 CNTS to Dyer, 26 August 1964, DHH, 79/246, folder 56.
cancellation, his technical service had been suffering from a “deterioration in morale” and a Canadian program would offer the men at DG Ships challenges that a foreign design would not. And it was for that reason Caldwell wanted a guarantee that “the Minister’s approval be specially sought - so that further work can proceed with some assurance of success.” Caldwell had legitimate reasons to believe that a new Canadian designed guided missile destroyer might suffer the same fate as the General Purpose Frigate. Although Miller was willing to support the new guided missile destroyer he had expressed concerns about its size. Sutherland had estimated that the price for eight guided missile destroyers would be between $480 and 500 million, but the Chief of the Defence Staff knew that ship programs often cost much more than first predicted. Building too many destroyers, or ones that were too technical, would chew up the navy’s budget and prevent further acquisitions, explaining why Miller argued that it was important “to look very closely” at the characteristics and design requirements before a firm recommendation was given.\(^\text{12}\)

Miller was right to scrutinize the guided missile destroyer program. Realizing that it would be impossible to build the full slate of destroyers with the money in the current budget, the navy had already suggested that the program be spread over a greater period of time by breaking it into two separate batches of four ships. The problem was that the Naval Advisory Group, which one officer rightly called a “mischievous concept of the old, and prestigious Naval Board,” was already being told by technical services that it could expect the first batch to cost $277 million rather than the original prediction.
of $ 250 million. This increase was troubling, but to make matters worse Davis and his officers at DG Ships had actually built considerable flexibility into the original estimate. Wanting to avoid their mistakes with the General Purpose Frigate, which, it should be remembered had grown from $ 264 million to $ 428 million, Davis observed that they had purposely inflated the estimate for this new program to “prevent an overly optimistic costing being given to the Minister which would later have to be increased.” 13 The fact that this contingency had evaporated so quickly was not encouraging. As a result, Rear Admiral Welland, who believed that the guided missile destroyers were a “good idea,” felt that the navy should consider Sutherland’s plan to add the missile system after the ships were built as a means to defray the initial costs. There was some logic to this proposal. Acquiring the missile systems at a later date would push that particular expense to a time when there was more flexibility in the budget. To some extent the navy was playing the same numbers game that had got it into trouble with the General Purpose Frigate, but it was a moot point. Dyer could not accept the idea of Canada possessing guided missile destroyers that did not have guided missiles and so rejected the concept outright.

Despite the growing costs of the program, DG Ships remained confident. Tremendous progress was being made in a short period of time as the Operational Requirements were re-examined and a brief was prepared for Defence Council asking that the program be approved. It packed a powerful punch. The fact that it was approved by an army officer - it was signed by the Chief of Operational Readiness, Lieutenant

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12 Miller to Hellyer, 21 August 1964, DHH, Raymont papers, 73/1223, file 1502.
13 Davis, Fifth Study, nd, LAC, Davis Paper, MG 31 G 33, 7.
General J.V. Allard - provided the illusion of outside support.\textsuperscript{14} While rehashing a number of the same arguments that had been made for the General Purpose Frigate - such as observing that the navy had to fill immediately serious deficiencies in air defence, shore bombardment, and surface attack - the brief itself nevertheless built a strong operational case for the new destroyers. Few believed that the minister would say no, and a jubilant Welland, who now worked for Allard as the Deputy Chief of Operational Readiness, crowed that “this is one way of getting the DDG off the ground.” But Welland’s odd choice of metaphors was not nearly as strange as what happened next. Just as the navy was on the verge of finally acquiring its guided missile destroyers, a decision was made to build four smaller vessels that would repeat the Annapolis class instead.\textsuperscript{15}

Although the Canadian guided missile destroyer concept was a serious contender, it suffered from the same weakness that had led to the Type 82’s demise, namely that its hull could not be laid down in a shipyard until January 1968. For some officers, this late lay down date made the American-designed Charles Adams class a good option. This 4,500-ton destroyer, which it should be remembered was armed with Tartar anti-aircraft missiles and ASROC, did meet the navy’s current requirements, and the fact that construction on these ships could begin as early as April 1966 made them even more appealing. While the Adams class would give the navy the fast program it needed to maintain its alliance commitments, a number of naval officers could not bring themselves to accept this ten-year old American design. The navy was in a quandary, as Welland

\textsuperscript{14} Davis, Fifth Study, nd, LAC, Davis Papers, MG 31 G33, 7; Minutes of meeting to discuss staff action indicated on the report of the maritime systems studies group, 31 August 1964, LAC, RG 24, Accession 1983-84/167, Box 3734, file 8100-1 v.10.

\textsuperscript{15} Allard to Miller, 20 August 1964, Guided Missile Destroyer, DHH, NPCC Papers, 79/246, folder 56.
explained: “the copying of the design of the CHARLES ADAMS …would enable an early start on construction, whereas a Canadian design would be 2 years behind, in time, but ahead technically.” Caldwell, however, had another option. Since the navy had already broken Sutherland’s proposed eight-ship guided missile destroyer program into two, Caldwell suggested that it might be possible to build four Adams for the first batch followed by four Canadian-designed vessels for the second. Although both programs would be started concurrently, the Adams would answer Dyer’s call for a quick program to maintain the current SACLANT commitment levels as well as buy time to properly develop and design the more desirable Canadian program.16 It was a fateful recommendation and one that set the navy on the fast path to the Repeat Annapolis design.

A letter from Hellyer to the Chief of the Defence Staff on 2 September 1964 indicated that the navy had read the political winds well. Pressure from the shipbuilding industry was growing and the minister was anxious to get a program started quickly, instructing Miller that “it was quite important that the principal program elements be considered at an early date, this is particularly true of the surface ships.” Miller had already told the minister that he would accept a program of guided missile destroyers because they were both the “appropriate type” for the navy, and would add “a reasonable degree of flexibility.”17 Although it was hardly a resounding endorsement, Hellyer’s observation that there was “some attraction” to the guided missile destroyers suggested that he agreed. At the very least it sent a signal to the navy that it could proceed with its

16 Minutes of meeting to discuss staff action indicated on the report of the maritime systems study group, 31 August 1964, LAC, RG 24, Accession 1983-84/167, box 3734, file 8100-1 vol. 10.
17 Miller to Hellyer, 21 August 1964, DHH, Raymont Papers, 73/1223, file 1502.
current plans of four Adams class and four Canadian-designed ships. In fact, it acted as further evidence that this approach was the right one, particularly since the Adams’ early lay-down date would also fulfil the minister’s desire for a fast shipbuilding program.

However, the navy’s plan had a fatal flaw. A careful review of this new two-batch destroyer program indicated that it was also exceeding the financial ceilings set out in the 1965/66 naval estimates, and it was for that reason Rear Admiral Caldwell warned that changes were required. Caldwell was right and Dyer knew it. The navy had no choice but to find a cheaper alternative to the Adams class and it was that realization that led to the Repeat Annapolis. This important point requires amplification. The idea of repeating an Annapolis had not come from Hellyer, as some modern day historians have assumed, but rather was the product of an internal naval decision. From a naval perspective, therefore, the Repeat Annapolis was filling the same role as the Adams in that the former would maintain the navy’s current commitments to SACLANT as well as give the minister the fast program he needed to satisfy pressure from the shipbuilding industry. Yet there were other benefits as well. For instance, these ships would relieve much pressure and give the navy the time it required to develop the guided missile destroyers properly. Moreover, the unexpected addition of more helicopter-carrying destroyers - even repeated ones - would be a welcome sight to the East Coast command, the more so once Bonaventure was decommissioned early.

Those involved in the design process for the repeat Annapolis and guided missile destroyers were treated to two entirely different experiences. Careful and deliberate planning over the summer of 1964 had led to solid plans for the guided missile

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18 Hellyer to Miller, 2 September 1964, DHH, Raymont Papers, 73/1223, file 402.
19 Caldwell to CLED, 8 September 1964, LAC, RG 24, Accession 1983-84/232, file S1150-110/M2
destroyers. Such efforts had produced an impressive 3,800 ton, 26 knot vessel armed with Tartar and twin Mauler missiles for air defence, a multipurpose 5-inch-54 gun and ASROC as well as SQS 505/ 502 hull-mounted and variable Depth Sonar. This ship would still not have a helicopter of any type, but the earlier idea of giving it Gas Turbine propulsion was explored further. Gas Turbine engines, or some type of steam or diesel plant combined with a gas turbine boost, were the only way to produce the 60,000 horsepower needed to match the staff requirement’s call for 30 knots. But while the guided missile destroyer was proceeding smoothly, early planning for the Repeat Annapolis was a rushed and somewhat chaotic adventure.

There is a well-told myth that Dyer and Welland sketched out the Repeat Annapolis on the back of either an envelope or cigarette package over a few drinks at cocktail party sometime in September 1964. Using Welland’s own words from a 2006 interview, this story is “absolute crap.” Archival documents not only back up Welland’s interpretation, but also suggest that the myth was most likely the product of a misunderstanding. Rather than marking the birth of the Repeat Annapolis, the sketch in question was undoubtedly the product of a harmless discussion in which Dyer and Welland had jotted down some ideas on what was by now an established design. The fact that junior officers, who knew nothing about the high-level discussions or background behind the Repeat Annapolis, saw this sketch resulted in assumptions that eventually evolved into the myth. Yet the simply reality is that the idea of adding a point

20 Chronology of Dates, nd, DHH, 2000/15, Box 12, file DDH 280.
21 Davis, 5th Study, nd. LAC, Davis papers, MG 31 G 33; The Proposed DDG, Presentation to CNTHA, DHH, Smith fonds, 2000/14, file 100.
23 R. Welland, interview by Tony Thatcher, tape recording transcript, Surrey, B.C., 5 November 2006, DHH, CANDIB Oral History project.
defence missile system to a repeat of the Annapolis class was actually conceived by
officers at the Directorate General Ships over the summer of 1963. At that time, growing
signs of the General Purpose Frigate’s possible cancellation had led to a request for
potential alternatives, and the DG Ship organization saw a missile-carrying Annapolis as
a contender. As a result, when this idea was reintroduced in September 1964 the navy
had effectively gone full circle as it had reconsidered all the platforms that it had
explored one year earlier (namely the Adams, Repeat Annapolis, Type 82, and a
Canadian-built guided missile destroyer). Although it is clear that the Repeat Annapolis
concept was resuscitated in September 1964 – this time as a cheaper substitute for the
Adams class – there were actually other variations of the concept under consideration. In
fact, the initial 1964 design made no mention at all about adding an anti-aircraft missile
system to these helicopter-carrying destroyers, and instead had lengthened the hull by
twenty-five feet to make room for additional fuel tanks.

Work on the concept began almost immediately and a design study was ready in
record time. It was soon apparent that making slight modifications to the Annapolis was
not going to be as easy as the navy first thought. DG Ship’s original plan to create room
for additional fuel tanks and stabilizer compartments by splitting the 25-foot extension
between the mortar well and flight deck as well as between the machinery spaces met
with disappointing results. Such changes, it was determined, would not only cause poor
arcs of fire for the Mk 10 Limbo mortars but also would require the reconfiguring of the
steam lines, explaining why this design was dismissed for a new one that placed the extra

24 Statement of Some Current RCN, USN and RN Ship Design, August 1963, DHH, NPCC Papers, 79/246,
File 99; A Canadian Nuclear Powered Submarine Program, LAC, Hellyer Papers, MG 32 B 33, Vol. 71
File 12.
25 feet forward of the machinery spaces. This did not satisfy some officers who believed that adding more room for fuel did little to improve the operational shortcomings in the fleet. And it was for that reason six alternatives soon emerged that consisted of various mixtures of helicopters facilities, SQS 505/502 Sonars, 5-inch-54 guns, and ASROC along with 40,000 ship horsepower propulsion. But it was the long-standing desire to provide the fleet with adequate air defence that lead to the greatest proposed change. Based on the belief that all modern warships should have an air defence capability, Commander P.H. Cayley and Lieutenant-Commander D. Mainguy, who were officers from the Director of Naval Fighting Equipment Requirements, suggested that the extra 25 feet would be better suited for a point defence missile system. It was at that juncture the navy had finally returned to the Repeat Annapolis from the previous year.

They were, of course, right; almost every staff paper admitted that the requirement for a point defence missile system was an “urgent one” or that the inclusion of such weapons “increased the survivability of the force in the least costly manner.” Given Hellyer’s desire for cost-effective platforms that latter observation seemed particularly relevant, and the officers responsible for the Repeat Annapolis’ characteristics found the logic behind the missile system hard to refute. While the guided missile destroyer would protect the entire fleet from air threats, the point defence missile

25 Appendix to Caldwell to CNS, August 1963, on Statement on Current or Proposed RCN, USN and RN ship design, DHH, NPCC Papers, 79/246, file 99; Section IV Comparison of alternatives, DHH, Grant fonds, 85/334, file 130.


system would ease that burden through their ability to protect the Annapolis. As a result, aspects of the multi-purpose concept began to creep into these specialized ASW ships. The same was also true for many of the other proposed changes. For example, the addition of a 5-inch-54 gun would add an invaluable bombardment capability to the fleet while SQS 505 and ASROC would do the same for the ASW role. There was more. DG Ships was also asked to explore ways that other weapon and sensor systems could be included without risking the Annapolis’ ability to carry a Sea King Helicopter.

Davis was unhappy with this entire concept. Arguing that it was vastly superior to either the Adams or Repeat Annapolis, Davis tried to convince his superiors that all eight guided missile destroyers should consist of the in-house Canadian design despite the final price tag:

We have no doubt, with nauseating reiteration, expressed our dissatisfaction at the somewhat dated Adams Class - and can summon but little enthusiasm for the “easy way out” of repeating [Annapolis’]. It must, however, be confirmed that if it is the Minister’s desire to give rapid work to Shipbuilders, then the options of repeat ADAMS or repeat [Annapolis] or a combination of both have the merit of comparatively early lay-down. If, however, we are intent on something which meets RCN requirements, then our own design is the answer.

Davis seemed to appreciate that Hellyer was in a bind with the shipbuilders and, not wanting the navy to miss out on its “shining hour,” he suggested that it was time to use this pressure to secure the Canadian-designed guided missile destroyer’s future. Repeating the same words of advice he had given in the spring, Davis once again emphasized that the navy had to take control of its own destiny. “In conclusion - and somewhat beyond our terms of reference,” Davis told Charles, “we hope that Defence
Council will be told what we prefer (what, indeed we must have) rather than leave them to make the selection.” This might have been possible, Davis later argued, had the navy made a consistent argument for the guided missile destroyer over the proceeding year. But thanks to the chaos created by the advocates, Davis believed his concerns were falling on deaf ears and that one of his earlier prophesies - namely, that internal bickering between advocates would lead to the navy accepting any “carrot” dangled by their political masters - was coming true.

In reality, Davis’ logic was flawed particularly since he was not included in the internal discussions on the ship replacement program. As a result, he was unaware that there were other reasons behind the navy’s willingness to explore the Repeat Annapolis design besides the minister’s desire to placate the shipbuilding industry. Nor did he understand that the suggestion to build this concept had not actually come from Hellyer, but rather was the product of a purely naval discussion between Caldwell and Dyer. Had Davis been included in the correspondence between these two officers he would have realized what was meant when Dyer explained to Caldwell:

There are indications that we might soon have a firm programme of new construction. We have, of course, been wrestling with the numbers and types of ships we should build ever since the GP Frigate programme was cancelled. The White Paper produced some guidelines and the Report of the Maritime Study Group which was headed by Doctor Sutherland and which came out in late August had brought the matter to a head. The largest single limiting factor is money. The lack of sufficient funds is having a very restricting effect on any plans which are devised.31

Considering cheaper vessels for part of the destroyer replacement program was a tough choice, but it represented a moment of clarity as well as a conclusion that should have

30 DG Ships to DGFD, 14 September 1964, LAC, RG 24, Accession 1983-84/232, Box 45, file 1150-110/M 2. Note: the original text used the term Nipigon rather than the proper Annapolis. Changes in the quotation were made to fit the consistency of the use of Annapolis in the text.
been reached long ago. Money was the defining factor over what ships the navy would build, and the only cost-effective option was to build four Repeat Annapolis and four Canadian-designed destroyers.  

While Davis did not appear to comprehend fully the political, financial, or alliance factors that gave birth to this joint program of Repeat Annapolis and Canadian guided missile destroyers, he nevertheless had a tremendous impact on its development. It was clear the former, which was now simply being called the DDH, was not going to be a carbon copy of the Annapolis class. Instead, the new DDH was to be a 27 knot ship whose weapons and sensors package were highlighted with SQS 505 hull mounted and variable depth sonar, ship-borne Jezebel, one Sea King helicopter, Mk 10 mortar, twin torpedo tubes, a point defence missile system and a 5-inch-54 gun. Davis was worried about this design, particularly since it had incorporated almost every weapon and sensor system that had previously been split among various concepts for the Repeat Annapolis. In particular, Davis was unhappy about the prospect of trying to build these DDHs along with a simultaneous program of four guided missile destroyers:

When considering “practical options” however, you must take account of our abilities. In general we have capacity for one major design and an associated miscellany. There will be plenty of the latter - a new Replenishment ship, Minesweepers (new or converted) and possible even an Adams - which will not be without its own problems. These we could handle; together with a new design of our own DDG. We could not cope with a new DDG and (at the same time) a lengthened up-gunned, up-sonared, newly powered [Annapolis].

Commodore Burchell had echoed the exact same concerns only three and a half months earlier. Troubled by what he saw as a dangerous assumption that the navy “could build

32 Chronology of Dates, nd, DHH, 2000/15, Box 12, file DDH 280.
two classes of sophisticated warships at once,” Burchell took it upon himself to warn
others that there was simply not “enough in-house effort to direct two such [complex]
programmes at the same time.” Unbeknownst to Davis, however, the decision to build
the Repeat Annapolis rather than the Adams had already been made. Worse yet, by
complaining that DG Ships was incapable of coping with a Repeat Annapolis at the same
time as a Canadian designed guided missile destroyer, Davis had ensured that the former
would be built before the latter. The Repeat Annapolis had been conceived as a means to
respond to the navy’s immediate needs for a shipbuilding program as well as to meet its
alliance commitments, and that fact alone necessitated that it come first.

Some individuals have long assumed that the guided missile destroyers were
abandoned the moment the navy agreed to explore a program of repeat Annapolis
Class. Others believed that Miller, realizing that the minister would never accept such
an expensive program, was directly responsible for the guided missile destroyers’ failure
and replacement by cheaper DDHs. Still a third element believed that the Naval
Advisory Group was finally reigned in by a minister who was now making clear what he
would accept in Cabinet. In the end, the navy was planning to acquire both platforms.
And, as was reflected in the new force structure circulating around Canadian Forces
Headquarters, the navy’s intention was to commence work on the four Repeat Annapolis
as soon as possible while the more advanced Canadian-designed guided missile
destroyers would be developed as a “follow on” program of four ships. In some measure,

34 DG Ships to DGFD, 14 September 1964, LAC, RG 24, Accession 1983-84/232, Box 45, file 1150-110/M 2.
35 Burchell to Fraser-Harris, 29 May 1964, LAC, RG 24, Accession 1983-84/167, Box 1846, file 5000-DDG.
36 Hal Smith presentation to Canadian Naval Historical Association, DHH, Hal Smith fonds, 2000/14, file 100.
therefore, the Repeat Annapolis were fulfilling the same role that the long-abandoned ASW frigates were to have played in Rayner’s original 1960 force structure; the navy was once again pursuing a building program that would consist of a mixture of helicopter-carrying destroyers followed by guided missile ones.

It had taken nearly two months for officers at Canadian Forces Headquarters to properly digest the contents of Sutherland’s Maritime Warfare System group, and by mid-September it was obvious that it would lead to yet another force structure. After a year and a half of reviewing defence priorities as well as reorganizing the Canadian military into a single headquarters, Hellyer was finally ready to turn his attention to equipping the navy, army and air force. The officers who were to put this new navy program together - namely Welland, Commodore Charles (Director General Force Development) and Commodore J. Deane (Deputy Chief of Naval Technical Services) along with Commanders Cayley and Gigg - were given remarkably little time to do so. Realizing that the caps placed on the procurement budgets were not popular, Hellyer was unwilling to let his military advisors protest through obstruction. The minister’s strong will and single-minded strategy, left no doubt that any service that did not produce a reasonably priced force structure would be left behind.

Having completed his review of Sutherland’s report, the Chief of Operational Readiness, Lieutenant General Allard, wanted something prepared for the Chief of the Defence Staff within less than two weeks. Complicating that task further, the navy officers responsible for this force structure would have to reject the premise that had dominated all the force structure proposals that had emerged since the cancellation of the

General Purpose Frigate. The combination of Sutherland’s assumptions, operational factors at sea, and strict financial limits imposed on all the services, made clear that the emphasis placed on multi-purpose versatility was now to be completely subordinated to a more specialized anti-submarine warfare force. On 8 October they delivered with what the Assistant Chief of the Defence Staff, Air Vice Marshal W.W. Bean described was “almost a completely new programme [that] bears little resemblance to that submitted in May.”38 Primarily an ASW force with small degree of limited war capability, the first draft of their proposed force consisted is shown in the following table 39:

<table>
<thead>
<tr>
<th>Programme Description</th>
<th>Pro-rated Unit Cost [$ M]</th>
<th>Total Programme Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restigouche Class Conversion Seven (7) Ships Major installations</td>
<td>9.3</td>
<td>65.0</td>
</tr>
<tr>
<td>- SQS 505/502 (VDS and HM) [Variable Depth Sonar and Hull Mounted Sonars]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- ASROC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme Commences Aug. 1965</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme Completes Sept. 1970</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonaventure Improvement</td>
<td>8.0</td>
<td>8.0</td>
</tr>
<tr>
<td>Commences Apr. 66 – Completes Mar. 67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fleet Replenishment Ship Programme (2) Commences July 1966 - Completes Dec 69</td>
<td>18.0</td>
<td>36.0</td>
</tr>
<tr>
<td>Sealift Ship (1) Commences Jul 66 - Completes Jun 69</td>
<td>20.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Two additional O Class Submarines Commences Jul 66 - “Follow-On Prog”</td>
<td>17.0</td>
<td>34.0</td>
</tr>
<tr>
<td>DDH Class (Negative Point Defence System) - Four (4) Ships, Major Equipment</td>
<td>35.5</td>
<td>142.0</td>
</tr>
<tr>
<td>- 5”54 Single Barrel (gun)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- SQS 505/502 (VDS &amp; HM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Helo facilities</td>
<td></td>
<td></td>
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<tr>
<td>- TACAN</td>
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</tbody>
</table>

38 Branch Chiefs and ACDS meeting, 22 September 1964 and 29 September 1964, LAC, RG 24, Accession 1983-84/167, Box 67, file 1180-7010-1 vol. 1; Dyer to Miller, 19 October 1964, LAC, RG 24, Accession 1983-84/167, Box 4030, file 8885-15 vol.3; Comments on Service Programmes 1965/66, 19 October 1964, DHH, Raymont Papers, 73/1223 file 1406, box 69.
This fleet had a familiar ring to it. Based on new DDHs, guided missile destroyers and submarines, this program revealed that the navy had gone full circle as it represented a scaled down version of the fleet that Rayner had been trying to sell throughout the first three years of his tenure as chief of the naval staff. This should not be surprising since one of the key architects of their new force structure, Charles, was a devoted destroyer man, who, it should be remembered, believed that this was the best and most versatile platform that the Canadian navy could afford.

Although this specialized ASW force (with some limited war capabilities) was adopted, Dyer did permit minor alterations that gave the advocates hope for the future. And it was for that reason that some of the May 1964 force structure crept back into the fold. For instance, while the specialized sealift ships were already incorporated into the new program, it was suggested that the navy also include the acquisition of twenty-one A-4s (if funds were available) as well as nine additional Sea Kings. More fine-tuning followed. Having heeded Davis’ concerns about building two major ship programs at the same time, it was further decided that the guided missile destroyers would be delayed until the 1970-75 time frame. They would continue to be developed alongside the Repeat Annapolis, but this plan effectively put the guided missile destroyers at the forefront of
the “fleet after next.”

There they would join a possible air force replacement program for the Argus while, in a move that would clearly placate the advocates, it was decided to carry out design studies on potential programs of nuclear submarines, a carrier as well as hydrofoils. Whether this was a tactic to reduce the chances that the current force structure would meet with internal resistance is uncertain, but giving these advocates hope for the next replacement program was a dangerous strategy. The seeds for another force structure crisis had just been sown and would blossom in 1967. In many regards this second debate was much like the first. The navy was once again thrown into a chaotic debate over whether to build guided missile destroyers, a carrier or nuclear submarines while at the same time dealing with potential cuts that were even deeper than the ones that the navy was dealing with in 1965. In the short-term, however, the current plan received a remarkable degree of support at Canadian Forces Headquarters.

At first glance it did not appear that way. The original draft of the new force structure for the minister (in the integrated nomenclature this force structure was being called the Maritime Forces’ program) was filled with contradictory advice and reeked of advocate-based interference. Rather than telling the minister exactly what the navy needed he was given more options, some of which seemed to be setting the navy down the same slippery slope that had enveloped it over the previous year. For instance, in one breath the Repeat Annapolis was presented as the navy’s top priority while in another it was suddenly argued that there were “options to the DDH programme.” Those alternatives were all too familiar. Rather than waiting for the guided missile destroyers

40 Richard Gimblett, *Lead Mark: The Navy’s Strategy for 2020*, (Ottawa: National Defence, 2001). Although the term “fleet after next” is a modern one it perfectly captures the difference between these two fleets.

41 Maritime Force Program, 23 October 1964, DHH, NPCC Papers, 79/246, file 78A.
one proposal held that the navy could either embark on four exact copies of the Charles Adams class immediately or build four Canadian ships with Tartar missiles commencing in 1968. Even more significant was the second choice, which was to construct Iwo-Jima type ships at a price of $120 million. Although the destroyer was the only platform to have alternate ships specifically named (the options for the other portions of the program, such as Bonaventure’s improvement or the second replenishment ship, were either to delay or delete them) the navy was not actually falling into a force structure trap.

By giving Hellyer options the navy was just doing its job. Force structures were purposefully designed to lay out alternative programs followed by a firm recommendation of which course was the best to take. The strategy was simple; identifying (and ruling out) other options made the argument for the preferred choice that much stronger. Where the navy had run into trouble over the previous years was that it had not spoken with one voice as groups of officers backing different options sent a mixed and confusing message to the minister. Things were different with the current force structure. Calling the Repeat Annapolis “versatile ASW ships” was simply a way of selling the fact that these platforms would have an added capability to their specialized role. Having been designed for anti-submarine work made them particularly strong “in the surveillance and escort roles,” and with a point defence missile system and a new gun they could now protect themselves from air attack as well as provide a bombardment capability. More importantly, the DDH’s weapons and sensor packages were specifically linked to the navy’s assigned role, which was to assist in the defence of North America by improving “our large area ocean surveillance capability” through the power “to locate and track submarines.” The Iwo Jima could also perform this task, but unlike the earlier
force structures it was stated that they “will have a less effective ASW surveillance and attack capability than 4 DDHs.”\textsuperscript{42} This was a remarkable admission particularly since so many staff studies from the previous year had argued that the exact opposite.

It was also highly significant that the Maritime Forces Program’s discussion on Sealift essentially ruled the Iwo Jima out as a possibility. Instead of being presented as a valuable dual-purpose ship, the Iwo Jima was now described as a vessel with “some ASW capability” and “an expensive means of providing sealift.” The navy had already closed the door on the Iwo Jima and this force structure only rammed that point home. Its reason for doing so had been stated long ago and harked back to Brock’s spring 1963 debate with Fraser-Harris over the need to build larger numbers of smaller DDHs rather than carriers. Nor was that the only aspect of this new force structure that rehashed past arguments. Returning to Rayner’s original thinking, it was observed that a second replenishment ship, along with \textit{Bonaventure} and \textit{Provider}, could meet any troop lift need; while a Sir Lancelot, Challenger or Canadian-built specialized sealift ship could respond to tank transportation requirements. How the navy planned to cope once \textit{Bonaventure} was decommissioned was not explained (although the addition of the second and eventually third replenishment ship made up for her loss). It would appear that this omission was no accident.\textsuperscript{43} The navy was no more interested in specialized lift ships than it had been when Rayner first proposed the idea in late 1963 as a cheap and easy way to meet the minister’s requirement. This time, however, the navy would use the specialized lift ship as a means to get a platform that they actually wanted. Their

\textsuperscript{42}\textit{Maritime Forces Programme, 15 October 1964, DHH, NPCC Papers, 79/246, file 78A.}
\textsuperscript{43}\textit{Minutes of Reports by Branch Chiefs, 1 October 1964, LAC, RG 24, Accession 1983-84/232, Box 67, file 1180-7010-1 vol. 1; Maritime Forces Programme, 15 October 1964, DHH, NPCC Papers, 79/246, file 78A.}
argument made sense. A second replenishment ship, which was deemed a “better option than specialized sealift,” would not only help in the limited war role, but it would also greatly extend the “on station” capability of the navy’s anti-submarine warfare fleet.⁴⁴ The once contentious issue of sealift now found a remarkable consensus among the team planning the Maritime Force Program and there were a number of other areas where they found common ground as well.

The navy’s preparations for both the Chief of the Defence Staff and Ministerial briefings on the Maritime Forces Programme identified that (on the surface at least) there was finally a sense of solidarity and direction within the navy. The nuclear submarine and carrier advocates were undoubtedly disappointed but they were not making any attempt to stand in the way of the new force structure. Certainly the effort Gigg put into preparing the case for the new “Fleet Replenishment Ship” (operational support ship) was a clear sign that he had left his nuclear submarine aspirations behind him - at least temporarily.⁴⁵ Like Gigg, the other officers responsible for drafting the new force structure worked extremely hard and well together. They even engendered a spirit of inter-service co-operation by asking Group Captain Smith to comment to them on the air force’s plans to replace the Argus. It paid off. While the various options were presented to the Chief of the Defence Staff and minister, there was no doubt about what the navy wanted or needed. The government was asked to approve a firm program that now consisted of four DDHs, the Restigouche (but not Mackenzie) conversion, the

Bonaventure improvement, a second fleet replenishment ship and eight more Sea

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⁴⁴ Presentation of briefing for Defence Council Maritime Program, nd, DHH, NPCC Papers, 79/246, file 78A.
⁴⁵ MFP Briefing, 16 October 1964, DHH, Raymont Papers, 73/1223, file 382.
Kings. Although not abandoned altogether, the Sealift ships, two additional O boats, guided missile destroyers and hydrofoils from the original 8 October force structure were either put off to the next program or placed into temporary abeyance.

With this force structure in hand, the navy was ready for its first test. On 20 October, Dyer and Welland, along with a small naval contingent, briefed the Chief of the Defence Staff at a special staff meeting. The fact that this was the first time that a naval program had been through the integrated headquarters – once again, as the Chief of Personnel Dyer no longer had direct access to the minister – was a cause of some concern. Examples of how the navy wanted its team tightly controlled were not hard to find. Issues that had the potential for controversy from the army and air force, such as Bonaventure’s improvement, were harnessed as the team was given strict instructions: “No comments will be made unless questions arise. Questions will be answered by RADM Welland.” Such excessive preparations were unnecessary. The brief went well. After opening remarks from Dyer and Welland, the presentation was turned over to Charles who outlined the navy’s current strength as well as its new program. The Chief of the Defence Staff and his staff officers were happy with what they saw and offered many useful suggestions on how to improve the presentation for its upcoming appointment with the minister.

The key to winning Hellyer’s support, according to Miller and his staff officers, was to focus on the value the Canadian Forces would be getting for its money from this fleet. Cost effectiveness was the key phrase that they believed would clinch the deal:

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46 Presentation of briefing for Defence Council Maritime Program, nd, DHH, NPCC Papers, 79/246, file 78A.
47 MFP Briefing 16 October 1964, DHH, Raymont Papers, 73/1223, file 382.
… a cost effective approach to the conversion of the RESTIGOUCHE Class ships as shown in the program is to be considered as a special way to highlight the requirement. The DDH program which is a most important part of the Navy program requires additional argument or substantiation to emphasize cost effectiveness…. The Fleet Replenishment Ship Program presentation is to emphasize a cost-effectiveness approach in some manner, possibly by illustrating the increase of “days at sea” for operational vessels. 48

Put another way, as Sutherland’s report had argued, the destroyer was the most cost-effective platform for a medium sized navy like Canada’s. The Chief of the Defence Staff’s staff was also willing to support the navy if it wanted to downplay the sealift requirement. Although he could not bring himself to accept destroyers and frigates as part of the RCN’s troop and equipment carrying capability, the idea that Bonaventure and Provider could cope with the navy’s sealift needs had appealed to Miller from the moment that Rayner first suggested it in 1963. That attraction further pried the door open for the second replenishment ship:

…it was felt that the new “PROVIDER” could possibly be modified to carry some troops or at least enough troops to man the vehicles which it could carry. The CDS summed up the consensus of opinion regarding the recommendations to be made to the Minister concerning sealift, i.e. “for peacekeeping operations the present and programmed capability is sufficient. The ability to move a battalion group in one lift is available, this could be improved upon if the new PROVIDER type ship had some troop carrying capacity. Accordingly, the program provides for the right balance of sealift in the over-all design of the forces.”49

The navy jumped on this message. Not only would it allow them to drop the requirement for a specialized sealift ship for good, but it also permitted the investigation of a third replenishment ship.

This was certainly the message that was conveyed to Hellyer when he was briefed on the program at the 26 October Defence Council meeting. Hellyer was told that the

48 Minutes of Chief of Defence Staff - Special Staff Meeting, 20, 21 October 1964, DHH, Raymont Papers, 73/1223, Box 75, file 1511.
49 Ibid.
navy could build specialized sealift ships if he really wanted them, but, with the backing of the Chief of the Defence Staff, Commodore Charles was able to push the “additional Provider” as the better option. Thanks to the advice provided during the previous meeting, the navy was also able to strengthen the Repeat Annapolis argument by conducting a cost comparison between that platform and the General Purpose Frigate as well as the current guided missile destroyer proposal. Moreover, the air force, leaning heavily on the recommendations of the Sutherland report, made a strong presentation on the need to replace the Argus.  

It was not the minister’s intention to come to any definite decisions at this meeting, but the presentation was nonetheless a resounding success. In Hellyer’s own words he was impressed with what the navy and air force had put together:

The formal briefing, on Monday, was quite well done. [His diary read] “It is a big improvement on much of the staff work we have been getting. The presentation on the Provider [supply ship] is something I had been waiting for. It clearly demonstrates that an extra Provider on each coast will increase our “on station” capability more for the cost involved than anything else we could do. The DDH… seem to make sense. Also an updating of the balance of the DDEs [destroyer-escorts] with better sonar, asroc, etc. All in all not a bad program.”

Dyer was equally delighted and sent a letter to Welland congratulating him and his team on their program. “It was clearly evident that considerable thought and much hard work had gone into its presentation,” Dyer told Welland, particularly since “the time to prepare the work was short which emphasizes even more the degree of effort which was put into making [it] the success that it was.” Such ringing endorsements from the Chief of Personnel and minister stood as a powerful testament to the change in attitude among the

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50 Defence Council minutes, 26 October 1964, DDH, 81/609, Box 7, folder 2; Defence Council Meeting, Secretary’s hand written notes, DHH, Raymont Papers, 73/1223, Box 68, file 1406.
51 Hellyer, Damn the Torpedoes, 112.
navy’s senior officers. Although their hand had been forced by financial cuts, in conjunction with the firm direction provided by Sutherland’s Report as well as the decline of the advocates’ influence, the result was that the navy finally had a viable force structure.

Things only got better for the navy. Over the next two weeks the Defence Council entertained plans to expand the Maritime Force Program with provisions for the third replenishment ship, a replacement for the West Coast’s only submarine, HMCS *Grilse*, and finally four more Sea Kings (in addition to the eight already proposed). The single setback came from the air force which was asking that the maritime patrol aircraft replacement program be deferred by two years.53 But with the air force and army having submitted their own force structures (ones that were highlighted by new tanks and artillery as well as transport (C130, Buffalo), maritime patrol and tactical aircraft) the Chief of Defence Staff turned his staff’s attention to defining a Canadian concept of war for the 1964-1974 period. Miller believed that “this matter was of prime importance,” particularly since it would be the justification for the larger Canadian Force’s equipment program, and he therefore created a team to investigate. This tri-service team presented their first briefing to the Chief of Defence Staff committee at the 17 November meeting. As far as the navy’s concept of operations was concerned, this team had gone a long way in reversing the course that Fraser-Harris’ Mobile Force committee had tried to chart out. Unlike that earlier report, which had attempted to provide the justification for a greater limited war concept of operations through the need to respond to United Nations’

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52 Dyer to Welland, 28 October 1964, DHH, NPCC Papers, 79/246, file 78A; Group Captain W.M. Garton to VCDS, 26 October 1964, DHH, Raymont Papers, 73/1223, Box 68, file 1406.
53 Defence Council, 9 November 1964, DHH, 81/609, Box 7, folder 2.
missions, this new planning was placing greater emphasis on NATO. In the process of doing so, it served as the final rejection of the limited war concept of operations:

Although it is practical to design forces for use in NATO and in the defence of Canada, the nature of UN operations and the type of forces likely to be required cannot be forecast and thus it is entirely impractical to attempt to establish a force purely for UN contingencies… Although there may be requirements for a maritime force contribution to UN other than sealift no special capability should be provided… The CDS agreed that it was of prime importance to be clear on our commitment to NATO, as this was the cornerstone of Canadian Defence Force planning.54

Having a sealift capability “built into” an ASW fleet would allow the navy to assist with UN missions, but this statement made it obvious that Welland and Fraser-Harris’s vision of large carriers with A-4 and F-4 fighters providing tactical air support to the army was dead.

Yet during the discussion over framing a common concept of war for the Canadian Armed Forces Welland could not resist the opportunity to make one last plea that “more flexibility [was] required in [the] Maritime Force.” This opportunity was the product of a comment by the Comptroller General, Lieutenant General R.W. Moncel who was openly wondering whether it was wise to “spend so much of our force on [the] special ASW role.” This small glimmer of hope was quickly extinguished since the Chief of the Defence Staff’s staff was not interested and observed that this type of flexibility would have to wait for the next fleet. As far as the current force structure was concerned it was far too late for such arguments, the more so since recent and pivotal operational events at sea appeared to prove that the navy had made the right choice with its decision to specialize in ASW.55

54 Minutes of CDS Staff, 17 November 1964, DHH, Raymont Papers, 73/1223, Box 75, file 1513.
55 Secretary’s hand written notes, CDS Staff meeting, 17 November 1964, DHH, Raymont Papers, 73/1223, Box 75, file 1513.
The navy had worked hard to become one of NATO’s most proficient ASW fleets, but there were signs that there was much more left to do. While the Canadian navy had attracted much attention for its development of SQS 505 hull and variable depth sonar as well as the idea of flying heavy helicopters off destroyers, the cuts to the budget and its failure to replace older ships in a timely manner nevertheless weakened Canada’s standing in the alliance. This was particularly evident during Exercise MASTERSTROKE. Held between 9-13 September 1964, MASTERSTROKE’s aim was to transit an United States Navy Strike fleet through a submarine barrier covered by carrier and shore-based aircraft. It was a disappointing experience for the Canadian ships involved. Certainly, Commander V.J. Murphy, who was the commanding officer of the variable depth sonar-equipped destroyer HMCS Crescent, was frustrated that the American screen commanders appeared to be prejudiced by the Crescent’s age and in the process of doing so failed to use this ship’s new detection gear properly. The commander of the First Escort Squadron, Captain J.P.T. Dawson, was equally baffled by the fact that the Canadian ships screening the task group were neglected to a point where their stumbling upon a submarine was considered a matter of good luck and fate. Despite that attitude the Canadians nevertheless made a good showing of themselves, accounting for four of the screen’s nine “kills” (three others were credited to the USN and the last two were combined RCN/USN actions), but that did not change Dawson’s final conclusion on the exercise. “I got the feeling, the impression,” Dawson began in a remarkable statement to his superior, “that the RCN had been invited along as a poor cousin on a picnic.”

56 First Canadian Escort Squadron, DHH, RCNHS fonds, 81/520/8000-260/1, box 228, file 3; V.J. Murphy, 18 September 1964, DHH, RCNHS fonds, 81/520/1650.
more modern destroyers for its alliance commitments. The Repeat Annapolis may not have been the ideal platform for the navy to perform all its assigned tasks, but they would help to quickly fill an immediate need.

There is some indication that the misuse of Canadian forces during MASTERSTROKE was the product of Americans commanders not knowing how to employ variable depth sonar rather than any specific prejudice against Canadian ships. Indeed, the fact that Captain Murphy found Crescent constantly having to make the long transit back and forth from the stern to port bow stations was the product of “the new screen commander [having] different ideas on the employment of VDS ships.” There was also the question of whether too many operational restrictions were being placed on variable depth sonar. The possibility that the variable depth sonar’s underwater cable could snag friendly submarines was a constant fear, and efforts to reduce this risk through limiting the depth at which it operated had caused some to “view VDS with pessimism.”57 Others were critical of the exercise itself. Comments that SACLANT exercises lacked realism were common throughout this period.58 Indeed, re-creating wartime conditions was not easy, but only days after MASTERSTROKE ended the navy participated in exercise SLAMEX which was billed as one of the most realistic attempts to simulate a Soviet submarine missile attack on the East Coast of Canada and the United States. Only the Cuban missile crisis of 1962 had come closer to the real thing, but in some ways SLAMEX had forced the Canadian navy to become more introspective regarding its anti-submarine warfare commitment.59

57 V.J. Murphy, 18 September 1964, DHH, RCNHS fonds, 81/520/1650.
58 G.R. Lindsey, Limitations in the realism of Anti-submarine and air defence exercises, 10 August 1964, DHH, Sutherland collection, 87/253-II-21.3.
59 Aide memoir, CANUS North Atlantic Strategy, June 1966, DHH, 76/51, folder 4C.
SLAMEX 2/64, which was carried out between 16 and 23 September 1964, was designed to test the “Atlantic ASW System” with the aim of evaluating the effectiveness of Canada-United States forces to coordinate defensive operations against a submarine launched ballistic missile (SLBM) attack. Every weapon and sensor type would be brought to bear against 14 “hostile” submarines over an unparalleled operational area covering some 700 miles between Labrador and Yucatan including the Gulf of Mexico. Hunting submarines over such an extensive area was formidable undertaking and the task of preventing them from reaching their launch points fell upon a sizeable armada:

American forces: 10 SOSUS stations, 2 aircraft carriers, 14 Squadrons of Maritime Patrol Aircraft, 64 escorts (29 frigates and 38 Destroyers), USCG ships and aircraft and numerous auxiliaries and aircraft.
Canadian forces: 1 SOSUS station, 5 destroyers (Algonquin, Crescent, Athabaskan, Yukon and St. Laurent), 3 Prestonian Frigates (Outremont, La Hulhoise, and Cap de la Madeleine) and Maritime Patrol aircraft404, 405, 415 Squadron, VS 880 (operating from USS Essex).60

The findings from SLAMEX were as staggering as its scope.61 Only four out of the fourteen hostile submarines were stopped before they reached their launch points. The damage to North America had they been real Soviet submarines would have been catastrophic. The 3,000-kiloton warheads attached to the thirty simulated SSN-4 missiles from the ten surviving boats would have wiped out key civilian targets such as Halifax, St. John’s, Montreal, New York, and Washington as well as numerous military targets and installations. Worse yet, after launching their missiles these submarines continued the carnage by sinking sixteen merchant ships and two destroyers. The losses to the civilian population were even more staggering as the number of Canadian killed and

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60 G. Walsh, 1 October 1964, Exercise SLAMEX 2-64, S 1660-89.
wounded was estimated at between 701,600 and 877,000. Overall, it was determined that this force of fictitious Soviet submarines had managed to threaten one third (42 million) of the US urban population. Other sobering conclusions followed.

For the past two years the Canadian navy had been obsessing over Soviet nuclear-powered submarines, only to have SLAMEX prove that the alliance could not even deal with the much slower diesel ones. One of the key elements of SLAMEX was “to evaluate the effect of recent improvements in weapons, weapons systems, and sensors,” but despite high hopes for all their new innovations the exercise was an unmitigated disaster for the anti submarine forces. It was a defining moment. The Canadian navy had responded to various staff studies regarding the need for better detection and weapon systems by developing an anti-submarine warfare network that would be based on SOSUS, Jezebel, helicopters, ASROC and SQS 505 variable depth sonar. It was not going to be enough:

Preliminary evaluation shows that the improvements in weapon, weapon systems and sensors caused no significant increase in over-all effectiveness of the ASW forces in coping with a steady state deployment for missile attack. The CANUS ASW system was unable to prevent a major simulated SLBM attack on the east coast of Canada and the United States.62

As grim as that conclusion was, a covering letter to the exercise report was even more direct by observing that “the exercise showed once again that existing ASW forces cannot effectively defend the continent against missile-firing submarines.”63 Given the severity of this conclusion it was obvious that the alliance as a whole would have to place

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an even greater emphasis on anti-submarine warfare. And that was exactly what the post-
exercise assessment recommended.

The key to countering the SLBM threat rested with quick and accurate
intelligence matched with an early application of force, and the only way to do that was
to continue the improvement of the North American anti-submarine warfare system’s
capability to neutralize enemy submarines with better weapons, weapon systems, and
sensors. There was also a requirement to refine the classification and localization
performance of the ASW systems themselves. These calls to augment current ASW
forces resonated in Ottawa. The force structure crisis had caused much disruption over
the previous year, but the results of SLAMEX strongly suggested that the decision to
specialize in ASW was the right one. Unless the government had suddenly switched
course and invested more money in the navy, the multi-purpose fleets proposed by
Fraser-Harris and his supporters would have added limited war capabilities at the expense
of the anti-submarine warfare role. Thanks to the efforts of those who believed in the
DDH Concept of Operations, the current force structure had set the Canadian navy on a
path that would conform to SLAMEX’s final recommendation even before they were
made.

There were other aspects of this exercise that also reaffirmed the premise behind
the DDH Concept of Operations. Financial cutbacks would not allow the navy to keep
both shore-based and carrier aircraft, and SLAMEX, much like EXERCISE FLATROCK
one year earlier, had again illustrated how the maritime patrol aircraft was the more cost-
effective partner for the destroyer. As the first exercise to “operate a meaningful number”
of American P3A Orions, SLAMEX not only gave the Canadian navy a glimpse of its future but also allowed this aircraft to showcase its capabilities. The results were decisive as the P3A out-performed the VS 880 Trackers, which, as fate would have it, were operating off USS Essex. (That these aircraft were on the Essex - Bonaventure was undergoing maintenance and refit in Saint John, New Brunswick - had given their pilots a sense of what their destiny would have been had Fraser-Harris and Welland got their way). Repeating the results of FLATROCK, the maritime patrol aircraft once again demonstrated that they were better suited to deal with severe weather conditions than the carrier-based ones.

The weather during FLATROCK may have been bad but SLAMEX was worse. Three hurricanes (Dora, Ethel and Gladys) raged in the Atlantic over the course of the exercise and such extreme environmental conditions identified how weather always complicated the defender’s ability to hunt submarines. Gladys, in particular, was problematic for all the exercise’s ASW systems except one:

It is noteworthy that CTG 81.2 VP forces were maintained on station, after the CVS HUK GROUP and other surface forces retired due to hurricane Gladys. Maritime Air again demonstrated its capability to sustain all weather around the clock flight operations. One positive kill was made after the surface forces had retired…. Each element of the ASW system has unique strengths and weaknesses. The effective operational capability of maritime aircraft, under adverse weather conditions for surface forces, is a significant factor in ASW… The P3A again indicated its ability to far exceed established guidelines for usage.65

While most naval officers agreed that the best situation would have been to get a replacement for Bonaventure as well as having the air force acquire a new maritime patrol aircraft, Hellyer’s financial cutbacks had long ago made it clear that this outcome was never going to happen. The new force structure had reaffirmed the decision to

65 Ibid.
spread the navy’s post-Bonaventure aviation requirements among helicopter carrying
destroyers and shore-based maritime patrol aircraft. SLAMEX, therefore, was one of the
first pieces of hard evidence that the navy had made the right choice.

The exercise also suggested that the assumptions that lay behind the navy’s
current concept of anti-submarine warfare were correct. Intelligence reports had long
warned that the Soviets would not only possess an intimidating force of 312 conventional
and 63 nuclear submarines by 1967, but also that it was anticipated that they would
exploit the offensive capability of these vessels to apply pressure and directly threaten
North America. SLAMEX had confirmed exactly how real these assessments were,
particularly with regard to those submarines that possessed missiles. The key to
defeating the Submarine Launched Ballistic Missile (SLBM) was to detect Soviet
submarines early and destroy them as far away from North America as possible. Indeed,
a secret briefing at Canadian Forces Headquarters perfectly captured how the SLBM
threat was impacting naval thinking:

Canada’s Anti-Submarine Warfare effort is co-ordinated with the efforts of our
allies and while our allies appear to be numerous and powerful, the fact is that the
oceans are extremely large and the submarine elusive. So the Canadian ASW
effort is of real significance. From a technical and tactical point of view the
successful hunting of submarines is entirely feasible and is shown to be so in
numerous exercises that take place through every year.

The nature of ASW is undergoing change owing mainly to submarines
gaining the ability to fire strategic [sic] and tactical missiles. Whereas in the past it
was good enough to defend shipping by close escort -- in other words to wait for
submarines to turn up -- this technique is really no longer applicable. We must
aim to detect submarines by search methods in the broad ocean. In other words,
the accent now should be on surveillance. This is the direction in which we are
aiming our ASW efforts. 66

Of course, NATO’s ability to destroy Soviet submarines at the key choke points in the
eastern Atlantic (namely the straits on either side of Iceland) was dependent on geo-
political factors. In all likelihood NATO would face a Cuban missile type scenario, meaning that slowly growing political tensions between the superpowers would allow both sides time to get their submarine fleets well out to sea. Put simply, attacking Soviet submarines in the eastern Atlantic during a period of heightened tensions, while the best way to prevent them from breaking out to the mid-Atlantic, would unleash the land-based inter-continental ballistic missiles and precipitate the nuclear war that the political levels would be busy trying to avoid. The solution, therefore, rested in detection and surveillance as NATO needed to know exactly where all the Soviet submarines were so that they could destroy them in the Atlantic the moment hostilities commenced.

Fortunately the Canadian navy’s destroyer concept of operations could make a useful contribution to this NATO objective because of the emphasis it placed on surveillance. Between the shore SOSUS station in Shelbourne, the 505/503 hull mounted variable depth sonar sets on its destroyers, ship-borne and aircraft Jezebel, NUTMEG, MAD as well as the helicopter’s SQS 10, the Canadian navy was making a considerable contribution to NATO’s detection capability. Thanks to the destroyer and maritime patrol aircraft, this force would also maintain a satisfactory attack capability even after Bonaventure was decommissioned. Indeed, SACLANT was happy with the Canadian navy’s offensive potential as helicopters and ASROC-firing destroyers complemented each other by providing the RCN with a quick-firing as well as self-contained long-range weapon capability, while the Mk 10 Mortars and ship-launched torpedoes provided close-in response systems. Although both the maritime patrol aircraft and Oberon submarines played critical roles, it was the operational support ships that would give this destroyer-based force the legs it needed to track and hunt Soviet

66 The RCN today, nd [circa spring 1965] DHH, 73/712.
submarines for extended period in blue waters. And finally, thanks to the Repeat Annapolis’ point defence missile system, the Canadian navy now had ships that could defend themselves from air threats when operating with a NATO anti-submarine group. Admittedly, this force had gaps and weaknesses as an independent national naval fleet. However, when viewed in a larger integrated alliance context, this destroyer-based fleet was making an important contribution and it was for that reason SACLANT bestowed his blessing upon the Canadian navy’s new force structure.

In September 1964 American Admiral Harold P. Smith, who had replaced Dennison as SACLANT in April 1963, was asked to provide a breakdown of his 1970 naval requirements for Canada. His response, which arrived two months later, suggested that he was happy with the direction that the Canadian navy was taking. By 1970 Smith expected Canada to provide NATO with “0 CVS (carrier), DD/DDE 30 + 5 Category B (Destroyers), SS (Conventional submarines) 2+1 Category B, 60 MPA (maritime patrol aircraft).” The fact that SACLANT did not see a need for a Canadian carrier in 1970 was highly significant, particularly given Bonaventure’s early decommissioning in that same year. A number of officers at Canadian Forces Headquarters were surprised and did not understand why Smith would not want a carrier that the Canadian navy was planning to keep until 1975. Commodore Murdoch could only surmise that Smith was more interested in quality rather than quantity. In an important memo to the Chief of the Defence Staff, Murdoch, who was acting under the authority of the Assistant Chief of the Defence Staff, Air Vice Marshal, W.W. Bean, concluded that since the Canadian carrier was “not the equal of an Essex, it would appear SACLANT is obliquely asking to pay off Bonaventure.” Effectively blaming SACLANT for the demise of carrier aviation in
Canada as well as the current force structure’s emphasis on destroyers and maritime 
patrol aircraft, Murdoch continued:

It would appear that SACLANT’s Force Planning Staff (largely USN) have 
endeavored [sic] to maintain the USN carrier force at, or better than, full strength 
at the expense of BONAVENTURE, while recommending that Canada provide 
MPA and DDE’s. There was no reason why Canada should provide the 
additional MPA and DDE’s rather than a carrier. The latest proposal indicates a 
change of emphasis on Canada’s Maritime Forces which may well inhibit future 
national plans. As there is no change to the required number of operational 
carriers, SACLANT may consider that other countries are better equipped to 
provide this carrier and this may have influenced his decision to deny Canada a 
commitment which she had undertaken since 1949.67

The importance of this claim cannot be overstated. The reasons why 
Bonaventure was 
retired early is one of the most enduring controversies in Canadian naval history, and yet 
according to Murdoch the seeds of that decision had been planted by SACLANT in the 
fall of 1964.

There is currently no evidence to support the proposition that SACLANT had 
engaged in some conspiratorial effort to save American carriers at the expense of 

Bonaventure. But the belief that SACLANT thought other countries were better suited to 
provide the carrier requirement was entirely realistic, the more so since it was a view that 
Sutherland and other destroyer supporters in the Canadian navy shared. While there were 
a number of other factors that help explain Bonaventure’s early decommissioning, 
Smith’s 1970 force goals did have a tremendous impact on sealing the fate of carrier 
aviation in Canada. By suggesting that long-term design studies be prepared for a “major 
warship,” the current force structure had left room for the navy to re-examine a carrier 
replacement in the 1967-1970 time frame; yet Smith was effectively torpedoing these 
ambitions before they had a chance to get started:
The fact that SACLANT has published a “nil” requirement for a carrier from Canada will undoubtedly have an impact on any national replacement plans. The RCN had a large interest in Naval Air which is a highly effective force, further, our Naval force structure ought to maintain a balance of forces, consequently, if we require a carrier to maintain versatility we will require SACLANT’s support in the form of a realistic requirement from Canada. … Whether Canada provides a carrier or some alternate ship of a similar nature will be decided by Canada, but any replacement would be very difficult to justify without a SACLANT requirement.68

Although the navy had sought out SACLANT’s opinion, it is interesting that his decision not to include a carrier in his force requirements suddenly amounted to unwarranted interference. The situation reeked of sour grapes. The remaining naval aviation advocates at Canadian Forces Headquarters may have accepted the fact that a carrier was not going to be included in the current force structure, but it is clear that they saw potential to get one added to the next fleet. And it was for that reason Commodore Murdoch, observing that Dyer was in complete agreement, told the Chief of the Defence Staff that a message had to be sent to Smith requesting that he adjust his force goal requirements to include a carrier. Miller refused. His reasons for doing so were simple. The navy’s current force structure was not about building a fleet that could support a wide range of carrier operations in the 1970s, and after citing Sutherland’s report Miller observed that “if we have to provide another carrier in the 70’s the form of the navy will be very seriously changed.”69

A January 1965 letter from Smith to Hellyer, which was designed to clear up some points of interest that had been raised during an earlier visit to Ottawa by his deputy commander, Vice Admiral I.W.T. Beloe, RN, left little doubt that Miller was right.

67 ACDS to CDS, 24 November 1964, DHH, Rayner Papers, 99/31-IB-16. This document was actually drafted and signed by Murdoch “for” the ACDS.
68 ACDS to CDS, 24 November 1964, DHH, Rayner Papers, 99/31-IB-16.
69 Ibid.
Smith was firm and his comments made it obvious any attempt to get a carrier added to his requirements would have ended in failure. Smith was absolutely fulsome in his praise of Canada’s current force structure and wanted the navy to continue on the same track. “Greatly encouraged” by the construction program that the minister had just announced in December 1964, and arguing that the Canadian navy’s ACLANT Anti-submarine effort “is one of our most important assets,” Smith was anxious to see the seven converted Restigouches and four “improved NIPIGONS” join his command. That these ships would be “backed by 2 PROVIDER Supply Ships” was even more impressive. In fact, Smith’s only criticism was that the Canadian navy was not building more destroyers to meet his requirements.70

SACLANT’s correspondence with Hellyer identifies that he fully understood the Canadian carrier paradox. It did not make sense for the Canadian navy to explore a replacement carrier at a time when governmental policy was leading to a reduction of the escorts assigned to his command “by one ship in three.” His message was blunt. It would be much better for the Canadian navy to finally put its carrier aspirations to rest once and for all and divert its energies to building more destroyers. To some extent the same logic applied to nuclear submarines. Their costs were also too high for a medium-sized navy, but this was one platform where Smith was willing to give Canada some latitude, telling Hellyer that:

On the subject of Nuclear submarines, I understand you questioned Beloe as to how we would react if you had to reduce your surface vessels by 3 or 4 to produce 1 nuclear submarine. There is no doubt that the nuclear hunter-killer submarine is the best A/S vessel in our armory [sic] and is likely to remain so when used in its proper environment - in forward areas and enemy waters. But we still have great need for surface A/S vessels as well as MPA [maritime patrol aircraft] and A/S

70 Smith to Hellyer, 11 January 1965; CJS (W) to CANFORHED, 212222 January 1965, DHH, Rayner Papers, 99/31-IB-16.
aircraft for the protection of merchant shipping and our attack naval forces, and
the defense [sic] of our coastal areas, I believe, at this state, it is right for Canada
to concentrate on A/S surface forces and MPA, but when you are considering the
long term replacement of BONAVENTURE, it may be practical to go for nuclear
submarines [instead]. 71

Unable to afford nuclear submarines, the Canadian navy had opted for next best anti-
submarine warfare alternative of teaming up “the VDS and helicopter equipped
destroyer,” and according to Smith, the destroyer-based fleet would always be the proper
path for a medium-sized navy that was facing more financial cuts. 72 Naval aviation had
suffered many setbacks since Fraser-Harris’ campaign to acquire Iwo Jinas and an Essex
had fallen flat, but Smith’s 11 January 1965 letter to Hellyer was one of their darkest
days.

Thanks to his early retirement Fraser-Harris missed the dismantling of his dream,
but there were naval aviation supporters who had to endure the nightmare. Some, like
Welland, even had to participate in the process. The loss of the battle to replace
Bonaventure, along with integration, was a demoralizing experience. In Welland’s own
words he was merely going through the motions and had lost the enthusiasm for his job
long before he traded his Vice Chief of the Naval Staff title in for his current integrated
moniker of Deputy Chief of Operational Readiness. “When I was VCNS I was really sort
of losing interest,” Welland reported in a 1983 interview, continuing with “I really didn’t
want to be the Chief of the Naval Staff over something that was turning to rat-shit. But I
couldn’t change it.” Nor was he willing to follow Fraser-Harris’ example and fight a
rear-guard action to stop integration and save the carrier replacement from its inevitable
fate, as he continued, “I really couldn’t start a war of my own which was the best

71 Smith to Hellyer, 11 January 1965; DHH, Rayner Papers, 99/31-IB-16.
solution.” Although Welland was “fed up with the whole thing” he stuck with the navy until 1967 and because of that he got to be part of the second force structure debate. According to Welland it was the process of reliving the frustration of getting the navy a proper force structure, in combination with the lead up to the unification, that led to his early departure:

… the navy was getting to me. The government were cutting back money. We’d put up one program after another, you know, capital programs on ships and aircraft. We got some but they were shot down too often and I thought I’d be wasting my time in doing this for another seven years, and the hell with it, I’m just not going to do it. I might have even left without Unification. 73

Honouring the traditions of the silent service Welland left the navy quietly. He was not alone. Having realized that nothing could stop Unification, Dyer and Stirling had already left the service with little commentary; only Landymore made his resistance a public affair and was subsequently fired for it. 74

Like Welland, the stress of his final years in the navy also followed Fraser-Harris into retirement. Although he would claim that he was not bitter about losing the carrier replacement battle, a series of letters written in the 1990s strongly suggest otherwise. Nor did Fraser-Harris ever forgive his seniors for snubbing his promotion to Rear Admiral. But while the former Assistant Chief of the Naval Staff (Air & Warfare) believed that his failure to conform to the pre-war permanent force club rules was to blame for his inability to get promoted, a letter from Brock to Rayner in November 1963 suggests that Fraser-Harris’s greatest flaw was his over zealous advocacy of naval

72 An ASW vehicle for the Canadian forces a proposal, DHH, Gigg Papers, 88/64-10, Item 1; Commodore F.B. Caldwell, 23 April 1964, LAC, RG 24, Accession 1983-84/167, Box 51, file 1225-1 vol. 3.
73 R. Welland, interview by Hal Lawrence, tape recording transcript, Ottawa, ON, 25 May 1983, DHH, BIOG W.
aviation. In the process of assessing Commodores Charles, Hennessy, Welland and Fraser-Harris’ suitability for promotion, Brock advised that “an excess of ‘driving enthusiasm’ and determination can be dangerous if not tempered by a balanced judgement. By applying this ‘balanced judgement factor’ I would exclude Fraser-Harris from consideration at all.” Brock had a point. Officers who were identified as extreme advocates, such as Fraser-Harris and Gigg, were dangerous because they would do almost anything to acquire their preferred platform. In fairness, these officers truly believed they were acting in the navy’s best interest, but in reality it was their inability to look at the larger picture that was their greatest flaw. Although Brock was right about Fraser-Harris, the former Vice Chief of the Naval Staff had his own weaknesses that made his last days in the navy even more controversial.

Brock’s departure from the navy was not pretty. In early August 1964, Brock, who was still serving as Flag Officer Atlantic Coast, received a call from the minister who wanted to arrange a time that the two men could speak in Ottawa. With no idea why the minister wanted this face-to-face meeting, Brock claimed that he was blindsided when Hellyer opened their conversation by effectively firing him. The exact wording of this encounter is highly controversial particularly since Brock and Hellyer both wrote memoirs with conflicting recollections of this encounter. Brock’s version, which appeared in his book *Thunder and Sunshine*, is harder to accept because it contains a word or word summary of events that took place almost twenty years earlier. Yet through similarities between the two accounts it is possible to state that Brock was forcibly retired because integration had resulted in a serious promotion quagmire among

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75 Brock to Rayner 7 November 1963, LAC, Brock Papers, MG 30 E 522, Correspondence. It is interesting to note that Debby Piers was also asked to rank the commodores for promotion and his list did not even

428
senior officers. Put simply, integration was scaling down the bureaucracy at Canadian Forces Headquarters and that had led to a situation where there were far more senior staff officers than positions available for them. From Hellyer’s perspective, therefore, getting rid of Brock (among others) was the only way to “create some movement” for younger officers to get promoted. While this was Hellyer’s prime reason for firing the Flag Officer Atlantic Coast, he also admitted in his diary that he found Brock “an anachronism – a traditionalist holding up his hands to stem the tide of the future. His devotion to the outmoded class distinctions inherited from the Royal Navy was inappropriate to the modern navy after World War II.” Indeed, Hellyer had a keen memory of Brock and his wife having “lavished” “Old World hospitality” on him during his East Coast visit while participating in exercise GOOEY DUCK, which, the minister recalled in his memoir “was made possible, however, by treating ordinary seamen as lackeys.”

Despite Hellyer’s recollection that Brock took his dismissal “like a real man,” the aftermath of this meeting was an extremely emotional one for the Flag Officer Atlantic Coast. Disbelief and nausea soon gave way to anger and moments of being a “little weepy” when Brock recounted the whole episode to Dyer over a few drinks. Nor did these feelings subside; three months later a letter from an unidentified public servant to the Prime Minister found:

Although publicly he has accepted his retirement with grace and dignity, privately he is convinced that we have made no greater error had we retired Lord Nelson himself. He could not understand why he had been chosen for release and he is indeed most anxious to find out who recommended his dismissal to Mr. Hellyer. He imagines that his dismissal was a dreadful blow to the morale of the Navy and he is convinced that it has caused the greatest consternation among the Senior Naval officers. (On checking, this did not prove to be found). There is no doubt that his dismissal came to him as a complete surprise because he had expected to

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include Fraser-Harris. See Piers to Rayner, 31 October 1963, DHH, Piers Papers, 2002/13, file 2-4-1.
76 Hellyer, Damn the Torpedoes, 92, Brock, Thunder and Sunshine, 166-168.
be in Command of the Integrated Forces on the East Coast. That he feels very badly about his retirement became quite clear when he actually broke down and cried. His pride which is not an unimportant part of his personality has also suffered a tremendous blow and he dreads the farewell speech he is to make on the 12th of November.77

Brock’s enormous ego was always problematic, and there were undoubtedly officers who were happy to see him go. But he also had his supporters. Many senior commanders in the United States Navy and Royal Navy, including SACLANT, wrote glowing letters to Brock on the job he had done as Flag Officer Atlantic Coast and their shock for the circumstances behind his release. In fact, one report, written by the Naval Member Canadian Joint Staff in London, Commodore F.B. Caldwell, even went so far as to record that Lord Louis Mountbatten, who served as Britain’s Chief of the Defence Staff between 1959-1965, “asked me rather bluntly why Admiral Brock was being retired and stated ‘he is an excellent officer and the best Admiral you have.’”78

Such praise from Canadian officers is not as easy to find, but it is clear that Rayner told Brock that he thought highly of him. Writing at the time of his own retirement in July, Rayner let Brock know that “you did an outstanding job as VCNS and the Naval Objectives Report for which you were very largely responsible will be of lasting value to the Navy.”79 On the day of Brock’s retirement, 12 November 1964, Rayner expanded on this praise:

I am mindful of the valuable report you compiled on naval objectives, which I believe is still the basic paper in naval planning. Also of the various programmes that you successfully pushed through and which are so important to the modernization of the navy. These are some of the things you will be remembered for, by those who worked with you at Naval Headquarters. My guess is that you

78 Caldwell to Dyer, 8 October 1964, DHH, Rayner Papers, 99/31-IA-10. Other letters from foreign officers regarding Brock’s early retirement can be found in the Brock papers, LAC, MG 30 E 522, vol. 9.
will be remembered by the majority in the Navy as a brilliant, successful and tenacious sea fighter. If there had been a R.A.’s [Rear Admiral’s] job at sea, no one could have done it better than yourself. On the personal side may I say how much I have appreciated your loyal support at all times.  

Rayner had made an important point in this letter that requires elaboration, namely the former Chief of the Naval Staff was crediting the Brock Report for laying the foundation of the current force structure that the minister had just approved. The fleet that Brock had outlined in his report was unrealistically large and expensive, but the premise of building a destroyer-centric navy that specialized in anti-submarine warfare (and was also capable of a small degree of versatility) did live on. His Report’s solution for the fleet’s air defence deficiency of relying exclusively on missile carrying destroyers was still a guiding principle. While the current manifestation of the eight General Purpose Frigates (the four Canadian-designed guided missile destroyers) had been relegated to the “fleet after next” they were nevertheless under active development and would remain so for another six months. Although neither the Mackenzies nor the Restigouches would get point defence missiles, the intended addition of one of these systems to the Repeat Annapolis was another indication that this air defence philosophy had prevailed.

There were many other aspects of Brock’s report that also survived. For instance, his call for supply ships was fully embraced in the new force structure, while the three Oberons represented a watered down version of his report’s recommendation for six Barbel conventional submarines. So, too, were the helicopter-carrying Repeat Annapolis, which, along with the St. Laurent conversions, were as close as the navy would get to Brock and Rayner’s larger version of the DDH navy. Perhaps in this regard the navy was fortunate. The concept of fitting up to fourteen helicopters into the Heliporter frigate’s

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St. Laurent-based hull was just as technically unrealistic as turning the Restigouche and Mackenzies into medium-range missile carrying DDHs. Of course, there were aspects of the Report that never made it into the new force structure, but given these similarities it is easy to see why Rayner believed that the navy was about to build a vastly scaled down version of Brock’s Report. Brock agreed. With a smug tone of self-satisfaction, Brock recalled in his memoir:

The consequences and repercussions of the “Brock Report,” as it became known, had many profound effects upon the Navy during the years that I was Vice Chief and, as I shall recount later, it may also have affected a strange young politician when he became Minister of National Defence a couple of years later. He certainly used it [the Brock Report], but he twisted and misconstrued its true meaning.81

Brock was actually referring to his belief that Hellyer had borrowed the assumptions in his report to lay the foundations for the Maritime sections of the 1964 White Paper, the more so since the force structure under current discussion had been devised by naval officers rather than the minister. But that fleet was nonetheless the product of a desire to build a small degree of flexibility into a specialized anti-submarine force. And once that fact is accepted it is difficult to escape the conclusion that the navy had spent four torturous and highly divisive years debating its future force structure only to end up right back where it had started. More importantly, the concepts behind the Brock report effectively guided the Canadian navy through the next forty years.

The reasons why the navy accepted a less sophisticated Repeat Annapolis rather than the guided missile destroyers they actually wanted has been shrouded in mystery for the past forty-three years. Yet the story under that shroud reveals that the Repeat Annapolis was not only the product of a rational and internal decision made by naval

81 Brock, Thunder and Sunshine, 85.
officers, but also that these ships filled an important role in a plan to acquire a fleet of eight destroyers between 1966 and 1973. Cheaper than the Adams class, the Repeat Annapolis offered the navy a financially realistic option to maintain its alliance force goals while at the same time meet the minister’s immediate need to satisfy pressure from the shipyards for more work. More importantly, however, the initial idea was that the Repeat Annapolis would buy time for the navy to develop properly the guided missile destroyers it really needed. Had it not been for further budget cuts in the late 1960s these ships would have fulfilled the second half of the original program and likely would still be serving alongside today’s DDH 280 Iroquois as a similar but separate class.
Chapter 8 Conclusion

The Canadian navy’s experience with force structure options between 1957 and 1965 was an unhappy one. A fluid strategic environment, the development of new technologies, a change of governments, various operational factors and (most importantly) the influence of ship advocates all conspired to dismantle a coherent fleet replacement program. The result was a period between 1963 and 1964 where misplaced planning was only brought to an end once the influence of ship advocacy was mitigated and firmer direction was provided by the political as well as integrated headquarters levels. The outcome was a well thought out program that was not only produced by naval officers but also offered one of the best possible force structures with the funds being made available. Yet the events that led to this force structure clearly indicate that certain myths surrounding both the General Purpose Frigate and Repeat Annapolis - namely that the navy was fully united behind the former and that the latter had been forced upon them by a headstrong minister - are untrue. While the events leading to the Repeat Annapolis have been explained through the exploration of empirical evidence, the question of whether the entire force structure crisis could have been avoided remains. Since Vice Admiral Rayner’s position as head of the navy during the first half of the 1960s put him in the best position to prevent the crisis, it is necessary to summarize the period with the view of measuring his actions against those of his staff.

The fact that Rayner, upon becoming Chief of the Naval Staff, was immediately confronted with the explosive impact of new technologies on naval warfare as well as the significant shift in the strategic environment ensured that his tenure as head of the navy was a complicated one. His predecessor’s decision to specialize in anti-submarine
warfare was bold but easy to justify given the financial and strategic realities facing the navy at that time. DeWolf knew that the government would never give him the money to build both specialized anti-submarine vessels and ships capable of operating in limited war situations. The chances that Canada would get involved in limited war situations that would require a high degree of sophistication and firepower seemed remote and that made his approach one that Rayner was willing to follow. However, events such as the Cuban Revolution, the Congo, the Berlin Crisis, as well as the Kennedy administration’s shift from the strategy of massive retaliation to flexible response, all put pressure on Rayner to reopen the question of whether to build a specialized or versatile fleet in the early 1960s. It was a complicated issue filled with pitfalls, and as time would prove it was perhaps the single greatest sustained challenge that Rayner faced during his tenure as Chief of the Naval Staff.

Adapting to the new threats posed by the fast nuclear submarine, supersonic fighter/ bomber and cruise missile was equally troublesome. Each required its own countermeasure - such as guided missiles, faster propulsion, bigger guns, rocket-assisted torpedoes, helicopters and better radars as well as sonars - and that presented the navy with a problem. The ineffectiveness of the 3-inch-70 gun against jet fighters made it clear that the RCN would require a more modern air defence weapon. Whether that new system should consist of replacement aircraft for the Banshees, guided missiles, or a reliance on allies was hotly debated. The speed of the nuclear submarine led to similar complications. The development of new sensors, such as the SQS 504 variable depth sonar, meant little without a suitable weapon to attack a detected nuclear submarine beyond its torpedo range. While the advent of the destroyer-based helicopter was
initially seen as the solution to the weapon-detection gap, the critical issue of dead time soon led to a requirement for a fast reaction missile-launched torpedo system. Other detection and weapon systems (most notably Jezebel, Julie, Nutmeg, and Mk 46 torpedoes) were considered equally important elements of the anti-submarine mix. That the navy needed the majority of these weapons and sensors by the early 1960s was not in doubt, but rather it was the question of how to get these systems to sea that muddied the waters. Whether it was better to build larger numbers of smaller specialized ships or bigger multi-purpose vessels was therefore the key question of the day.

The advocates’ use of the debate over specialization and versatility became a cornerstone of the force structure crisis, but when Rayner’s response to this issue is measured in isolation it is clear that he had a good grasp of the problem. A versatile anti-submarine fleet would ensure that the navy remained relevant through its ability to respond to any contingency. Yet, like DeWolf, Rayner also realized that multi-purpose ships were far more expensive than specialized ones. And that made them a particularly tough sell to a cost-conscious government. Rayner’s decision to work a small degree of versatility into what was essentially an anti-submarine fleet through a force structure of general purpose frigates, conventional submarines and helicopter destroyers was a wise choice but it was not without its critics. To some degree this debate over versatility has always haunted the Canadian navy and the detractors of Rayner’s vision of a flexible anti-submarine force did have legitimate concerns. Efforts to fit 200 troops into the General Purpose Frigate along with a bombardment gun, anti-aircraft missiles, a utility helicopter and anti-submarine weapons represented an attempt by a financially strapped navy to deal with both their primary anti-submarine commitment and a possible limited
war requirement. However, the argument that the General Purpose Frigate were trying to perform so many functions that it could not do any single task well had a certain ring of truth to it. The same could be said for the claims that multi-purpose ships could not be in two places at the same time, meaning that the Canadian navy could not respond to simultaneous anti-submarine and limited war situations. But while specialized ships were cheaper and performed their specific tasks better than multi-purpose ones, it is easy to see why Rayner was inclined towards a small measure of versatility. No one could predict whether or not the navy would ever have to respond to a limited war situation but the embarrassing idea of trying to employ highly specialized anti-submarine ships in such a scenario was too much for Rayner to handle. Using the limited funds available to the navy to his best advantage, Rayner’s fleet was designed to make the maximum contribution to Canada’s top maritime commitment to NATO while at the same time achieving as much general purpose capability as possible.

Rayner had good reason to believe that his approach was the right one. Senior allied officers, such as Madden, Dennison and Smith, had all placed their stamp of approval on his fleet, while defence scientist Sutherland’s endorsement of the General Purpose Frigate was equally encouraging. Clearly there would never have been a force structure debate had Rayner only required the support of ministerial advisors and allies, but (unfortunately for the Chief of the Naval Staff) it was his political masters who had to approve his fleet. Rayner’s grade on that front was mixed. His performance while serving under the Conservatives was particularly strong and showed him as a clever, skilled and congenial negotiator. Rayner understood that procurement was not a question of win or lose but rather how to gain approval for as much of his program as possible.
His strategy of hedging his bets with Diefenbaker’s government allowed him a tremendous amount of flexibility, and had the Conservatives remained in power there can be little doubt that their acceptance of Rayner’s fleet of frigates and conventional submarines would have sealed his reputation as one of Canada’s better admirals.

But while Rayner deserved high marks for the way he dealt with the Conservatives, measuring his response to the Liberal’s budgetary reductions along with their defence policy re-evaluations and cancellation of the General Purpose Frigate is more problematic. All these factors contributed to the instability that fuelled the force structure crisis, and it is therefore tempting to blame Rayner’s overdeveloped sense of obligation to his civilian masters for some of the chaos. His belief in this principle – which rested at the heart of how liberal democracies controlled their militaries – was, of course, correct. Instead it was the way he interpreted his relationship with Hellyer that was at fault. Rayner saw little point in advancing one program over another in the wake of the General Purpose Frigate’s cancellation, particularly since Hellyer was not going to make any decisions on force structure until he had received Sutherland’s maritime systems report. This was Rayner’s mistake. In fairness, there was no crystal ball at Naval Headquarters to tell Rayner that the current incarnation of Mobile Force was a stillborn concept or that the minister’s interest in nuclear submarines would wane.

Nevertheless, it is hard to escape the conclusion that Rayner would have had better luck had he adopted DeWolf’s proactive approach. Forcefully telling the minister what the navy was capable of doing with the available funds as well as defining the ships needed to undertake those tasks could have prevented the void that formed at Naval Headquarters regarding the navy’s force structure. Even if the minister had decided to move in a
different direction than the one Rayner proposed, this type of focus from the Chief of the Naval Staff could have kept the advocates in check and mitigated their interference.

Rayner’s failure to provide this leadership was the key factor that allowed the advocates to gain power and influence beyond their rank. Their sway over the navy’s force structure was not only considerable, but it also demonstrates the value of studying individuals within the bureaucracy (or in the navy’s case at the military staff level). Indeed, the process that led to the repeat Annapolis is a prime example of what can be gleaned when historians employ the bureaucratic/staff officer - bottom up approach. As this methodology suggests, the key to uncovering the truth behind certain decisions often rests with a deep documentary excavation of the bureaucracy that informs and influences the military men and politicians who are in charge of the navy. Consequently, by avoiding the standard approach of previous accounts within the literature - which tend to focus exclusively on the apex of power - this dissertation was able to uncover an intriguing story regarding the impact that relatively junior staff officers had on naval policy through the practice of ship advocacy. It also led to the discovery that the decision to build the Annapolis was not the product of one man but was rather the product of interactions between key staff officers and ship advocates.

The ship advocates were major players at Naval Headquarters. Not only did they help torpedo Rayner’s attempts to save the General Purpose Frigates over the summer of 1963, but they also managed to put his Oberon submarine deal in jeopardy in the hopes that these cancellations would free up money for their specific platforms. Although they were convinced that they were acting in the service’s best interest, these types of decisions were not theirs to make. Yet officers such as Fraser-Harris and Gigg flourished
in the leadership vacuum as they aggressively advanced ships that Rayner knew the navy could not afford. That Rayner never got his officers to realize this fact was perhaps the greatest tragedy for the navy, the more so since he understood that the navy faced a paradox that should have rendered the entire force structure debate moot before it ever began. With the government drastically slashing the navy’s budget there was simply no way the service could adopt a new mobile force role in addition to its traditional anti-submarine tasking.

Operational experience at sea only served to reinforce this conclusion. Important exercises, along with events such as the Cuban missile crisis, revealed that the future threat posed by nuclear powered and armed Soviet submarines was severe, and that meant the navy had to invest whatever resources it was getting into countering these fast underwater vessels. As a result, while aircraft carriers and nuclear submarines would have been a welcome addition to Rayner’s navy, he had long ago realized that teaming up the destroyer with maritime patrol aircraft, conventional submarines and operational support ships gave the navy the best return with the limited funds that were being made available to them. This was an essential truth that the naval aviation and nuclear submarine advocates refused to accept, and, therefore preventing their interference required an autocratic leadership style that Rayner simply did not possess. That did not matter as long as Brock served as his Vice Chief. Brock’s personality and awareness of the problem was a key factor that kept the influence of the advocates in check, but his appointment to the East Coast and replacement by a consensus builder like Dyer effectively opened the floodgates for change.
The abandonment of Brock’s cautious approach to ship design, constant defence policy re-evaluations, the cancellation of the General Purpose Frigate, and, most significantly, the fact that the navy was being led by a demoralized Chief of the Naval Staff proved fertile ground for the advocates. The chaos was considerable. Plans for Iwo Jima and Essex class aircraft carriers were rushed through the staff process, leaving for later important considerations, such as whether they were actually the right platforms for the navy. However, it was all for naught, as, after much wasted effort, the navy ended up right back where it had started. No one doubted the fact that the carrier was a prized asset. In some measure it was the only vessel that could properly respond to limited war situations as well as bring a maximum concentration of firepower to bear on a suspected submarine’s position. Yet, like the nuclear submarines, aircraft carriers were a luxury that the RCN could not afford. It was for this precise reason that Rayner had been developing a balance of anti-submarine warfare systems that consisted of the destroyer, maritime patrol aircraft, conventional submarine, and operational support ships that would make the best use of new technologies such as ASROC, SQS 505 sonar, and Jezebel. This fleet could never fully make up for loss of the carrier or perform as well as hunter-killer nuclear submarines in an anti-submarine environment, but it was a good cost-effective option for a navy that was being covered by strict financial ceilings.

It was not until the summer of 1964 that Dyer finally got what Rayner had long been trying to tell him. The realization the navy would not get enough money to build a replacement carrier or nuclear submarines led Dyer to the painful conclusion that his service would have to settle for working a small measure of flexibility into a specialized force of new destroyers. That conclusion was the pivotal factor that not only led Dyer to
bring the advocates under control but also allowed the newly integrated headquarters to produce a force structure in relative short order. As the heart of that force structure, the Repeat Annapolis was equally symbolic of Dyer’s sudden recognition that the navy had to take immediate advantage of Hellyer’s willingness to spend money. The result of a rational and internal decision made by naval officers, these ships were part of a plan to acquire eight destroyers between 1966 and 1973. Cheaper than any other destroyer class under consideration, the Repeat Annapolis represented a financially realistic option that would allow the navy both to maintain its alliance force goals and meet the need to provide Canadian shipyards with work. Moreover, the Repeat Annapolis was intended to buy time for the navy to properly develop the guided missile destroyers that Dyer really wanted. As such, the Repeat Annapolis were actually the first half of a eight ship program that would have seen these four helicopter-carrying destroyers joined by a slate of four guided missile destroyers. And these ships - in conjunction with the Oberons, improved Restigouche and operational support ships - would have gone a long way in providing the navy with a scaled-down version of the fleet that Rayner had been pushing since 1960.

Dyer’s force structure, which represented the maximum return for the slim funds being made available to the navy, was also an example of how well these particular staff officers could work together once the influence of advocacy was mitigated and firmer direction was provided from the top. However, the preceding year of indecision had come with a high price. Whether the plan to build four Repeat Annapolis followed by four Canadian-built guided missile destroyers would have succeeded had the navy had more time to develop them is a matter of speculation, but there is no doubt that the
Repeat Annapolis project was rushed through the design process. Put another way, while the overall force structure was well thought out, the Repeat Annapolis was not. The result, as Sam Davis was quick to observe, was an ill-conceived ship that rapidly grew beyond its original characteristics.

Davis had consistently cautioned his superiors that the lack of direction over force structure was having serious ramifications on DG Ship’s ability to design ships. His warnings went unheeded until it was too late. In many ways the Repeat Annapolis was a substandard concept that was the product of Dyer and his naval advisory group being unprepared for the minister’s sudden willingness to spend money. At first glance, adopting a 5-inch-54 bombardment gun and a point defence missile system to a lengthened Annapolis design appeared to be a sensible attempt by Dyer to add a degree of flexibility into a specialized anti-submarine ship, but it was actually a recipe for disaster. The Annapolis hull had long ago reached its growth potential and as a result it should not be surprising that these additions led to a 2,800-ton design evolving into the 4,000-ton Iroquois class destroyer. In some measure, this was the product of unrealistic design expectations within DG Ships. Ideas such as fitting medium and point defence missile systems along with helicopter facilities into the Restigouche conversion, or building a heliporter that could carry fifteen aircraft in a St. Laurent hull, are key examples of exactly how far-fetched some DG Ship designs were. That DG Ships thought these designs were possible was the product of their inexperience, but the tribal mentality produced by warring sets of advocates also played a significant factor in spawning such concepts. Jokes about DG Ships becoming a “design of the week club”
were indicative of an organization that was at the mercy of a situation where advocacy-based planning never allowed them to take a concept much beyond the sketch phase.

The force structure crisis was a pivotal moment in the RCN’s history. Not only did it define the character of the future Canadian navy from 1965 into the 1990s, but it also stood as an illustration of the role that staff officers play in shaping the decisions of their superiors. Rayner’s original fleet of guided missile destroyers, conventional submarines and large helicopter-carrying destroyers was the product of a rational assessment of the navy’s strategic needs measured against the funds being made available to him, and by defining a role and selecting vessels to fill that task it represented the way force structures should be developed. That there were staff officers who were willing to upset this process was the root cause of the force structure crisis. And as a result Rayner’s inability to control his staff should stand as a powerful warning to modern flag officers of the need to keep a tight reign over the force structure process, particularly during periods of political uncertainty and financial turmoil. Yet there are also lessons for staff officers in this sad tale of naval infighting. Debate over force structure is a healthy and necessary part of the fleet planning process; however, Commodore H.G. Burchell’s conclusion on the impact of advocacy deserves repeating since it is just as valid today as it was in 1963: “once action is underway on an approved project anything less than full support is sabotage.”¹

¹ DGFE to Staff, 15 February 1963, LAC, RG 24, Accession 1983-84/167, Box 493, 1700-DGFE, vol.2
Bibliography

Primary Sources

Library and Archives of Canada (Ottawa, Ontario)

Manuscripts Division

MG 26 John Diefenbaker Papers
MG 26 Lester B Pearson Papers
MG 30 JV Brock Papers
MG 30 HG DeWolf Papers
MG 30 HS Rayner Papers
MG 31 SM Davis Papers
MG 32 D Harkness Papers
MG 32 Paul Hellyer Papers

Government Archives Division

RG 2 Privy Council Office Records
RG 2 Cabinet Defence Committee Minutes
RG 2 Cabinet Conclusions
RG 19 Department of Finance
RG 24 Department of National Defence Records
  Accession 1983-84/049
  Accession 1983-84/167
  Accession 1983-84/215
  Accession 1983-84/232
RG 25 Department of External Affairs
RG 49 Department of Defence Production Records
RG 55 Treasury Board
RG 98 Department of Supply and Services

Directorate of History and Heritage (Ottawa, Ontario)

Collections

71/278 Landing the CHSS-2 on the DDE
73/251 Ad Hoc Working Group on Naval Programmes Report, A Study on size and Shape of Royal Canadian Navy, 1964-1974
73/712 The RCN Today
73/750 Director of Naval Operations Requirements Correspondence
73/757 General Purpose Frigate Sketch Design
73/814 Directorate of Naval Information – Submarine building - Correspondence
73/1146 Ship Replacement programme - possible press queries
73/1146 Directorate of Naval Information Correspondence

445
73/1223 Raymont fonds
74/651 The Atlantic Fleet A Report
75/148 ASW Effectiveness of the RCN Destroyer Escort
75/149 Submarine Survey Committee
76/51 Maritime Command fonds
79/246 Naval Policy Co-ordinating Committee fonds
79/355 Fourteenth senior officers conference
80/225 Task Force on Review of Unification of the Canadian Armed Forces; background papers
81/481 Report of the Ad Hoc Committee on Naval Objectives
81/520 Royal Canadian Navy Historical Section Fonds
81/609 Defence Council Minutes
85/333 JC Arnell Fonds
85/334 Alexander Cameron Grant fonds
85/366 Study of Long range Anti-submarine weapons delivery systems for Restigouche/ Mackenzie Class DDEs
87/253 Lindsey-Sutherland papers
88/51 SM Davis, Submarine Acquisition in the RCN from Nuclear to Conventional, 1955-65
88/64 E.G. Gigg fonds
90/292 Tony German fonds
91/297 VCNS to CNS, Possible Force Structure 1963-1972
91/378 Vice Chief of the Naval Staff correspondence
93/110 Canadian Naval Technical History Association collection
95/2 Naval Service Headquarters fonds
99/31 Herbert S Rayner fonds
99/36 WAB Douglas fonds
2000/14 Hal W Smith fonds
2000/15 Maritime Technical Library fonds
2001/14 James Plomer fonds
2001/30 William Gourlay Dolphin Lund fonds
2001/36 SM Davis Papers
2002/13 Desmond W Piers fonds
2002/17 Joint Staff fonds

Biography (BIOG) FILES

JA Charles
JV Brock
K Dyer
Charles Dillion
R Welland

Support Shared Services (SSS) (Stacey Building, Ottawa)

RG 24 Un-catalogued material Accession 1994-0831
Canadian War Museum

Naval Lists

Public Records Office (Kew, England)

Admiralty Records
ADM 1
ADM 256
ADM 333
ADM 302

Department of Scientific and Industrial Research Records
DSIR 23

Imperial War Museum (London, England)

A.B. Fraser Fraser-Harris Papers

National Maritime Museum (Brass Foundry, England)

Canadian Oberon Class, Ship’s Cover 907

Government Publications and Serials

-------- House of Commons, Special Committee on Defence: Interim report, 1963
(Sauvé Commission).
-------- House of Commons, Special Committee on Defence: Minutes of Proceeding and
-------- House of Commons Debates.
-------- Naval Lists, 1957-64.

Memoirs

Brock, J.V. The Dark and Broad Seas. Toronto: McClelland and Stewart, 1981.
Diefenbaker, JG. One Canada: Memoirs of the Right Honourable John G Diefenbaker.
Hellyer, Paul. Damn the Torpedoes: My Fight to Unify Canada’s Armed Forces.
McNamara, Robert. In Retrospect: The Tragedy and Lessons of Vietnam. New York:
1975.
Welland, RP. *This will have to do.* Private Memoirs.

Newspapers, Magazines and Journals

*The Crowsnest*  
*Globe and Mail*  
*Halifax Chronicle-Herald*  
*Ottawa Citizen*  
*Ottawa Journal*  
*Maclean’s magazine*  
*Toronto Daily Star*  
*Victoria Columnist*

Secondary Sources

Books


Charlton, Peter. *Nobody Told Us it Couldn’t Be Done: The VX 10 Story.* Privately Published, 1993.


Hadley, Michael. U-Boats against Canada: German Submarines in Canadian Waters.
Haydon, Peter. The 1962 Cuban Missile Crisis: Canadian Involvement Reconsidered.
Toronto: Canadian Institute of Strategic Studies, 1993.
--------- When Military Plans and Politics Conflict: The Case of Canada’s GP Frigate.
Holley, Irving. Buying Aircraft: Materiel Procurement for the Army Air Forces.
--------- Ministers and Generals: Politics and the Canadian Militia. Toronto: University


Shaw, E.K. *There was never an Arrow*. Ottawa: Steel Rail Education, 1983.


Van Creveld, Martin. *Technology and War: From 2000 BC to the Present*. Toronto:

Articles and Book Chapters


“Vice Admiral Herbert S Rayner: the last Chief of the Naval Staff,” in The Admirals, edited by Michael Whitby et al. (Toronto: Dundurn Press, 2006).

-------- “Postwar Ocean Shipping and Shipbuilding in Canada: An Agenda for research.” The Northern Mariner, 1, no.3 (July 1991): 25-46.


Mayne, Richard Oliver. “Bypassing the Chain of Command: The political origins of the RCN’s equipment crisis of 1943.” Canadian Military History 9, no. 3 (Fall 2000): 7-22.


Unpublished Dissertations


### Annex A

#### Comparison of proposed naval force structures

**1961-1964**

<table>
<thead>
<tr>
<th>Brock Report 1961</th>
<th>Vessel Type</th>
<th>Hellyer’s Fleet November 1964</th>
<th>Maritime Force Program (1st draft and amendments) October 1964</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6) Barbel</td>
<td>SSK</td>
<td>(3) O Boat</td>
<td>(5) O Boats (additional 2 recommended to the 3 planned)</td>
</tr>
<tr>
<td>“N” Nuclear Subs</td>
<td>SSN</td>
<td>Under consideration for after 1976</td>
<td>Under consideration for after 1976</td>
</tr>
<tr>
<td>idea of future acquisition 1970-73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8) GPF</td>
<td>DDG</td>
<td>None</td>
<td>DG Ships instructed to explore DDG concept with Hellyer’s knowledge. DDG not abandoned until early 1965</td>
</tr>
<tr>
<td>(12) Heliporter Frigates</td>
<td>DDH (L) Classification first used in reference to Brock Report Heliporter Frigate</td>
<td>(4) DDH Original Brock report desire to carry 14 helicopters in DDH (L) reduced to 8. Wanted ship to carry VDS, Hull Sonar and PDMS and so DG Ships discovered that 2 helicopters were most DDH can carry with all equipment listed above.</td>
<td>(4) DHH</td>
</tr>
<tr>
<td>None</td>
<td>CVH</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>(2) Tanker/Supply</td>
<td>OSS</td>
<td>(2) OSS</td>
<td>(2) OSS and (1) Cargo type sealift</td>
</tr>
<tr>
<td>Hydrofoil</td>
<td>FFE</td>
<td>Development to continue</td>
<td>(6) Hydrofoil</td>
</tr>
<tr>
<td>Arctic Patrol Vessel</td>
<td>DDH</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>ISL</td>
<td>DDE</td>
<td>Program ongoing</td>
<td>Program ongoing</td>
</tr>
<tr>
<td>(7) IRE</td>
<td>DDE</td>
<td>(7) IRE</td>
<td>(7) IRE VDS and ASROC rather than DDH</td>
</tr>
<tr>
<td>(4) Improved Mackenzie</td>
<td>DDE</td>
<td>No mention</td>
<td>No mention</td>
</tr>
<tr>
<td>No replacement</td>
<td>CVS (Bonaventure replacement)</td>
<td>No replacement</td>
<td>Under consideration for after 1976</td>
</tr>
<tr>
<td>None</td>
<td>A4 Sea hawk</td>
<td>No mention</td>
<td></td>
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</tbody>
</table>

457
## Annex B
### Comparison of destroyer designs

<table>
<thead>
<tr>
<th></th>
<th>DDH (S) PD 26</th>
<th>Repeat Annapolis</th>
<th>Nipigon (Annapolis Class)</th>
<th>DDH (RN) (Oct 64)</th>
<th>DDH 280 (June 65)</th>
<th>GPF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>417</td>
<td>366</td>
<td>366</td>
<td>391</td>
<td>423.4</td>
<td>398</td>
</tr>
<tr>
<td><strong>Length</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterline</td>
<td>400</td>
<td>356</td>
<td>356</td>
<td>356</td>
<td>398</td>
<td>380</td>
</tr>
<tr>
<td><strong>Breadth</strong></td>
<td>51</td>
<td>42</td>
<td>42</td>
<td>42</td>
<td>48.2</td>
<td>46</td>
</tr>
<tr>
<td><strong>Draft</strong></td>
<td>14/33</td>
<td>13.4/</td>
<td>13.5/23.5</td>
<td>18.6</td>
<td>14.6/37.9</td>
<td>13.9/</td>
</tr>
<tr>
<td><strong>Displace</strong></td>
<td>4200</td>
<td>2800</td>
<td>2900</td>
<td>TBD</td>
<td>3800</td>
<td>3300</td>
</tr>
<tr>
<td><strong>CRMS</strong></td>
<td>Mauler (2)</td>
<td>Mauler (2)</td>
<td>None</td>
<td>Yes – to be fitted</td>
<td>Sea Sparrow</td>
<td>Mauler (2)</td>
</tr>
<tr>
<td><strong>MRMS</strong></td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Tartar</td>
</tr>
<tr>
<td><strong>Torpedo</strong></td>
<td>??</td>
<td>Mk 44 &amp; 46</td>
<td>In twin Mk 32 tubes</td>
<td>Mk 44 &amp; 46</td>
<td>Mk 44 &amp; 46</td>
<td>2 Mk 44</td>
</tr>
<tr>
<td><strong>Gun</strong></td>
<td>No</td>
<td>5” 32</td>
<td>3” 50</td>
<td>5”</td>
<td>5” 54</td>
<td>5”38</td>
</tr>
<tr>
<td><strong>Mortar</strong></td>
<td>??</td>
<td>Mk 10</td>
<td>Mk 10</td>
<td>Mk 10</td>
<td>Mk 10</td>
<td>Mk 10</td>
</tr>
<tr>
<td><strong>Sensors</strong></td>
<td>VDS SQS 26</td>
<td>SQS 501 (Bottom Search) SQS 502 (mortar control) SQS 505 (VDS) SQS 505 (HMS)</td>
<td>SQS 501(HMS) SQS 503(HMS)</td>
<td>SQS 501 SQS 505(HMS) SQS 505 (VDS) SQS 506 (improved 502) Jezebel ( Passive)</td>
<td>Improved SQS 501 SQS 505 (HMS) SQS 505 (VDS) SQS 506 (improved 502) Jezebel ( Passive)</td>
<td>SQS 502 SQS 17 (VDS) SQS 17 (Hull)</td>
</tr>
<tr>
<td><strong>Radar</strong></td>
<td>SPS 40 M26 Sperry</td>
<td>SPS 12 M 26 Sperry</td>
<td>SPS 12 (air search) SPS 10 (surface)</td>
<td>TBD</td>
<td>SPS 40 M26 Sperry</td>
<td></td>
</tr>
<tr>
<td><strong>Propulsion</strong></td>
<td>Steam Y-100 40000 shp</td>
<td>Steam Y-100</td>
<td>Steam Y –100 30000 shp</td>
<td>Steam Y –100</td>
<td>Gas Turbine FT 4 FT 12</td>
<td>Steam Y-100 30000 shp</td>
</tr>
<tr>
<td><strong>Helicopter</strong></td>
<td>6 HSS 2 (Heavy)</td>
<td>1 HSS 2 (Heavy)</td>
<td>1 HSS 2 (Heavy)</td>
<td>1 HSS 2 (Heavy)</td>
<td>2 HSS 2 (Heavy)</td>
<td>1 GP (Light)</td>
</tr>
<tr>
<td><strong>Speed</strong></td>
<td>28</td>
<td>27</td>
<td>28</td>
<td>27</td>
<td>30</td>
<td>26</td>
</tr>
<tr>
<td><strong>Crew</strong></td>
<td>396</td>
<td>246</td>
<td>246</td>
<td>244</td>
<td>240</td>
<td></td>
</tr>
<tr>
<td><strong>Command and Control</strong></td>
<td>??</td>
<td>??</td>
<td>TBD</td>
<td>Litton CCS 280</td>
<td>Automatic Action Information System</td>
<td></td>
</tr>
<tr>
<td><strong>Machinery Control</strong></td>
<td>Engine Room</td>
<td>Engine Room</td>
<td>Engine Room</td>
<td>Bridge</td>
<td>Engine Room</td>
<td></td>
</tr>
<tr>
<td><strong>Estimated Cost/ unit</strong></td>
<td>$ 38 M (Mar 63)</td>
<td>$ 31 M (Aug 63 est)</td>
<td>$ 32.1 M</td>
<td>$ 63 M</td>
<td>34.2 M (Jan 1962 est)</td>
<td></td>
</tr>
</tbody>
</table>

458
Annex C

Illustrations of Various Ships and Aircraft

List of Illustrations

Illustration 1 Repeat Annapolis and Annapolis class
Illustration 2 St. Laurent class (HMCS Ottawa)
Illustration 3 DDH 280 beside a St. Laurent hull with GPF
Illustration 4 General Purpose Frigate Sketch, March 1962
Illustration 5 General Purpose Frigate Sketch, September 1963
Illustration 6 Guided Missile Destroyer Sketch A, July 1964
Illustration 7 Guided Missile Destroyer Sketch B, July 1964
Illustration 8 Guided Missile Destroyer Sketch C, July 1964
Illustration 9 GPF with accommodation for 200 troops
Illustration 10 DDH 280 Schematics
Illustration 11 ASW Fast Frigate, January 1959
Illustration 12 Restigouche Conversion – ASW design, Mk 10 (ASROC carrier), April 1962
Illustration 13 Restigouche Conversion – DHH design, April 1962
Illustration 14 18,000 ton V/STOL aircraft carrier (CVH Configuration), June 1963
Illustration 15 ASW Carrier PD 25 (CVH Configuration), January 1963
Illustration 16 LPH-2 (Iwo Jima) Feasibility for Canadian building, October 1963
Illustration 17 Destroyer type helicopter carrier PD 10, circa 1961
Illustration 18 Heliporter (DDH Configuration) PD 24, June 1963
Illustration 19 6,300 ton Heliporter PD 31 (DDH Configuration), April 1963
Illustration 20 7,400 ton Heliporter PD 30 (DDH Configuration), April 1963
Illustration 21 7,900 ton Heliporter (Catamaran configuration), May 1963
Illustration 22 Heliporter (DDH Configuration) PD 26, June 1963
Illustration 23 Heliporter (DDH Configuration) PD 29, June 1963
Illustration 24 SLAMEX Submarine launch points
Illustration 25 1964 DDH Schematics
Illustration 26 1964 Improved Restigouche Schematics
Illustration 27 1964 DDH Capabilities
Illustration 28 1964 IRE Capabilities
Illustration 29 Thresher class
Illustration 30 American Adams class and British Type 82
Illustration 31 Canadian CP-107 Argus and CS2F-1 Tracker aircraft
Illustration 32 RCN F2H-3 Banshee and USN A-4 Skyhawk
Illustration 33 CHSS-2 Sea King helicopter
Illustration 1
Repeat Annapolis (top) and Annapolis class (bottom)
Illustration 2
St. Laurent class (HMCS Ottawa)
Illustration 3
DDH 280 beside a St. Laurent hull with GPF pictured below
Illustration 4
General Purpose Frigate Sketch, March 1962
Illustration 5
General Purpose Frigate Sketch, September 1963
Illustration 6
Guided Missile Destroyer Sketch A, July 1964
Illustration 7
Guided Missile Destroyer Sketch B, July 1964
Illustration 8
Guided Missile Destroyer Sketch C, July 1964
Illustration 9
GPF with accommodation for 200 troops
Illustration 11
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Illustration 14
18,000 ton V/STOL aircraft carrier (CVH Configuration), June 1963
Illustration 15
ASW Carrier PD 25 (CVH Configuration), January 1963
Illustration 16
LPH-2 (Iwo Jima) Feasibility for Canadian building, October 1963
Illustration 17
Destroyer type helicopter carrier PD 10, circa 1961
Illustration 18
Heliporter (DDH Configuration) PD 24, June 1963
Illustration 19
6300 ton Heliporter PD 31 (DDH Configuration), April 1963
Illustration 20
7400 ton Heliporter PD 30 (DDH Configuration), April 1963
Illustration 21
7900 ton Heliporter (Catamaran Configuration), May 1963
Illustration 22
Heliporter (DDH Configuration) PD 26, June 1963
Illustration 23
Heliporter (DDH Configuration) PD 29, June 1963
Illustration 24
SLAMEX Submarine launch points

CONFIDENTIAL

TARGET AREA COVERAGE FOR SSN-4 SLBM ATTACK
POSTULATED ROTOING EXERCISE CAUSES SLAMEX 2-44

USS Beaufish
- USS Aline
- USS Carp
- USS Sea Owl
- USS Beaufish
- USS Cobra
- USS Sargo
- USS Thresher
- USS Trout
- USS Dart
- USS Sargo
- USS Thresher
- USS Trout
- USS Dart

SSN-3 SUVER CHARACTERISTICS:
1. RANGE = 300 NM
2. 3 MISSILES/SUBMARINE
3. YIELD = 5000 MT
4. CRP = 1.5 NM

45 X 10^6 URBAN POPULATION
ARE CONTAINED IN THE SHAPED AREA
WHICH LIES WITHIN 350 MILES OF
THE LAUNCH POINTS.

Figure 3
CONFIDENTIAL
Illustration 25
1964 DDH Schematics
Illustration 26
1964 Improved Restigouche Schematics
Illustration 27
1964 DDH Capabilities

- **The Helicopter Destroyer**
  - **Helicopter Anti-Submarine System**
    - CHS 92 Sea King
    - 6000 square miles surveillance
    - 5 mile active Deep Target detections
    - 4 homing torpedoes
    - Nuclear depth charges
  - **Helicopter Point Air Defence**
    - SPARROW
    - 96 km on Mach 1.28 at 4.2 miles
    - [2.5 m extra, retrofit]
  - **Hull Mounted Sonar**
    - AN/SQS 505
    - 5 mile detection in the surface duct
  - **Towed Sonar**
    - AN/SQS 505
    - 5 mile detection of deep targets
  - **A/S Short Range, Shallow Water**
    - Mortar MK NG 10 & AN/SQS 506
    - 1000 yards range
    - 400 lb projectile
    - Proximity fuse
    - Torpedo tubes
    - MK 44/46 torpedoes
  - **Passive Surveillance**
    - Jezabel
  - **Land Support and Surface Gunnery**
    - Five inch gun
    - 13 mile range
    - 70 lb projectile
    - 20 rounds per minute sustained
  - **Fighting Information**
    - AN/SPS 49
    - Air early warning
    - 200 miles
    - M49
    - Long range surface gunfire control navigation
Illustration 28
1964 IRE Capabilities
Illustration 29
Thresher class

Photo # NH 97544  USS Thresher (SSN-593) underway, July 1961
Illustration 30
American Adams class and British Type 82
Illustration 31
Canadian CP-107 Argus (top) and CS2F-1 Tracker (bottom) aircraft
Illustration 32
RCN F2H-3 Banshee and USN A-4 Skyhawk
Illustration 33
CHSS-2 Sea King helicopter