

# **Military Command and Control Organisation**

## **Volume 1**

### **The Royal Navy**



Version 3 (11–05–08)

Front

Plate 1: The parade ground at HMS *Ganges*, Shotley in Suffolk  
Photographed in 2005

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## **PREFACE**

This report is one in a series of five volumes examining the United Kingdom's 20th Century Military Command and Control Organisation. The project was commissioned by English Heritage and its scope extends to the following volumes:

Volume 1: Royal Navy

Volume 2: British Army

Volume 3: Royal Air Force

Volume 4: United States Army Air Force and United States Air Force

There are also two appendices, found in Volume 5:

Army Camps

Volunteer Lists

Research for compiling all four of the main reports was begun in April 2006 and the task was completed at the end of August 2007.

Research on the appendices was conducted between 2003 and 2007.

## **ACKNOWLEDGEMENTS**

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## ABBREVIATIONS

1LS	1st Line Squadron (Operational)
2LS	2nd Line Squadron (Training)
AA	Anti Aircraft
ABRO	Army Base Repair Organisation
AD	Assistant Director
ADDL	Aerodrome Dummy Deck Landing
AFD	Admiralty Floating Dock
AFO	Admiralty Fleet Order
AINO	Assistant Inspector of Naval Ordnance.
ARDU	Aircraft Receipt and Despatch Unit
ASV	Air to Surface Vessel (radar)
ASW	Anti-Submarine Warfare
ATRA	Army Training and Recruitment Agency
ATSA	Army Technical Support Agency
BR	Book of Reference
BRNC	Britannia Royal Naval College
CAFO	Confidential Admiralty Fleet Order
CAO	Chief Administrative Officer
Capt	Captain
Capt (D)	Captain (Destroyers)
Capt (F)	Captain (Frigates)
Capt (SM)	Captain (Submarines)
CB	Confidential book
Cdo	Commando
CDP	Chief of Defence Procurement
CDPI	Chief of Defence Procurement Institution
Cdr	Commander
Cdre	Commodore
CEO	Chief Engineering Officer.
CFM	Captain Fleet Maintenance
CFMR	Captain Fleet Maintenance Repair (organisation)
CFS	Chief of Fleet Support
CGRM	Commandant General of the Royal Marines
C-in-C	Commander-in-Chief
C-in-C Fleet	Commander-in-Chief of the Fleet
CINCFLEET	Commander in Chief Fleet
CINNAVHOME	Commander in Chief Naval Home Command
CNSA	Commodore, Naval Ship Acceptance
CO	Commanding Officer
COMATG	Commodore, Amphibious Task Group
COMAW	Commodore, Amphibious Warfare
COMUKTG	Commander, United Kingdom Task Group.
COO	Chief Ordnance Officer
COS	Chief of Staff
CPO	Chief Petty Officer
CSB	Clyde Submarine Base



CSST	Captain, Sea and Shore Training
CTCRM	Commando Training Centre Royal Marines
CVBG	Carrier Battle Group
CVS	Aircraft Carrier (ASW)
DAC	Defence Animal Centre
DARA	Defence Aviation Repair Agency
DCS	Defence Costs Study
DCSA	Defence Communications Service Agency
DCTA	Defence Clothing and Textiles Agency
DEE	Director of Electrical Engineers
DEO	Defence Estate Organisation
DERA	Defence Evaluation And Research Agency
DESG	Defence Engineering & Science Group
DGDC	Director General of Defence Contracts
DGFMP	Director General Future Manpower Policy
DGSW(N)	Director General Surface Weapons (Naval)
DHE	Defence Housing Executive
DINO	Deputy Inspector of Naval Ordnance
DLCO	Deck Landing Control Officer
DLO	Defence Logistics Organisation
DLT	Deck Landing Training
DMS(N)	Director of Marine Services (Navy)
DNA	Director Naval Architecture
DNETS	Director Naval Education And Training Support
DNO	Director Naval Operations, Director of Naval Ordnance
DPA	Defence Procurement Agency
DRA	old name for DERA – Defence Research Agency
DRD	Devonport Royal Dockyard
DSCA	Defence Secondary Care Agency
DSDA	Defence Storage and Distribution Agency
DSLE	Director Ships Logistics Engineering
DST(SF)	Director Supplies and Transport (Ships And Fuels)
DSWE	Director Ships Weapon Engineering (SSA)
DTO	Dockyard Test Organisation
DTS(W)	Director Technical Services (Warships)
DUS(Pol)	Deputy Under-Secretary (Policy)
FAA	Fleet Air Arm
FDG	Fleet Diving Group
FDM	Future Dockyard Management
FLO	Fleet Liaison Officer
FMB	Fleet Maintenance Base
FMRO	Fleet Maintenance and Repair Organisation
FMU	Fleet Maintenance Unit
FNOIO	Fleet Naval Ordnance Inspector
FO	Flag Officer
FOF1	Flag Officer, First Flotilla
FOF3	Flag Officer, Third Flotilla
FOMB	Fleet Operating and Maintenance Base

FONA	Flag-Officer, Naval Aviation
FONAC	Flag Officer Naval Air Command
FOS	Fleet Operational Schedule
FOSF	Flag-Officer, Surface Flotillas
FOSM	Flag-Officer, Submarine
FOSNI	Flag Officer, Scotland and Northern Ireland
FOST	Flag Officer Sea Training
FOTR	Flag Officer, Training and Recruitment
FPMSF	Fisheries Protection and Minesweeping Flotilla
FRADU	Fleet Requirements and Direction Unit
FRU	Fleet Requirements Unit
GHQ	General Headquarters
HO	Hostilities Only
INO	Inspector of Naval Ordnance
LC	Landing Craft
LCT	Landing Craft, Tank
MAP	Ministry of Aircraft Production
MB	Main Building – Whitehall
MCM	Mine Countermeasures
MDP	Ministry of Defence Police
MGB	Motor Gun Boat
ML	Mine Layer
ML	Motor Launch
MOD	Ministry Of Defence
MOD(PE)	Ministry Of Defence (Procurement Executive)
MTB	Motor Torpedo Boat
NAAFI	Navy, Army and Air Force Institute
NAS	Naval Air Station
NATO	North Atlantic Treaty Organisation
NBSA	Naval Base Supply Agency
NLO	Naval Liaison Officer
NOIO	Naval Ordnance Inspection Officer
NRTA	Naval Recruitment and Training Agency
NSC	Naval Support Command
NTD	Naval Technical Department
obo	on the books of
OUT	Operational Training Unit
PAS	Port Auxiliary Service
PO	Petty Officer, Royal Navy
POL	Petrol, Oil, Lubricants
QARDDS	Queen Alexandra's Royal Naval Nursing Service
RA	Rear Admiral
RAFMGDA	RAF Maintenance Group Defence Agency
RAFTGDA	RAF Training Group Defence Agency
RAS	Reserve Aircraft Storage
RF	Radio Frequency
RFA	Royal Fleet Auxiliary
RFS	Repair for Ship

RMAS	Royal Maritime Auxiliary Service (PAS Boats)
RMR	Royal Marines Reserve
RMXS	Royal Marine Auxiliary Service
RN	Royal Navy
RNAD	Royal Naval Armament Depot
RNAME	Royal Naval Aircraft Maintenance Yard
RNAS	Royal Naval Air Station
RNC	Royal Naval College, Britannia (BRNC)
RNMWS	RN Minewatching Service
RNSB	Royal Naval submarine base
RNSD	Royal Naval Stores Depot
RNSQ	Royal Naval Sick Quarters
RNTE	Royal Naval Training Establishment
ROF	Royal Ordnance Factory
SACEUR	Supreme Allied Commander, Europe
SACLANT	Supreme Allied Commander, Atlantic
SAS	Special Air Service
SAT	Sea Acceptance Trial
SBS	Special Boat Service
SDR	Strategic Defence Review.
SMS	Safety Management System
SNAC	Secure Naval Alongside Communications
SNINE	Scotland, Northern Ireland, Northern England
SO	Supply Officer, Security Officer
SS	Superintendent Ships, Surface Ships
SSA	Ship Support Agency
SSD	Superintendent Ships Devonport
SWEO	Squadron Weapon Engineering Officer
SWSE	Ship Weapon Systems Engineering
TAG	Telegraphist / Air Gunner
TAS	Torpedo Anti-Submarine
TBR	Torpedo Bomber Reconnaissance
TDU	Torpedo Development Unit
TE	Training Establishment
TLB	Top Level Budget
VCDS	Vice Chief of Defence Staff
W/T	Wireless Telegraphy
WRNS	Women's Royal Naval Service
WSA	Warship Support Agency

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## Part 1 – Introduction

### 1.1 – Structure of the Report

The main body of this volume is divided into the following parts:

Part 1 – Introduction

Part 2 – Naval Commands in the 20th Century

Part 3 – Naval Organisation and the Admiralty

Part 4 – Naval Establishments

Part 5 – The Fleet Air Arm

Part 6 – The Royal Marines and Ancillary Naval Services

Part 7 – Appendices

Part 2 describes the Command Structure of the Royal Navy with regards to its home-based fleets and ports. The secure underground HQs, and the Coastal Forces developed during WWII are described, as is the joint-services harbour and dockyard defence system.

Part 3 relates to the history and structure of the Admiralty, and its eventual merge into the Headquarters of the Ministry of Defence. Details of establishments are included, together with the appropriate WWII evacuation plan. Information regarding the management of contract labour during is described. Two lists of departments are provided, the first for 1944 when the Navy was at its peak, and another for 1980, after the merge into the MoD.

Part 4 examines the principal Naval shore establishments, including dockyards, ports, and training facilities. Lists of all major shore based facilities are included for four periods throughout the century: 1926, 1935, 1944 and 1979.

Part 5 describes the Fleet Air Arm, or Royal Naval Air Service, from its conception, through merging into the RAF, and then its re-establishment shortly before WWII. In Part 7 there are a number of appendices relating to establishments, airfields, and facilities during the two World Wars.

Part 6 is an overview of the Royal Marines plus a number of other units and support organisations which were and still are essential to the running of the Royal Navy.

The Appendices, Part 7, contains in addition to the above mentioned a list of shore-based establishments, or ‘stone frigates’ as they were often known, which existed throughout the last century. There are also lists of primary and secondary source material.

### 1.2 – Notes on Sources

There is a distinct deficit of information relating to the command structure of the Navy from the beginning of the Great War. What is available is often unreliable and controversial. A search on TNA records produces very little, and again there is much discrepancy; it is also very confusing. Records, where found, were frequently very incomplete. Much of the information

studied related to reports and minutes of meetings which were never followed through, as hindsight and history would prove.

As an example only one record was found relating to HMS *Macaw* – the principal camp for Fleet Air Arm personnel in transit, to and from North America. It is the medical officer's report for a few months only around early 1944, yet the camp was operational for almost three years. For the majority of shore establishments very few records could be located.

The principal source has been the Navy Lists, but again these appear to be incomplete in some instances, especially during WWI. Other principal sources were the Admiralty Fleet Orders (AFOs), and Confidential AFOs; there are many thousands of these in existence, and the overwhelming majority are of little interest.

Much material can be found on the internet; some records are very good, other not so. However they do provide information regarding a number of subjects which could not be traced elsewhere.

Two excellent secondary sources were found to be:

Lt Cdr Warlow's *Shore Establishments of the Royal Navy*, and

Brian Lavery's, *Hostilities Only – Training the Wartime Royal Navy*.

The former author describes many of the inconsistencies and other problems he experienced in researching his book.

## Part 2 – Naval Commands in the 20th Century

### 2.1 – Organisation

#### 2.1.1 – Commands

- a) Naval commands were of three distinct types:
  - Geographical establishments, or stations, e.g. Coast of Scotland Command
  - Maritime units, e.g. The Home Fleets
  - Other elements, e.g. the WRNS.
- b) Commands consisted of a headquarters establishment, frequently referred to as a 'station', plus a number of active units called sub-commands. Often there would be a sub-command with the same name as the HQ unit, Rosyth being a typical example.
- c) The terms 'command' and 'sub-command' have also been used with some flexibility, for example, naval maps c.1941 depict Milford Haven as a sub-command of Western Approaches command. Within the former were Barry and Cardiff, but these too are frequently referred to as sub-commands. Sometimes the term 'sub-area' was used, and this seems a much better term for describing entities such as Milford Haven. There is however a good deal of inconsistency.

#### 2.1.2 – Commanding Officers

- a) The Commander-in-Chief of a station normally resided in a warship, known as the flagship. He was assisted by a Flag Lieutenant, and an Accounts Branch officer as secretary.
- b) Commands and sub-commands were under the control of either:
  - A Commander-in-Chief (Commands)
  - A Flag Officer Commanding (Commands)
  - A Flag Officer-in-Charge (Sub-commands, and later smaller Commands)
  - A Commodore-in-Charge (Sub-commands)
  - A Naval Officer-in-Charge (Sub-commands).
- c) Confusingly the rank associated with these titles was very inconsistent. Ranging from Admiral-of-the-Fleet to Lieutenant Commander, a particular position would on change of personnel, frequently jump several ranks for unexplained reasons. Then there were situations as in 1936 where the title Commodore (Destroyers) was actually held by Captain H D Pridham-Whipple. By 1970 Flag Officers were of the rank of Rear-Admiral and above.

### 2.2 – Naval Staff Organisation

- a) Army and RAF staffs were organised on a set pattern, with universal staff titles and duties. Naval staffs operated differently with their duties depending on tasks and local conditions.
- b) The traditional method frequently employed in the Navy was to have a Chief of Staff who was a deputy of the Admiral on matters regarding policy, and also a co-ordinator of the work of the whole staff.

- c) This system began to change after WWII and by the 1960s home staffs were typically split into three division, and were organised as follows:

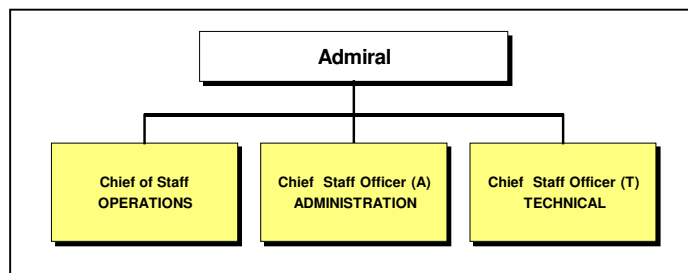


Fig. 1: Home Staff Organisation, c.1960

- d) A typical structure for the staff of a Commander-in-Chief would be:

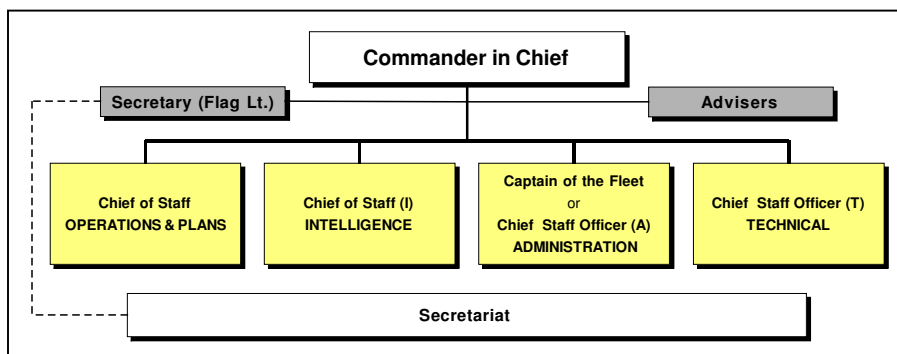


Fig. 2: Senior Staff Structure, c.1960

- e) The Advisers would be senior representatives from local stores, works departments, victualling and armament yards, who would also perform normal functions within their local facility.

## 2.3 – The Maritime Elements

### 2.3.1 – Pre WWI

- a) Until the beginning of the 20th Century the principal force of the Royal Navy was the **Channel Fleet**, which had existed in various guises for some 300 years. As a result of a continuing threat from France it became a permanent entity in the 18th century, with bases at Falmouth, Plymouth and Torbay. A permanent establishment was later created in the 19th century at Portland.
- b) In February 1901 the Home Command structure of the Royal Navy consisted of just five elements:
- Nore – HMS *Wildfire*, under a vice-admiral
  - Portsmouth – HMS *Victory*, admiral
  - Plymouth – HMS *Vivid*, admiral
  - Queenstown, Ireland, rear-admiral
  - Channel Squadron – HMS *Majestic* and HMS *Magnificent*, each with a rear-admiral.
- c) Around 1904 a second force – the **Home Fleet** – was created, using ships from overseas (the Mediterranean Fleet and China Station). Two years later the Admiralty, regarding Germany as the principal aggressor, reorganised the structure once again by significantly increasing the size of the Home Fleet using vessels from all other stations. Portland now became the main base,



with supplementary ports at Berehaven and Nore. At the end of the decade the **Atlantic Fleet** was also created by the First Sea Lord.

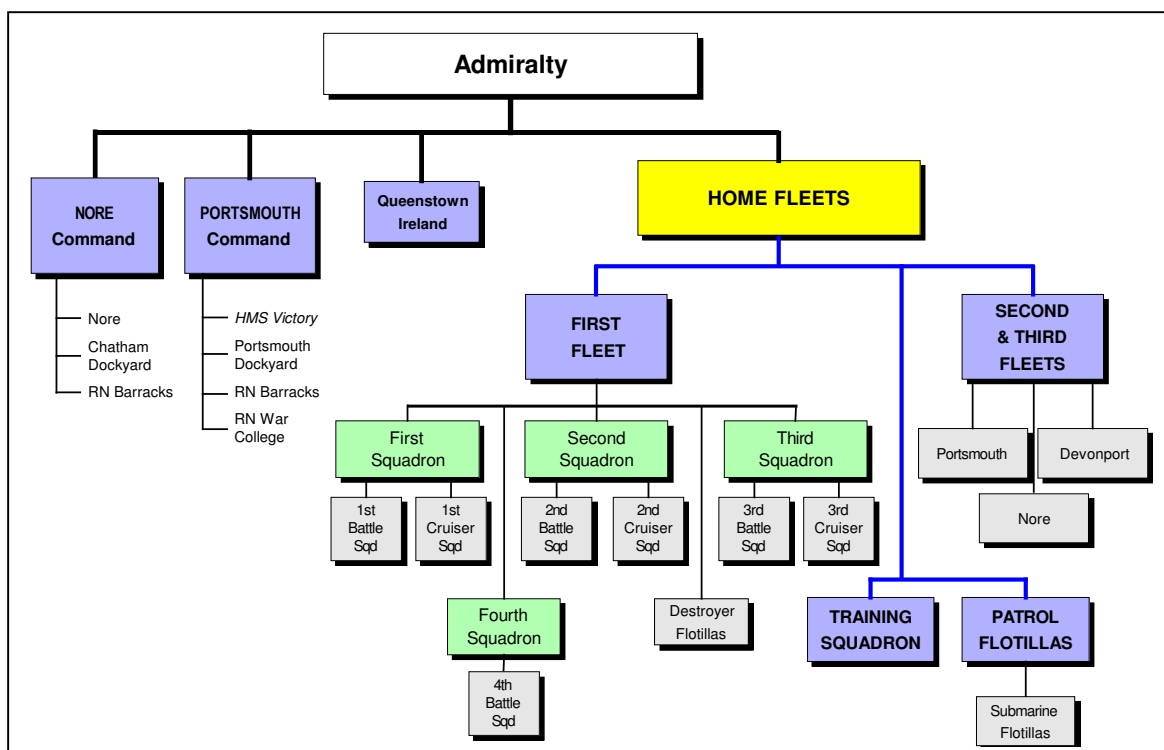


Fig. 3: Home Command Structure in November 1912

- d) Shortly before WWI there were just two principal commands outside the Home Fleets. Lord Fisher, the First Sea Lord who had been responsible for a dramatic updating of naval hardware, in particular the Dreadnought class, had also recognised that there was a shortage of safe ports and harbours. Over the next few years Devonport would be added, together with facilities at Dover and Harwich in England, plus Cromarty, Rosyth and Scapa in Scotland. Ireland was already an independent command at Queenstown (Cobh), with dockyard facilities at Haulbowline, and moorings at Berehaven.
- e) By 1912 it had been established that Rosyth would not be ready for handling larger ships until 1916, and Cromarty / Invergordon was selected as the principal base for the fleet, with smaller units using Scapa.<sup>1</sup> It was also recognised that protection of both these bases was sadly lacking, however the cost of providing essential defences was prohibitive, hence very little work was done. Cromarty was then relegated to second place with Scapa being selected as the primary war base. At Scapa in particular there were a number of accidents and collisions in heavy weather caused by ships dragging their anchors. Eventually a meagre 0.01% of the Navy budget was allocated towards improving the facilities. A large dry dock was completed at Cromarty however, which would allow Scapa-based warships to be repaired closer to home, rather than undertaking the hazardous journey to the Channel ports.
- f) The withdrawal of a number of warships from the Atlantic and Mediterranean Fleets resulted in an expansion of the Home Second Fleet and by 1914 consisted of two pre-Dreadnought battle squadrons which could be manned by personnel from the naval schools. The third fleet still consisted of almost obsolete vessels manned by reservists.

<sup>1</sup> Cromarty was generally the earlier term for the base, with the land based establishment at Invergordon succeeding it.

### 2.3.2 – The Great War

- a) In July 1914 the Home Fleet began to move to from Portland to its war station at Scapa Flow. Many sources have stated that it was renamed the *Grand Fleet* at this time, but that term does not appear in the Navy List until 1917, it continued to be called the Home Fleet until then. It absorbed the Atlantic Fleet plus a number of other units during the operation, eventually comprising around 40 modern warships under the command of Admiral Sir John Jellicoe. The defences were still far from complete, and it was pure luck that the enemy chose not to launch an expected submarine attack on the anchorage, believing that the Royal Navy's main base would be very well defended. It would be a year however before most of the defences, including 21 block-ships, anti-submarine nets, minefields and gun batteries were complete. As a precaution some battleships were moved during this period to Loch Ewe on the west coast of Scotland and Lough Swilly on the Northern Ireland coast.
- b) Sub units within each fleet consisted of groups of similar types of ships, e.g. destroyers or submarines, and were called squadrons or flotillas. They size of each of these varied according to requirements, and could be as small as two vessels, though destroyer flotillas typically consisted of five.

### 2.3.3 – The Patrols

- a) A small but significant mobile unit was the Northern Patrol. This was created just before WWI and consisted initially of a small number of almost obsolete cruisers of the 'Edgar' class. Its task was to patrol some 600 miles of ocean between northern Scotland, and the coasts of Greenland and Iceland. These vessels were soon replaced by 24 armed merchant cruisers, becoming the 10th Cruiser Squadron. The patrol was disbanded at the end of hostilities but was reformed at the beginning of WWII.
- b) An inherent belief in the possibility of invasion led to the creation of four further patrol flotillas along the eastern coast of the UK:
 

Forth Patrol	Tyne Patrol	Humber Patrol	Dover Patrol.
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- c) The first three were under the command of the Admiral of Patrols, whilst the latter had its own independent rear-admiral as commander. Later the former title changed to the Rear-Admiral Commanding the East Coast of England.
- d) Using significantly older destroyers than those of the Grand Fleet, these were supplemented by torpedo boats and submarines, who would defend individual ports and harbours against enemy attack. They were based at Nore, Portsmouth, Plymouth, Pembroke, and Queenstown.
- e) Later still came the Channel Fleet, which was augmented by the 12th Cruiser Squadron, as a separate command. This was followed by the establishment of a two patrol flotillas at Harwich which utilised destroyers and submarines. Small numbers of elderly vessels were based at a number of ports from the Forth to Dover which were considered as weak-points outside the reasonable areas covered by the main five patrols. Effective as these were, the enemy still managed successful attacks on several targets including Hartlepool, Scarborough and Whitby
- f) At the end of 1916 of Admiral Jellicoe was succeeded by the Commander of the Grand Fleet Battlecruisers, Admiral Sir David Beatty.

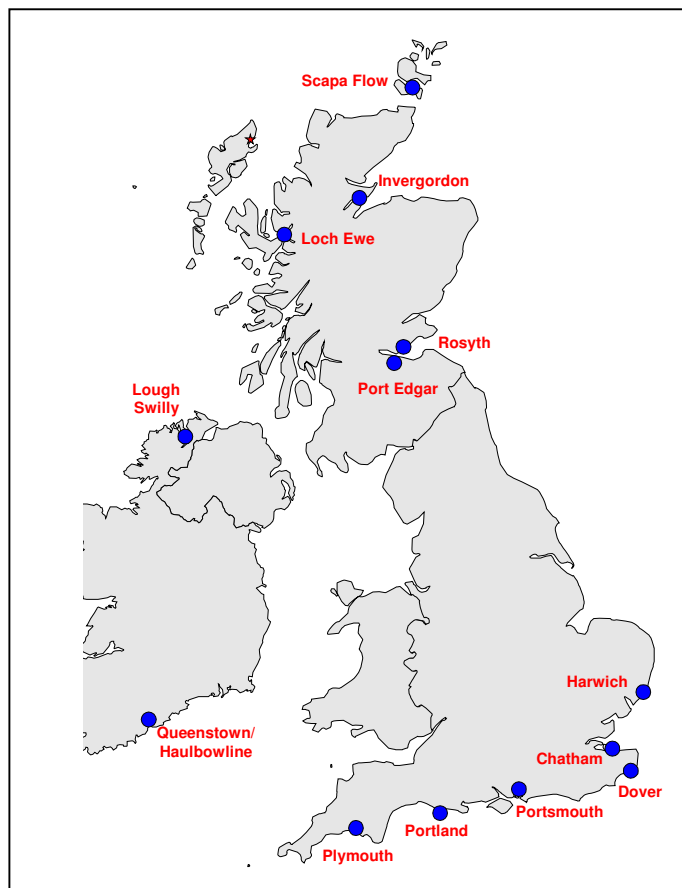


Fig. 4: Principal Royal Navy Bases in WWI

### 2.3.4 – Between the Wars

- a) The Grand Fleet was disbanded at the end of hostilities and a significantly smaller Atlantic Fleet was reformed, absorbing the Channel Fleet and remaining in that form until 1932 when it was again renamed the Home Fleet. The formation of the Royal Air Force on 1 April 1918 meant the end of any control the Navy had over its flying elements; it now had to provide aircraft carriers so that the RAF could fly from them.
- b) Dover, the Sheerness Dockyard, and Harwich became sub-commands of the Nore. Two new groups – HM submarines and HM Yachts – were created and came under Portsmouth Command, together with Portland Dockyard. Plymouth Command gained two sub-commands in the form of Liverpool and Pembroke Dock.
- c) With the formation of the Irish Free State, facilities at Queenstown were handed over and a new authority, though geographically very different, was created and named the Coast of Scotland Command, with Cromarty and Rosyth as its principal divisions. The sea-going components were severely reduced to a Reserve Fleet of Portsmouth, Nore and Devonport based vessels, plus the Atlantic Fleet.
- d) By the end of the decade however there had been a slight expansion, with the Atlantic Fleet now consisting of four squadrons. This development continued into the mid thirties with the addition of Southampton, and HMS *Osprey* at Portland, to Portsmouth Command. Rosyth was added to the Reserve Fleet, and the formation of a new Home Fleet was possibly the most significant change during the period.

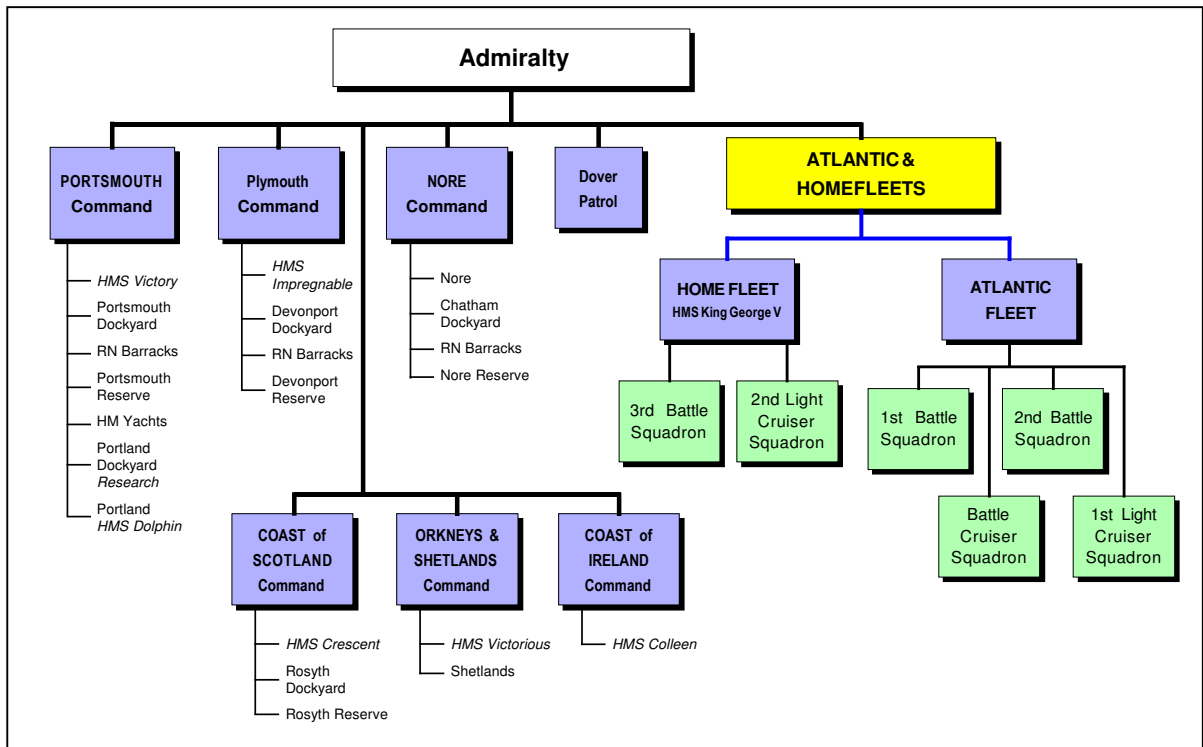


Fig. 5: Home Command Structure in November 1919

- e) The latter under the command of Admiral Sir Roger RC Backhouse, comprised the Battle Cruiser Squadron under HMS *Hood*, the Second Battle and Cruiser Squadrons, plus a new Aircraft Carriers component. Finally the Fisheries Protection and Minesweeping Flotilla became a command under its own right at Portland.

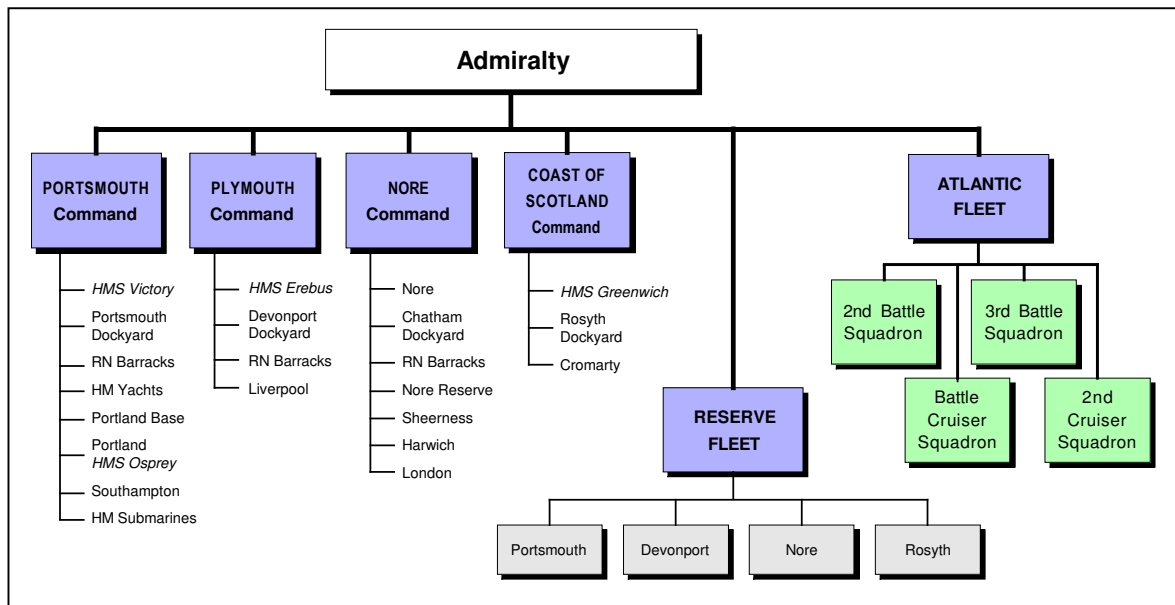


Fig. 6: Home Command Structure in July 1929

### 2.3.5 – The Second World War

- a) Until 1938 the three fighting services had agreed that in the event of war with Germany, the main units of the Home Fleet would be based at Rosyth in the Firth of Forth, which had this

function during the final phases of the Great War. Its importance was then re-examined by the First Sea Lord and the C-in-C Home Fleet. They decided that Rosyth would not meet the changed requirements of a new war with Germany, as it was badly placed for intercepting enemy warships who may attempt to break out into the Atlantic. In addition its long approaches were vulnerable to mining. Alternatively the Pentland Firth afforded some protection to the main entrance to Scapa Flow, the latter being 150 miles closer to the interception position between the Shetland Islands and Southern Norway. It was therefore decided that in the event of a war with Germany, the Home Fleet should again be based at Scapa Flow. It was duly concentrated there at the time of the Munich crisis, and again in the last days of August 1939.

- b) In October 1939 there were five principal Home Naval Commands headed by a Commander in Chief, plus two others under a Flag Officer.
  - Commander in Chief: Home Fleet, Nore, Portsmouth, Rosyth, Western Approaches
  - Flag Officer: Dover, Orkneys & Shetland.
- c) The seagoing elements consisted of a Home Fleet and a Reserve Fleet, plus a number of smaller units.
- d) The Home Fleet under Admiral Sir Charles Forbes consisted of:
 

Five battleships	Two battlecruisers	Three aircraft carriers
Three squadrons of cruisers	Two destroyer flotillas	Twenty plus submarines.
- e) The Reserve Fleet had its headquarters at Portsmouth on the light cruiser HMS *Effingham*. It supported 18 vessels: two battleships, five cruisers, an aircraft carrier, five destroyers and five escort vessels. Seven of these were detached to other stations which included Rosyth, Sheerness, and Devonport.
- f) These were supported by a Channel Force based at Portland on HMS *Resolution*. It had:
 

A battle squadron of two battleships	Two aircraft carriers
Three cruisers	A destroyer flotilla of eight ships.
- g) Also based at Portland was the Fisheries Protection and Minesweeping Flotilla Command, consisting of 26 sloops, several of which were on detachment to other commands.
- h) There was also a Humber Force, composed of the Second Cruiser Squadron (two ships), and the Seventh Destroyer Flotilla of eight vessels, and eight minesweepers.
- i) The Atlantic Command was now divided into North and South components. By June a Northern Patrol had been formed, as in World War I, made up principally of armed merchant cruisers and boarding vessels, plus anti-submarine trawlers. Divided into two cruiser squadrons, it was based at HMS *Pyramus* at Kirkwall. By 1942 it had become the Northern and Western Patrol, now consisting solely of armed merchant cruisers and boarding vessels.
- j) An attempt to secure two forward bases in the Irish Republic failed. These were Lough Swilly in Donegal, and Berehaven in Cork. Fortunately Londonderry proved to be a worthy replacement for the former, with the advantage of a nearby airfield at Eglinton. The loss of anchorages on the southern Irish coast had to be compensated by improved facilities at Devonport.

- k) Apart from the docking and maintenance facilities at the main bases, there were a very large number of commercial dockyards, plus dry docks available to the Navy. These were split into three categories:
- Those capable of accepting capital ships
  - Capable of accepting cruisers & aircraft carriers
  - All others.
- l) Most of the smaller ports and harbours were attached to the sub-commands. These were under the direction of 'Resident Naval Officers'. In 1941 these were:

Aberystwyth	Aldeburgh	Amble	Appledore
Ardglass	Ayr	Berwick	Boston
Bridlington	Bridport	Brixham	Buckie
Burnham	Burntisland	Caernarfon	Conway
Cromer	Exmouth	Felixstowe	Fishguard
Fleetwood	Folkestone	Fowey	Fraserburgh
Gravesend	Greencastle	Herne Bay*	Heysham
Hunstanton	Inverness	King's Lynn	Littlehampton
Llanelli	Lossiemouth	Mablethorpe	Macduff
Margate	Montrose	Padstow	Penzance
Porthcawl	Porthmadog	Preston	Rye
St Mary's	Sandbank	Scarborough	Seaham
Shoreham	Silloth	Skegness	Southwold
Stonehaven	Sullom Voe	Teignmouth	Torquay
Troon	Watchet	Whitby	Whitehaven
Wick	Workington	Wrexham.	

\* included Whitstable

### 2.3.6 – World War II Structure and Dispositions

- a) The charts on the following pages show the command organisation and limits during WWII.
- The structure in late 1939
  - Wartime Command Limits in November 1940
  - Revised Limits in April 1941
  - Nore, Dover, Portsmouth, and Plymouth Commands, 1936–1945
  - Coast of Scotland. Western Approaches, Orkneys and Shetlands Commands, 1936–1945
  - Rosyth, Home Fleet, and other commands, 1936–1945
- b) Note that the command ranks depicted in the charts are only a guide. As an example, Nore Command – HMS *Pembroke*, shows an admiral in command in 1940. This means that at some period around that time an admiral was the C-in-C. Prior and subsequent to this, however, there was a vice-admiral in command. In this case Admiral, The Hon Sir Reginald AR Plunkett-Erle-Drax was C-in-C from December 1939 to April 1941. He succeeded Vice-Admiral Sir Edward R G R Evans and was in turn succeeded by Vice-Admiral Sir George H D'O Lyon.
- c) Full details can almost always be found in the appropriate Navy Lists.

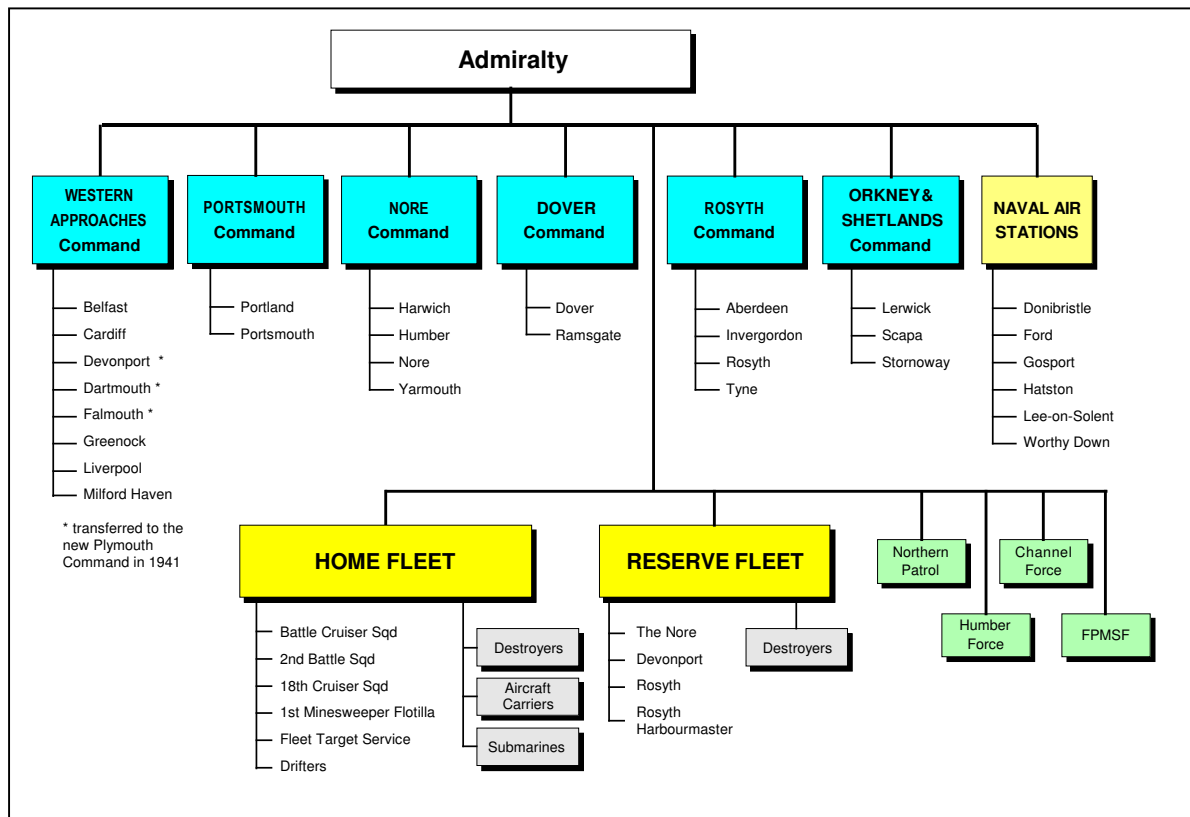


Fig. 7: The Home Command Structure in late 1939

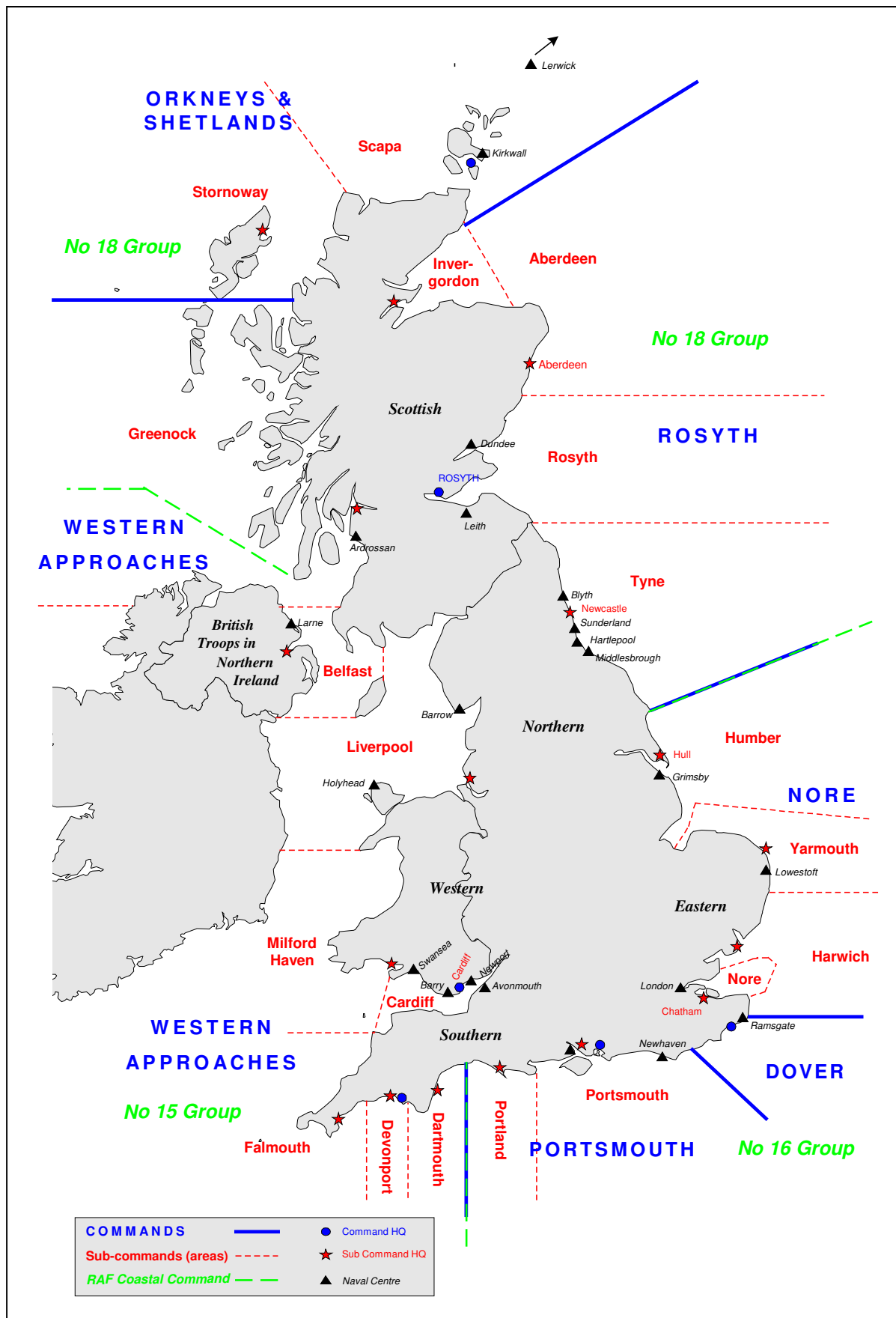


Fig. 8: The Wartime Limits of the Commands, November 1940



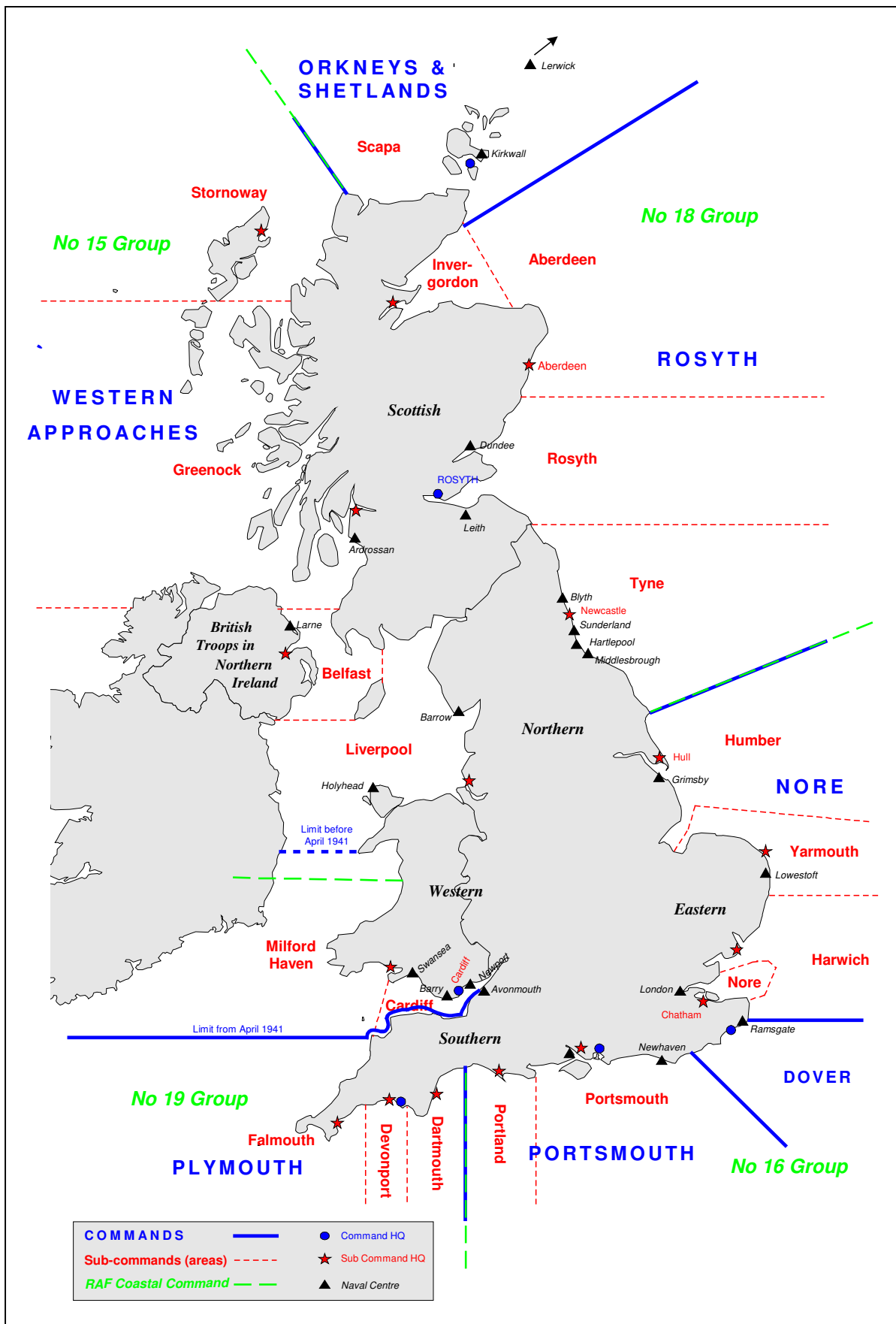


Fig. 9: Revised Command Limits, April 1941

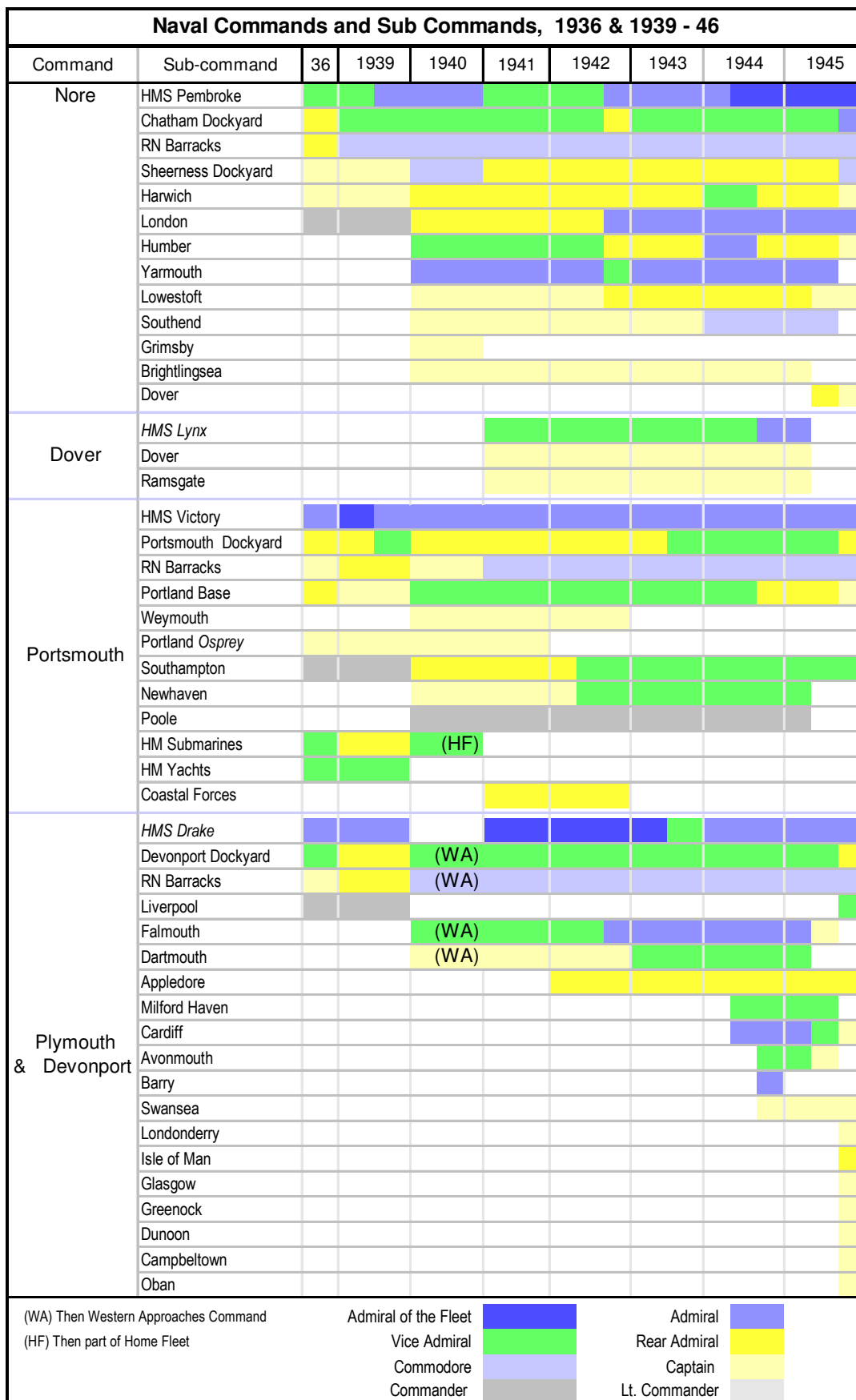


Fig. 10: Nore, Dover, Portsmouth &amp; Plymouth Commands

Naval Commands and Sub Commands, 1936 & 1939 - 46									
Command	Sub-command	36	1939	1940	1941	1942	1943	1944	1945
Coast of Scotland - became Rosyth	<i>HMS Greenwich</i>								
	Rosyth Dockyard								
	Cromarty								
	Rosyth								
Western Approaches	<i>HMS Eaglet</i>								
	Liverpool								
	Milford H								
	Belfast / NI (1)								
	Londonderry								
	Londonderry (2)								
	Cardiff								
	Avonmouth								
	Barry								
	Newport								
	Swansea								
	IoM								
	Holyhead								
	Barrow								
	Larne								
	Stranraer								
	Glasgow								
	Greenock								
	Greenock-Warren								
	Dunoon								
	Inverary								
	Lamlash								
	Campbeltown								
	Ardrossan								
	Oban								
	Port ZA RA (Mining Squadron)								
	Port ZA HMS Trelawney								
	Stornaway								
	Aultbea								
	Tobermory								
	Largs								
	Largs (Landing Ships)								
	<i>HMS Dinosaur</i> - Landing Craft								
Orkneys & Shetlands, Orkney from mid 1945	<i>HMS Proserpine/ Iron Duke</i> from 1942								
	Scapa								
	Orkney								
	Kirkwall								
	Lerwick								
	Thurso								
	Faroes								
	Iceland								
became separate command									
1) Became Northern Ireland, late 1943					Admiral of the Fleet		Admiral		
2) Commodore (Destroyers) Western Approaches					Vice Admiral		Rear Admiral		
3) Then part of Orkneys and Shetlands					Commodore		Captain		
					Commander		Lt. Commander		

Fig. 11: Coast of Scotland, Western Approaches, Orkneys &amp; Shetlands Commands

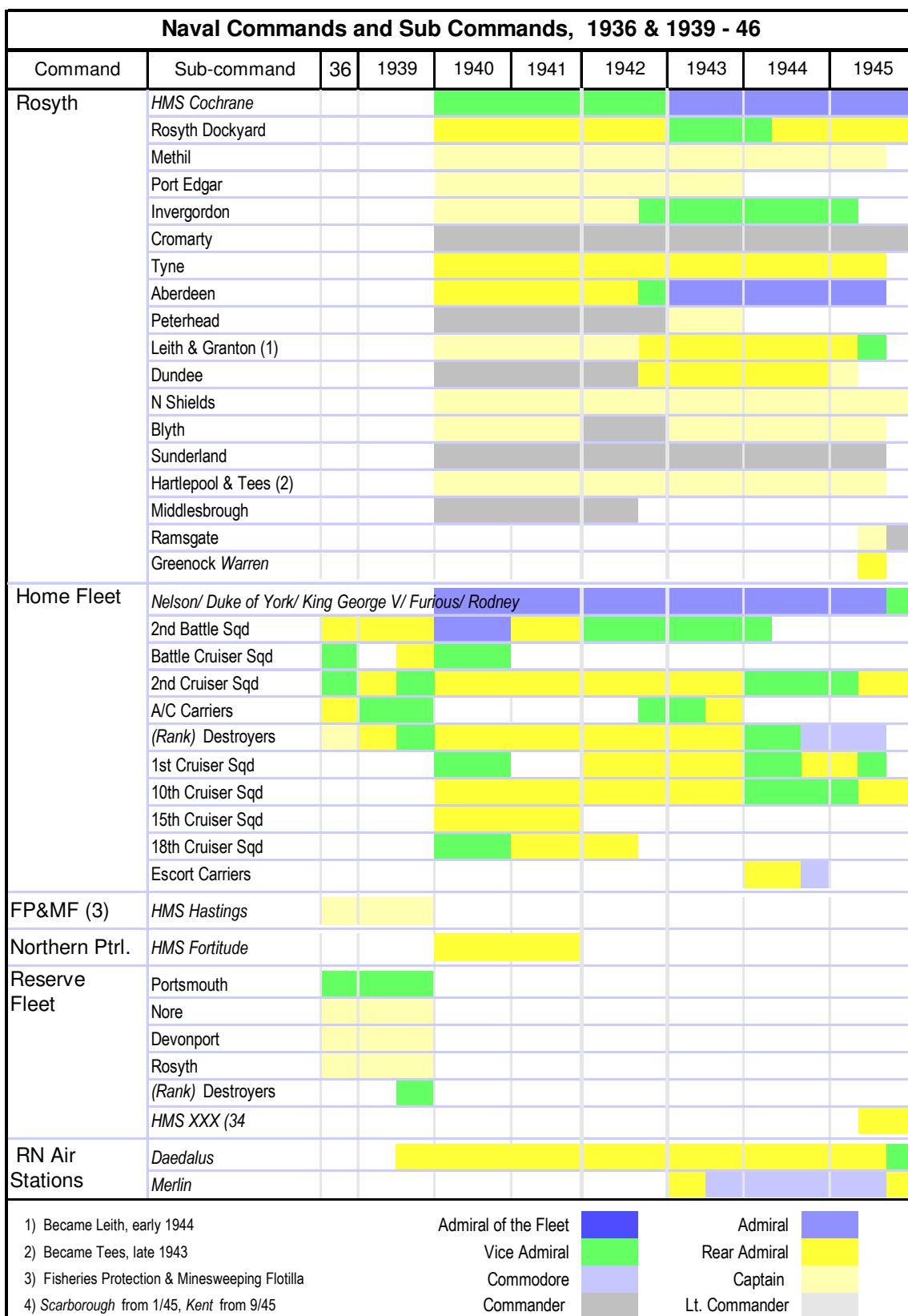


Fig. 12: Rosyth, Home Fleet and Ancillary Commands

### 2.3.7 – Post World War II

- a) The end of WWII meant very significant changes to the command structure. Dover, Rosyth and Western Approaches were dismantled and some of their contents absorbed into remaining units, or the newly created Coast of Scotland and Northern Ireland Commands. The mighty Home Fleet was reduced to a fraction of its original size, but the recently formed Reserve was retained.

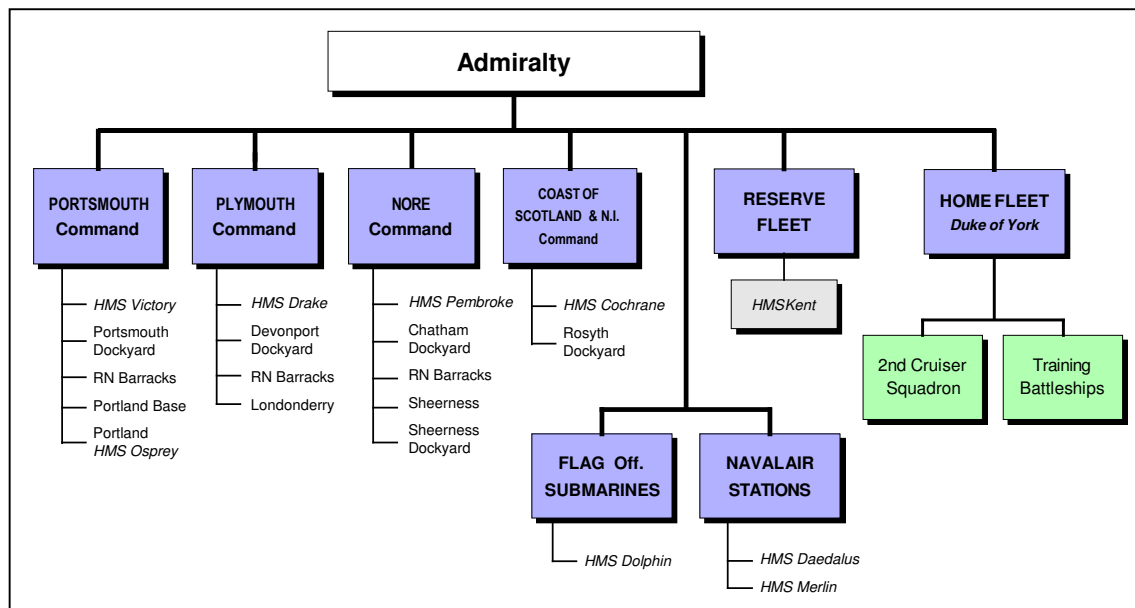


Fig. 13: The Home Command Structure in March 1947

- b) There were few changes over the next decade apart from the Irish component being removed from the Coast of Scotland and Northern Ireland Command. As during WWII the Home Fleet was restructured on a frequent basis. Initially Training Battleships became a Training Squadron; by 1953 a Heavy Squadron had been added, but four years later the fleet consisted of just two units: aircraft carriers, and everything else!
- c) The Royal Naval College Greenwich became a command in its own right by 1953, and the Fleet Air continued to expand with a Ground Training sub-command in operation at HMS *Daedalus* during the same year. This was short lived but within four years HMS *Condor* had become a Reserve Aircraft sub-command, and Flying Training sub-command moved from Donibristle to Yeovilton.
- d) In 1956 the Central Drafting Depot was established at Lythe Hill House, Haslemere as a sub-command of the Nore. Initially under HMS *President*, it became HMS *Centurion* in 1964.
- e) Defence cuts towards the end of the decade initiated a plan to close a number of historic establishments including the Nore Command, Portland, Sheerness Dockyards, plus the air stations at Donibristle, Eglinton, Ford, and Worthy Down.

**2.3.8 – 1960–1980**

- a) By 1964 the Navy had eight commands in the UK:
- Three were geographical:
    - C-in-C Portsmouth, covering the Channel, the southern part of the North Sea to the Wash, and south-eastern England
    - C-in-C Plymouth, covering Atlantic, and the Irish Sea south of a line from the Solway Firth and the southern boundary of Northern Ireland, plus Wales and western England up to Lancashire
    - Flag Officer Scotland and Northern Ireland – areas not covered by the above.
  - There were two functional commands:
    - Submarine
    - Naval Air.
  - Plus two marine commands:
    - Portsmouth
    - Plymouth.
- b) Finally there was the Home Fleet Command, which had responsibility for all major ships in home waters, excluding aircraft carriers, commando ships, submarines and their depot vessels, and the Fishery Protection Squadron.
- c) All shore bases came under the control of the relevant geographical command, though civil establishments were administered directly by the Navy Department.
- d) By 1966 a number of other commands had been added to the above. These were:
- Aircraft Carriers
  - Naval Flying Training
  - Sea Training
  - Medway
  - Portsmouth Dockyard.

**2.3.9 – NATO**

- a) The Royal Navy has a commitment to NATO and provided a number of units which often work alongside navies from Belgium, Canada, Denmark, Germany, Holland, and the USA.
- b) The two principal forces were
- Standing Naval Force Atlantic, (SNFL or STANAVFORLANT) was formed at Portland in 1968 and consisted of eight frigates and destroyers of the member countries to dissuade aggression in the North Atlantic. It was replaced by the Standing NATO Maritime Group 1 (SNMG1) in 2005.
  - Standing Naval Force Channel, (SNFC, or STANAVFORCHAN). It was formed 11 May 1973 to provide a continuous mine counter-measures (MCM) capability. In 1998 it was replaced by the MCM Force North (MCMFORNORTH).

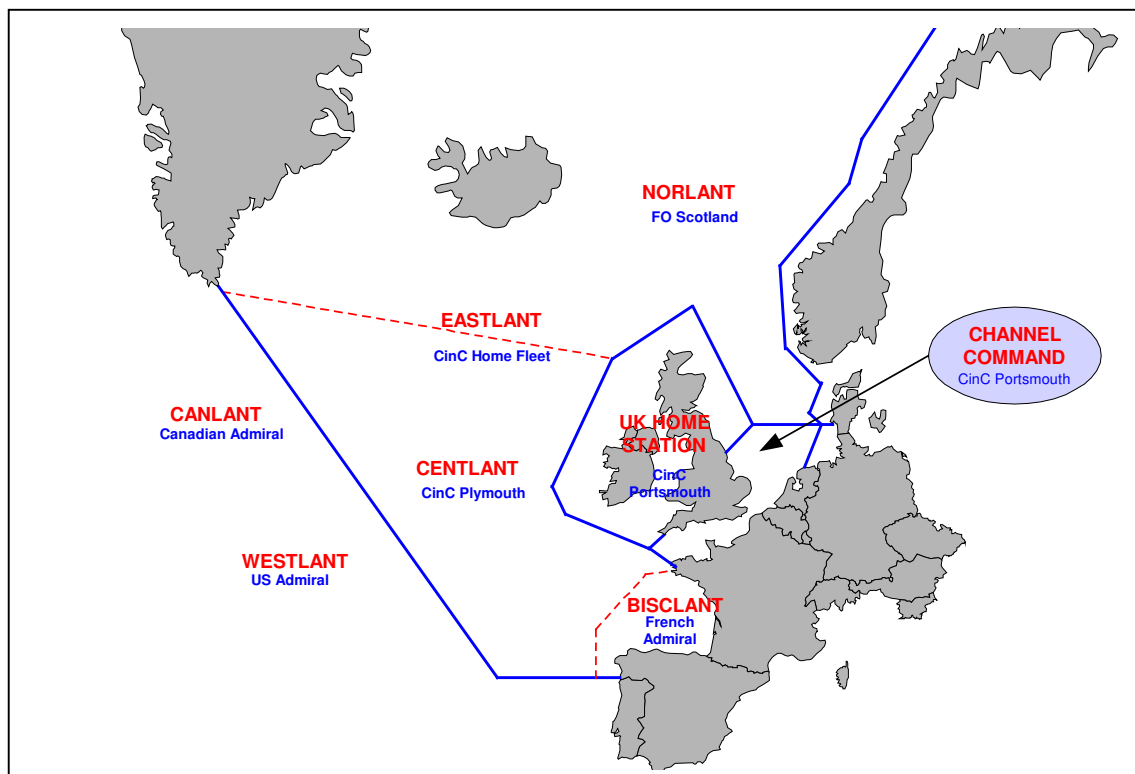


Fig. 14: NATO Sub-Area Limits, c.1965

### 2.3.10 – The Western Fleet

- a) In 1967 the Mediterranean Fleet was disbanded and elements, together with those of the Home Fleet were combined into a new Western Fleet. This produced a fleet with significantly greater responsibilities than its two predecessors, being responsible for the UK home waters, the North and South Atlantic, and the Mediterranean.
- b) Effectively, the fleet was responsible for all Navy operations West of Suez. After four years it absorbed the Far East Fleet, and the entire entity was renamed Fleet Command. Headed by the Commander-in-Chief Western Fleet (CINC WF), its HQ was at Northwood Middlesex. The C-in-C also held the title Commander-in-Chief Allied Channel Command, a NATO position.

### 2.3.11 – Areas of responsibility of Sub-Commands in 1968

Torbay	Dorset/Devon Border to Bolt Head
Plymouth	Bolt Head to Dodman Point & Channel Isles
Falmouth	Dodman Point to Hartland Point
Mounts Bay	Mounts Bay Assembly anchorages
Severn	Hartland Point to Mumbles Head
Milford Haven	Mumbles Head to Bardsea Island
Mersey	Bardsea Island to Lancs. / Cumberland Border and IoM
Belfast	Ulster Coast
Clyde	Lancs/Cumberland Border to Ardnamurchan Point
Loch Ewe	Ardnamurchan Point to Cape Wrath
Kirkwall	Cape Wrath to Lybster
Aberdeen	Lybster to Milton Ness
Forth	Milton Ness to Burnmouth

Tyne	Burnmouth to Chawdon Point
Tees	Chawdon Point to Filey Brigg
Humber	Filey Brigg to 52° 57'N 01° 08'E
Great Yarmouth	52° 57'N 01° 08'E to Orfordness
Harwich	Orfordness to Foulness Point
London	Thames above a line West Point / Thorney Creek
Medway	Foulness Point to North Foreland
Dover	North Foreland to Dungeness
Portsmouth	Dungeness to Anvil Point and IoW
Southampton	Southampton Water
Portland	Anvil Point to Dorset/Devon Border

### 2.3.12 – Post 1970

In 1970 the commands were:

Aircraft Carrier Command – HMS *Victory*  
 Naval Air Command – HMS *Daedalus*  
 Naval Flying Training Command – HMS *Heron*  
 Submarines Command – HMS *Dolphin*  
 Western Fleet – HMS *Warrior*, with Flotillas under HMS *Hampshire*  
 Portsmouth Command – HMS *Victory*  
 Sea Training Command – HMS *Osprey*  
 Flag Officer Medway – HMS *Pembroke*  
 Portsmouth Dockyard – borne in HMS *Victory*  
 RN Barracks, Portsmouth – HMS *Victory*  
 Royal Yachts – HMS *Britannia*  
 Plymouth Command – borne in HMS *Drake*  
 Devonport Dockyard – HMS *Drake*  
 RN Barracks, HMS *Drake* – HMS *Drake*  
 Scotland and Northern Ireland Command – HMS *Cochrane*  
 Rosyth Dockyard – HMS *Cochrane*  
 ACRG<sup>2</sup> – HMS *Discovery*  
 Admiralty Interview Board – HMS *Sultan*  
 Commodore Naval Draughting – HMS *Centurion*  
 Royal Naval College Greenwich – borne in HMS *President*

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<sup>2</sup> Admiral Commanding Reserves & General Naval Recruiting



Table 1 – Areas and Commands in 1970		
Flag Officer	Naval O-i-C at:	RNO / NLO at:
Plymouth	Plymouth	Fowey, Guernsey, Jersey
	Torbay (Brixham)	Babbacombe, Dartmouth
	Falmouth	-
	Mounts Bay	-
	Severn (Barry)	Bristol (& Clevedon), Swansea (& Port Talbot), Ilfracombe, Watchet, Newport
	Milford Haven	Fishguard
	Mersey (Liverpool, includes Manchester)	Beaumaris, Preston, Fleetwood, Douglas IoM
Clyde	Clyde (Glasgow)	Oban (& Ardrishaig), Workington, Ayr, Campbeltown
	Loch Ewe	Stornoway, Ullapool, Mallaig
	Belfast	Bangor, Londonderry, Larne, Portavogie, Ardglass, Kilkeel
Scotland	Forth (Rosyth)	Leith, Methil, Grangemouth, Dundee
	Kirkwall	Lerwick, Wick (& Thurso)
	Aberdeen	Peterhead (& Fraserburgh), Buckie, Invergordon
	Tyne (Newcastle)	Blyth, Sunderland
	Tees (Teesport)	Hartlepool
Medway	Medway (Chatham)	Sheerness, Margate
	Humber (Hull, including Goole)	Grimsby, Immingham, Boston, King's Lynn
	Great Yarmouth	Lowestoft
	Harwich	Felixstowe
	London (HMS <i>Discovery</i> )	Gravesend
	Dover	Ramsgate, Folkestone
Spithead	Portsmouth (including Isle of Wight)	Shoreham, Newhaven
	Southampton	-
	Portland (including Weymouth)	-

### 2.3.13 – Options for Change

In 1990, as a result of the end of the Cold War, there was a significant restructuring of the UK's armed forces, aimed at reducing the cost of defence. Under 'Options for Change' the size of the Royal Navy was reduced by some 60,000 personnel. Shore bases which were lost included *Camperdown*, *Ceres*, *Hallam* and *Mercury*.

## 2.4 – Commands

### 2.4.1 – The Dover Patrol

- a) The Dover Admiralty Pier was completed in 1850. In 1897 the year before the passing of the first German Navy Act, the Admiralty decided to build an enclosed harbour. In 1907 this work was completed and formally opened by King George V, then Prince of Wales. The harbour was intended to accommodate battleships as well as destroyers and submarines, but then the country's probable sea antagonists changed from France to Germany, and the British Battle Squadrons were therefore gradually moved further and further north. Even when the war started, the Admiralty was focussed on the Elbe, and not on Ostend or Zeebrugge; Dover was not even considered as a base of particular importance.
- b) At the outbreak of war the Dover Flotilla formed as part of East Coast Command under Rear-Admiral George A Ballard, who had made Harwich his headquarters in accordance with Admiralty plans. Its chief function was to prevent German ships breaking through and passing down the Channel. All vessels of every sort were made to anchor in the Downs and were then examined.<sup>3</sup> Ships were prevented from slipping through the wide waters between the Goodwins and the northern French Coast by a minefield, but a shipping lane was left open – close to the French Coast between Calais to Dunkirk for use by British merchant ships and the vessels of the Dover Patrol.
- c) The Dover Command became a separate command under Rear-Admiral Hon Horace Hood and a headquarters was established at Dover. The main reasons for this were:
  - The rapid advance of the enemy on Paris
  - The capture of a large part of Belgium
  - The necessity for keeping open communications with the Army in France
  - The desirability of stopping submarines from passing down the Channel all pointed to the strategic importance of the Dover area.
- d) The waters of the Dover Patrol extended from the Scheldt to the North Foreland, and from Beachy Head due south to the French Coast; this formed a water area of roughly 4,000 square miles. The vital front that had to be protected every night was as follows:
  - A 56 mile long band between Nieuport (and the Allied Lines) to Dunkirk harbour, then
  - 20 miles of trade route along the north coast of France to Calais, then
  - 20 miles across the entrance to the Channel
  - It also included the examination area off the Downs where an average of 80 to 100 ships would be at anchor day and night.
- e) By night the Dover Patrol's role was that of defence, involving:
  - Defence of the shipping in the Downs
  - Prevention of raiders breaking through unobserved
  - Support of the network of anti-submarine lookouts, and the destruction of submarines.

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<sup>3</sup> For a German destroyer this was only two hours away at full steam

### 2.4.2 – Nore Command

- a) This was the major operational command of the Royal Navy from the 17th century until the early part of the 20th century. Responsible for most of the North Sea, sub-commands were established at Ramsgate and Yarmouth in England, and Leith in Scotland. It also controlled the Chatham and Sheerness Dockyards.
- b) During WWII, under the Commander-in-Chief, the Nore, on HMS *Pembroke* it comprised:
  - Chatham Dockyard: HMS *Pembroke* – Admiral Superintendent
  - Sheerness Dockyard: HMS *Wildfire* – Captain / Commodore Superintendent HM Dockyard, from end of 1939, also Commodore-in-Charge Sheerness
  - RN Barracks Chatham: HMS *Pembroke* – Commodore RN Barracks
  - London: HMS *President II* – Liaison Officer for Naval Reserve and Merchant Navy Duties, London, also HMS *Yeoman* – Flag Officer-in-Charge, London
  - Brightlingsea: HMS *Nemo* – Naval Officer-in-Charge
  - Harwich: HMS *Ganges* / HMS *Badger* – Captain-in-Charge, Harwich and in command of Shotley Training Establishment, also Flag Officer-in-Charge, Harwich
  - Humber: HMS *Beaver*, Grimsby – Flag Officer-in-Charge, Humber, also Flag Captain, Chief Staff Officer in command of HM Naval Base Immingham
  - Lowestoft: HMS *Minos*, later HMS *Martello* – Naval Officer-in-Charge, Lowestoft
  - Southend: HMS *Pembroke IV*, later HMS *Leigh* – Naval Officer-in-Charge / Commodore-in-Charge, Southend & Naval Control Service Officer, Thames
  - Yarmouth: HMS *Watchful* – Flag Officer-in-Charge, Yarmouth.
- c) During WWII the station's principal role to guard the coastal shipping route to the ports of North Eastern England. From D-Day it became a staging post for the allied armies in North Western Europe.
- d) Post war defence cuts resulted in the eventual closure of the Nore, as it was considered to have difficult access to the sea, and poor berthing facilities at Chatham in comparison with other stations. With a potential saving of £2.5 million, it finally closed at the end of March 1961.

### 2.4.3 – Dover Command

- a) Many sources have depicted Dover as a sub-command of the Nore. Throughout WWII however it was a fully fledged command as HMS *Lynx*, with a sub-command at Ramsgate. It was under the command of a flag officer, rather than a C-in-C, but by July 1945 was relegated to a sub-command of Nore. Surprisingly Ramsgate was then allocated to Rosyth Command, rather than the adjacent Nore. With its HQ on HMS *Lynx*, it had two components under the Flag Officer Commanding Dover:<sup>4</sup>
  - Dover Dockyard: HMS *Lynx* – Captain Superintendent, Dover
  - Ramsgate: HMS *Fervent* – Naval Officer-in-Charge, Ramsgate

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<sup>4</sup> Also known as Admiral, Dover, Vice-Admiral, Dover and Commodore Commanding, Dover during WWII

#### 2.4.4 – Portsmouth Command

- a) This was one of the original commands, active from the beginning of the 20th century. It contained sheltered anchorages in the Solent and Spithead, together with a very large harbour. Prior to the Second World War its location was ideal for rapid access to the English Channel.
- b) In September 1939, under the Commander-in-Chief, Portsmouth (HMS *Victory*) it consisted of:
  - HM Submarines: HMS *Dolphin* – Rear-Admiral Submarines (S )
  - HM Yachts: HMS *Victoria and Albert* – Vice-Admiral Commanding HM Yachts
  - Portsmouth Dockyard: HMS *Victory* – Admiral Superintendent
  - RN Barracks Portsmouth: HMS *Victory* – Commodore RN Barracks
  - Newhaven: HMS *Forward* – Naval Officer-in-Charge Newhaven
  - Poole – Naval Officer-in-Charge Poole
  - Portland Base: HMS *Boscawen* – Captain / Flag Officer-in-Charge Portland, also HMS *Attack* (Portland) – Rear-Admiral Coastal Forces
  - Portland: HMS *Osprey* – Captain Anti-Submarine (A/S ), also Captain-in-Charge Anti-Submarine (A/S) Training School
  - Southampton: HMS *President*, later HMS *Victory V*, later HMS *Shrapnel* – Flag Officer-in-Charge Southampton, also Liaison Officer for Naval Reserve & Merchant Navy duties
  - Weymouth: HMS *Boscawen*, later HMS *Bee* – Naval Officer-in-Charge Weymouth.

#### 2.4.5 – Coast of Scotland Command.

- a) This was a pre WWII entity formed in July 1937, which then split in August 1939 to produce the Orkneys and Shetlands, Rosyth, and part of Western Approaches Commands.
- b) In 1937, under Rear-Admiral & Commanding Officer, Coast of Scotland, (HMS *Cochrane*) it comprised:
  - Rosyth Dockyard
  - Cromarty: HMS *Cochrane* – King's Harbour Master, Cromarty
  - Rosyth: HMS *President* – Liaison Officer for Naval Reserve and Merchant Navy duties.

#### 2.4.6 – Orkneys and Shetlands Command

- a) Originally part of Coast of Scotland Command, the Northern Approaches Command was created in 1939, but soon changed its name to Orkney and Shetlands. Its sub-commands were Lerwick, Scapa, and Stornoway, though the former appears to have been short lived and absorbed into Scapa. Iceland became a sub-command, for a period but later was elevated to full command status.
- b) Its principal HQ was at Lyness, with some elements at Stromness. The Stornoway element was later transferred to Western Approaches. At the end of WWII the name was shortened to Orkney Command.

#### 2.4.7 – Rosyth Command

- a) During the early years of the 20th century the threat to Britain shifted significantly, with Germany now being perceived as the most likely aggressor. A sheltered anchorage with good road and rail communications was needed on the eastern coast of Scotland, and the Firth of Forth looked ideal with Rosyth being selected. Construction of a major dockyard area began in

1909, and the King opened the facility in June 1915. Cromarty / Invergordon provided excellent anchorages in secure waters to the north.

- b) It was not intended as a construction base, but became a major repair and refit facility. It was never a popular site, being a significant distance from the North Sea, and also relying heavily on its proximity to Edinburgh, but this was via the vulnerable Forth Bridges, the destruction of which in wartime could be disastrous. The unpopularity of the base was a good reason for its closure after WWI, remaining so until 1939.
- c) In the early 1940s under the Commander-in-Chief, Rosyth (HMS *Cochrane*) it comprised:
  - Rosyth Dockyard – Admiral Superintendent Rosyth Dockyard
  - Aberdeen: HMS *Bacchante* – Flag Officer-in-Charge, Aberdeen
  - Blyth: HMS *Elfin* – Naval Officer-in-Charge, Blyth
  - Cromarty – King's Harbour Master, Cromarty
  - Dundee: HMS *Cressy* – Naval Officer-in-Charge, Dundee
  - Hartlepool and Tees: HMS *Paragon* – Naval Officer-in-Charge, Hartlepool and Tees<sup>5</sup>
  - Invergordon: HMS *Flora* – Naval Officer-in-Charge, Invergordon
  - Leith & Granton: HMS *Claverhouse* – Naval Officer-in-Charge, Leith & Granton<sup>6</sup>
  - Methil: HMS *Cochrane* – Naval Officer-in-Charge, Methil
  - Middlesbrough: HMS *Paragon* – Naval Officer-in-Charge, Middlesbrough
  - North Shields: HMS *Calliope* – Naval Officer-in-Charge, North Shields
  - Peterhead: HMS *Bacchante* – Naval Officer-in-Charge, Peterhead
  - Port Edgar: HMS *Lochinvar* – Captain-in-Charge, Port Edgar
  - Sunderland: HMS *Calliope* – Naval Officer-in-Charge, Sunderland
  - Tyne: HMS *Calliope* – Flag Officer-in-Charge, Newcastle.
- d) In February 1952 Rosyth Command was renamed Scotland Command.

#### **2.4.8 – Western Approaches Command**

- a) In October 1939 this command was formed, its principal task being the responsibility for the protection of merchant shipping in the North Atlantic. The Assistant Chief of the Naval Staff (Trade) was directly responsible for planning and operations within this command. The HQ was in Plymouth which seemed sensible at the time since the convoys approached the UK around the south-west of Ireland. The fall of France however changed everything with ports and airfields now very accessible to enemy forces. From June 1940 shipping losses began to increase dramatically.
- b) As a result it became necessary to re-route these convoys around Northern Ireland, which resulted in logistical problems at the Plymouth HQ. The command was split and on 7 February 1941 the HQ moved to Liverpool. Plymouth Command became the name of the section remaining in the south-west.

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<sup>5</sup> Later known solely as 'Tees'

<sup>6</sup> Later known solely as 'Leith'

- c) On 17 February 1941 Western Approaches Command split, the southernmost area becoming a new Plymouth Command. The former, now smaller but far more manageable, was directly responsible for:
- The protection of trade within its area
  - Routing and control of all inward and outward bound ocean convoys
  - Measures to combat U-boat, or enemy aircraft attacks on shipping within the area.
- d) Under its command were the Liverpool, Greenock, and Londonderry escort groups and sloops, plus the Belfast trawler force. The new Glasgow sub-command was taken over, together with the Stornoway sub-command from Orkneys & Shetlands.
- e) The Plymouth Command would assume control of all activities within its area. After a very lengthy period of discussion, the area limits were set.
- f) The Western Approaches boundaries were:
- Northern Limit: from Cape Wrath to 10 miles south of Dyrholaey (Portland) – Iceland and then to Cape Farewell – Greenland
  - Western Limit: from Cape Farewell – Greenland, to 57° 48' N, 30° W, and then to the meridian of 30° W
  - Southern Limit: the latitude of Bardsea Island, to the parallel of 41° N.
- g) However, early in 1944, the Milford Haven and Cardiff sectors with its attendant sub-commands of Avonmouth, Swansea and Barry were returned to Plymouth Command.
- h) The station closed at the end of WWII, with a few sub-commands being transferred chiefly to Plymouth Command; at its peak under the Commander-in-Chief, Western Approaches, HMS *Eaglet* it consisted of:
- Liverpool: HMS *Eaglet* – Flag Officer-in-Charge, Liverpool
  - Belfast: HMS *Caroline* – Flag Officer-in-Charge, Belfast / Northern Ireland
  - Ardrossan: HMS *Fortitude* – Naval Officer-in-Charge, Ardrossan
  - Aultbea: HMS *Helicon* – Naval Officer-in-Charge, Aultbea
  - Avonmouth: HMS *Lucifer* – Naval Officer-in-Charge, Avonmouth
  - Barrow-in-Furness: HMS *Clio* – Naval Officer-in-Charge, Barrow-in-Furness
  - Barry: HMS *Lucifer* – Naval Officer-in-Charge, Barry
  - Campbeltown: HMS *Nimrod* – Naval Officer-in-Charge, Campbeltown
  - Cardiff: HMS *Lucifer* – Flag Officer-in-Charge, Cardiff
  - Dunoon: HMS *Osprey* – Captain-in-Charge, Anti-Submarine Training School
  - Glasgow: HMS *Spartiate* – Flag Officer-in-Charge, Glasgow
  - Greenock: HMS *Orlando* – Flag Officer-in-Charge, Greenock
    - Greenock: Vice-Admiral Combined Training, HMS *Monck*
    - Rear-Admiral Combined Operations (Western Approaches and Rosyth), HMS *Warren*
  - Holyhead: HMS *Torch*, later HMS *Bee* – Naval Officer-in-Charge, Holyhead
  - Inveraray: HMS *Quebec* – Naval Officer-in-Charge, Inveraray, later renamed Commandant Combined Training Centre & Senior Naval Officer Combined Operations, Northern Bases.

- Isle of Man: HMS *St George*, later HMS *Valkyrie* – Naval Officer-in-Charge, Isle of Man & Captain-in-Charge, RNTE Douglas
- Lamlash: HMS *Orlando*, later HMS *Fortitude* – Naval Officer-in-Charge, Lamlash
- Largs: HMS *Monck* – Flag Officer Carrier Training and Administration, also HMS *Monck II* – Rear-Admiral Unallocated Landing Ships, then RA Landing Ships and Craft (Unallocated)
- Larne: HMS *Racer* – Naval Officer-in-Charge, Larne (from 1944)
- Londonderry: HMS *Ferret* – Naval Officer-in-Charge, Londonderry, also Commodore (D), Western Approaches
- Milford Haven: HMS *Skirmisher* – Flag Officer-in-Charge, Milford Haven
- Newport: HMS *Lucifer* – Naval Officer-in-Charge, Newport
- Oban: HMS *St Andrew*, later HMS *Caledonia* – Naval Officer-in-Charge, Oban
- Port ZA<sup>7</sup>: HMS *Trelawney* – Naval Officer-in-Charge, Lochalsh
- Stornoway: HMS *Mentor* – Naval Officer-in-Charge, Stornoway
- Stranraer: HMS *Fortitude* – Naval Officer-in-Charge, Stranraer
- Swansea: HMS *Lucifer* – Naval Officer-in-Charge, Swansea
- Tobermory: HMS *Western Isles* – Commanding Officer, HMS *Western Isles*

#### 2.4.9 – Plymouth Command

- At the beginning of WWII all sub-commands in the south west of the UK came under the new Western Approaches Command. As mentioned above, that command split in February 1941, with the southernmost area forming the new Plymouth Command. Its limits were:
  - Northern Limit: the latitude of Bardsea Island, to the latitude of Slyne Head
  - Western Limit: the meridian of 15°W
  - Southern Limit: the parallel of 41°N
  - Eastern Limit: the meridian of 15°W.
- After just six weeks a major amendment was required as Western Approaches had lost control over shipping routes coming in from Southern Ireland. The northern limit was moved substantially southwards to Portishead Point, along the foreshore to Hartland Point, then along a westerly line to join the current westerly limit.
- Plymouth Command initially used two HQ sites inconveniently located 4 miles apart. The administrative section & Plymouth sub-command HQ was at Mount Wise, and the operations / signals / cypher units were at Fort Austin, Eggbuckland. The former base is described later.
- Post war, with the closure of Western Approaches Command, the station absorbed most of the sub-commands on the western coast of England and southern Scotland, and comprised:
  - Commander-in-Chief, Plymouth: HMS *Drake*
  - Devonport Dockyard: HMS *Drake* – Admiral Superintendent
  - RN Barracks Devonport: HMS *Drake* – Commodore RN Barracks

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<sup>7</sup> Port ZA<sup>7</sup> was a 'secret' mine-laying base at Kyle of Lochalsh, originally designated 'Port B' from 01/40 to 06/40.

- Dartmouth: HMS *Britannia*, later HMS *Dartmouth* – Captain-in-Charge RN College & Naval Officer-in-Charge Dartmouth
- Appledore: HMS *Appledore* – Naval Officer-in-Charge, Appledore, & Commandant Combined Training Centre Appledore
- Avonmouth: HMS *Lucifer* – Naval Officer-in-Charge, Avonmouth (1945)
- Cardiff: HMS *Lucifer* – Flag Officer-in-Charge, Cardiff (1944–45)
- Falmouth: HMS *Forte* – Flag Officer-in-Charge, Falmouth
- Isle of Man: HMS *Valkyrie* – Naval Officer-in-Charge, Isle of Man (from 1946)
- Greenock: HMS *Orlando* – Naval Officer-in-Charge, Greenock (from 1946)
- Liverpool: HMS *President* – Liaison Officer for Naval Reserve & Merchant Navy duties
- Londonderry: HMS *Ferret* – Naval Officer-in-Charge, Londonderry (from 1946)
- Milford Haven: HMS *Skirmisher* – Flag Officer-in-Charge, Milford Haven
- Swansea: HMS *Lucifer* – Naval Officer-in-Charge, Swansea (1945).

#### 2.4.10 – Channel Command

This is referenced in some Admiralty documents c.1941. It appeared to consist of Plymouth, Portsmouth, and possibly Dover. Though shown on maps of the period it is almost certainly a term of convenience rather than an official designation. Post WWII however it became the name of a NATO command under the control of C-in-C Home Fleet with its HQ at Northwood.

#### 2.4.11 – Greenock Command

This is referred to in Admiralty documents of the period.<sup>8</sup> Formed in 1942, it apparently consisted of the sub-commands of Greenock, Liverpool and Belfast. Again it was possibly a convenient entity, a sub-area existing hierarchically between Western Approaches Command and its sub-units. It does not appear in the Navy Lists, and hence the term may have been quickly dropped.

## 2.5 – Coastal Forces

- Operations in the English Channel during WWII were very different from those in the earlier conflict. Both sides had aircraft which could be used to attack enemy shipping at short notice. The German Navy also employed fast motor-torpedo, or 'E' boats which were employed at many of the French Channel ports. In late 1939 Britain's operational coastal craft were based overseas, but by the following April two bases for motor-torpedo boats were commissioned at Portsmouth and Felixstowe. This led to the appointment of a Flag Officer, Coastal Forces, Rear-Admiral P K Kekewich who made Portland his headquarters during November 1940.
- The Navy had very little experience in this field, and a 'working-up' unit was temporarily based at HMS *Vernon*, Portsmouth. There was some rapid expansion over the year on the south coast with HMS *Attack* opening in *Osprey*'s vacated HQ buildings. Over two dozen bases were eventually opened during the war, most operating in the Channel and North Sea.
- Apart from their principal aggressive role of clandestine raids and enemy convoy harassment, they became responsible for the transfer of secret agents to Brittany and Norway. Three principal types of craft were used: the Motor Torpedo Boat (MTB), Motor Gun Boat (MGB),

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<sup>8</sup> ADM 116/4479



Motor Launch (ML). A smaller version of the latter was developed known as the Harbour Defence Motor Launch (HDML); later, a somewhat unsuccessful vessel, the Steam Gun Boat (SGB), was tried but abandoned after only eight had been commissioned. A total of 3,200 boats were used throughout the conflict and were manned by a large number of non UK crew, particularly Australian and New Zealanders, Canadian, Dutch, and Norwegian. Most of the officers were from the RNVR (hostilities only) pool.

### 2.5.1 – Headquarters

- Rear-Admiral Coastal Forces: HMS *Attack* – Portland, later London
- Chatham: Captain Coastal Forces, Nore Command
- London: HMS *President* – Deputy Director of Operations Division (Coastal Force – (DDOD(C))), also Director of Coastal Forces Materiel Department (DCFMD)
- Portsmouth: Captain Coastal Forces (Channel), C-in-C Portsmouth.

### 2.5.2 – Bases

Ardrishaig: HMS *Seahawk* – Anti-submarine training

Belfast: HMS *Caroline* – ML

Chatham: Coastal Forces Mobile Unit 2 (CFMU2), to Wilhelmshaven 5/45

Dartmouth: HMS *Britannia III*, 5/41–12/42 – MTB/ MGB

HMS *Dartmouth II*, 12/42–8/43 – MTB/MGB/ML

HMS *Cicala*, 8/43–12/44– MTB/ MGB

Devonport: HMS *Black Bat* – formed 1943 as tender to HMS *Defiance*

Dover: HMS *Wasp*, 12/44 to *Fervent* – MTB/MGB/ML

Falmouth: HMS *Forte IV* – ML

Felixstowe: HMS *Beehive* – MTB/MGB

Fort William: HMS *St Christopher* – Training centre

Gosport: HMS *Hornet*, Coastal Forces Depot – MTB

Holyhead: HMS *Torch* (1939–43), then HMS *Bee* – ‘Working up’ base (from Weymouth 10/43)

Immingham: HMS *Beaver II* – ML

Invergordon: HMS *Flora III* – ML

Larne: HMS *Racer* – ML

Leith: HMS *Claverhouse* – ML

Lerwick: HMS *Fox* – MTB/ML

Lowestoft: HMS *Minos*, (1940– 41), HMS *Mantis* (1942– 45) – MTB/MGB/ML

Milford Haven: HMS *Skirmisher II*

Newhaven: HMS *Forward II* (1941-42). MTB, HMS *Aggressive* (1945) – MTB/SGB

Coastal Forces Mobile Unit 1 (CFMU 1) – to Arromanches 7/44

Poole: HMS *Tadpole* – Paying off & disposal

Portland: HMS *Attack* – MTB/MGB/ML, also Repair Unit

Portsmouth: HMS *Vernon*, 1940– 41. Initial base of Coastal Forces, during 1940–41 after which special bases were formed

Ramsgate: HMS *Fervent* – MTB/MGB/ML

Scapa Flow: HMS *Iron Duke* – ML

Sheerness: HMS *Wildfire III* – ML

Weymouth: HMS *Bee* – ‘Working up’ base, moved to Holyhead 10/43

Yarmouth: HMS *Midge* – MTB/MGB/ML

## 2.6 – The Wartime Secure Headquarters Establishments

### 2.6.1 – Dover

- a) Dover's proximity to the French coast meant that, it was a likely target from a European enemy since well before the 20th century.
- b) During the Napoleonic Wars of 1793–1815 a series of tunnels were driven into the chalk under Dover Castle. Begun in 1797, these consisted of seven 'casemates', positioned 60 metres below ground, i.e. mid-way between the sea-level batteries, and those of the castle itself. Two groups of three brick lined tunnels were served by a seventh unlined 'communication' passage. The original intention was to equip each casemate with a gun, but the threat of invasion had diminished appreciably by the time the tunnels were completed c.1810, and it seems certain that they were left empty.
- c) They were maintained throughout the 19th century, but strangely not used during WWI, other than for storage purposes. The Dover Patrol's signal station was sited above the complex.
- d) In 1939 Flag Officer Dover, Vice-Admiral Sir Bertram Ramsey moved into the eastern casemate, which had been converted into an underground operations room. From September the Royal Engineers moved in and began extending the complex by adding additional tunnels above and behind the casemates. Initially this extension, known as the 'Annexe' contained kitchens and messes, plus dormitories and a dressing station, however the latter was soon extended to become a 500 bed hospital, with two operating theatres. Bizarrely many of the 'unused' adjacent tunnels were used to store obsolete RAF 40lb bombs.
- e) In 1940 the installation was known as the Admiralty Casemate and became the control centre for Operation Dynamo – the evacuation from Dunkirk of the Allied Expeditionary Force, and other Allies.
- f) Fort Burgoyne at Edinburgh Hill, Dover had been the control centre for coastal artillery until it went underground into new quarters in the tunnels– the Movements Room. More expansion took place in 1941 resulting in a combined HQ, known as 'Bastion'. This would replace the operations centre at Portsmouth in case of damage to the latter.
- g) The following year work began on an even deeper complex, eventually called DUMPY (Deep Underground Military Position Yellow), which was completed in 1943 and became a fully equipped HQ operations for the joint services. This was connected by telephone to nearby airfields, air sea-rescue units, AA and coastal gun sites, plotting rooms and naval operations rooms. The need to construct deeper accommodation had been hastened by shelling from the German long-range heavy artillery.
- h) By the end of WWII the complex consisted of three levels of tunnels. In the middle there was the original casemate level. Below this was Dumpy, and at the top were the Bastion and Annexe I, plus the Esplanade which had been constructed to provide air raid tunnel shelters.
- i) During the Cold War Dumpy was refurbished, becoming an Anti-Aircraft Operations Room (AAOR )until 1955 when it changed to a Regional Seat of Government, (RSG) for over twenty years. The government relinquished control of the site in 1986, and at the time of writing Annexe and Casemate levels were open to public viewing via English Heritage; Dumpy and Esplanade were closed, and access is being sought for Bastion.

### 2.6.2 – Newhaven

- a) In September 1939 HMS *Forward* had its HQ in the Sheffield Arms Hotel, Fort Road, Newhaven. Immediately after Dunkirk that was requisitioned by the army, and in June 1940 the Navy moved a mile inland to the substantial and recently constructed Guinness Trust Holiday Home complex at South Heighton. The site was eventually responsible for:
- HMS *Marlborough* – the Torpedo School at Eastbourne
  - HMS *Aggressive* – Coastal Forces base at Newhaven
  - HMS *Newt* – Combined Operations unit at West Quay, Newhaven
  - HMS *Lizard* – Combined Operations unit at Butts Baltic Wharf, Shoreham
  - Naval Officer in Charge, Littlehampton
  - Naval Officer in Charge, Shoreham.
- b) The establishment was also in control of maritime defences along the Sussex coast, including block ships and minefields. Reputedly some 10,000 staff were located in the area<sup>9</sup> and a very large number of premises were requisitioned, including Gracie Field's property at 127 Dorothy Avenue, Peacehaven which was used by the WRNS.
- c) This very vital stretch of coastline was so close to enemy occupied Europe that in 1941 the decision was taken to construct an underground command centre, serving a similar purpose to that already existing at Dover. On completion it contained two telephone exchanges, standby generator and air condition / filtration plant, plus kitchen and toilet facilities.
- d) The main entrance was from the Guinness building, with a second located at the end of a 300 foot tunnel emerging on to what is now the A26 to the west. Access from the underground complex was made to a number of surface features – four pillboxes, and an observation post disguised as a hen house.
- e) Intelligence was obtained from ten coastal radar stations located between Bognor and Fairlight, and was compared with that from the Dover HQ. Heightened activity was witnessed during the Channel Dash in February 1942, and the Dieppe Raid later that year; it was a crucial component in the execution of 'Overlord'. During the conflict the premises were shared with Canadians of a coastal artillery HQ.
- f) The entrance to the complex was sealed in November 1945, before the Holiday Home was handed back to the Guinness Trust. The western entrance however was not secured, leading to looting and vandalism over the following years. The Guinness building was later renamed Denton House, and most of the building was demolished in 1996, leaving only the central block. The underground complex is at present awaiting a decision regarding its preservation.

### 2.6.3 – Plymouth

- a) An initial proposal from 1937 to construct a protected joint services HQ adjacent to Hamoaze House was amended two years later as part of a much wider scheme which would eventually result in four underground headquarter establishments for the Royal Navy and the RAF. The site for the Plymouth construction was at Mount Wise, and three other similar developments would expectedly take place at Portsmouth, the Nore, and Rosyth.

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<sup>9</sup> Ellis G – page 38

- b) The original plan for a single-storey bunker with a 20 ft concrete and shingle bomb burster layer was amended to two levels, and construction began in 1939. The split in command in February 1941, resulting from the transfer of Western Approaches to Liverpool, caused in a rethink regarding the function of the bunker. Due to the advanced stage of the project it was completed as a joint C-in-C Plymouth, Fortress Defence HQ, and AA Operations Centre, opening a few months later, though only the former would remain after two years.
- c) The centre, finally completed in 1944, became HQ C-in-C Plymouth, and was responsible for wide variety of activities including the control of movements in the south-west relating to the invasion of Europe.
- d) It was known as 'PUE' – Plymouth Underground Extension and had communications facilities for a large number of external services, typically:
 

Combined HQ, Portsmouth	Combined HQ, Western Approaches
Army Command and District HQ	Adjacent naval sub-command HQs
RAF Command / Group HQs	Supreme Allied Command in London
GCHQ Bletchley & Cheltenham	Local airfields and radar stations
Transportation Centre in Plymouth	Local US Army & Navy HQ's.
- e) Following the end of hostilities and the transfer of much of the western naval centres to Plymouth Command the base continued to function as the principal HQ in the area. Four years later with the formation of NATO the base became the HQ C-in-C Eastern Atlantic, and was known as the Maritime HQ.
- f) The new Naval Home Command effectively combined the Portsmouth and Plymouth forces, with their respective C-in-Cs becoming Flag Officers under a new C-in-C Naval Home Command.
- g) Towards the end of the century the HQ was completely refurbished and updated in a major development programme lasting many years which started in 1985. By 2004 however the site had become redundant with all facilities moving elsewhere; a completely new HQ at HMS *Excellent* on Whale Island, became the UK Permanent Joint Headquarters.

#### **2.6.4 – Portland**

- a) As well as the planned underground HQs mentioned above, a further development took place at the rear of Portland Dockyard. Two tunnels gave access to a small number of subterranean rooms which included a Royal Navy operations room, a military plotting room, and the necessary communications and signals facilities. Airlocks were fitted and the centre had its own generating and air conditioning / filtration plant. The HQ opened in 1941 as a sub-command of C-in-C Portsmouth at Fort Southwick.
- b) The site was vacated in 1945, and refurbished seven years later as a reserve HQ for the dockyard in the event of a nuclear attack. Care and maintenance continued until the late 1960s, but the site is extant though derelict.

#### **2.6.5 – Portsdown**

- a) Fort Southwick was the middle of five such fortifications built on Portsdown Hill to the north of Portsmouth. Constructed between 1861 and 1870 it was used first by the Army, then by the Navy as barracks. In February 1942 work began by the Royal Engineers on a series of tunnels

and war rooms beneath the surface of the fort. This project, known as the Underground Headquarters was to be used by combined Army, Navy, and RAF personnel for matters relating to Operation Overlord – the adjacent Southwick House being the surface HQ for Supreme Headquarters Allied Expeditionary Force (SHAEP). The control and communications centre became available for use from January 1943, and was used on D-Day as a ‘filter’ room for co-ordinating radio and radar information relating to naval operations. Over 600 staff were involved in the underground HQ on that day.

- b) A separate subterranean structure was also built in a disused chalk pit at Paulsgrove. This became a secure radio communications station working in conjunction with the HQ. In the event of the latter being put out of action either the Dover or Newhaven underground bunkers would be used as a reserve.
- c) The complex continued to be used throughout the Cold War, and was finally sold off in 2003.

### 2.6.6 – Liverpool

- a) Logistical problems at the headquarters in Plymouth, together with the need to re-route merchant shipping convoys around Northern Ireland, resulted in the headquarters for Western Approach Command moving to Liverpool. A short time later RAF 15 Group Coastal Command moved its HQ from Plymouth to the same building, which became known as the Area Combined Headquarters.
- b) The site chosen in the city was Derby House, part of the Exchange Buildings in Water Street / Rumford Street / Exchange Flags, close to the waterfront. This was a substantial office block, the construction of which had begun in the 1930s and used as a GPO HQ, hence it was well equipped with communication cables. At Churchill’s request it contained a sizeable basement which had been extensively reinforced in the late thirties, to ensure that it was both bomb and gas proof. On completion it boasted a seven-foot thick roof and walls of three-feet reinforced concrete, and totalled some 50,000 square feet incorporating in excess of 100 rooms. It was generally known as ‘The Fortress’, or occasionally ‘The Citadel’, and may have been part of HMS *Eaglet*.<sup>10</sup> The nearby Royal Liver Building was used as HQ for the Merchant Navy.
- c) The function of the HQ was to administer the safe conduct of allied merchant shipping en route from North America, primarily against attack from the U-boats. The defence hardware was sited primarily in the ports of Greenock, Liverpool, and Londonderry, plus RAF Coastal Command bases sited in Northern Ireland and on the west coast of the UK. Over 1,000 staff were involved in this HQ, the majority being Wrens, and the command itself eventually utilised more personnel than had been administered by the Admiralty itself prior to WWII. Under the command of, initially Admiral Sir Percy Noble, and then Sir Max Horton from November 1942, the establishment consisted of three sections, Administration, Material, and Operations. Each of these was under the command of a captain.
- d) Three significant events resulted in the turning point of the battle during 1943:
  - The rapid breaking of the German ‘Shark’ enigma codes
  - The introduction of the very-long-range B24 Liberator bomber into Coastal Command
  - Improvements in the coding of Admiralty radio traffic which denied the contents to the enemy.

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<sup>10</sup> Article: Grove, Battle of the Atlantic – 50th Anniversary 1993

- e) The following January the Western Approaches Tactical Unit was established in the adjacent Exchange Buildings. Its function was to study U-boat tactics and then to develop suitable counter-measures. The unit trained over 5,000 naval officers during its existence.
- f) It is reported that a reserve HQ was constructed at Knowsley Hall, the home of Lord Derby and situated some six miles to the north-east. It certainly was never used. Another location was at Fort George in Londonderry, which used two large underground bunkers in the grounds of Magee College.<sup>11</sup>
- g) The Battle of the Atlantic lasted 2,073 days and during this period the HQ was unsurprisingly visited by Churchill on several occasions, almost certainly as a result of his belief, "*The only thing that really frightened me during the war was the U-boat peril*". It was also visited by the King and Queen on 10 November 1942. Today these facilities, which were also responsible for the hunting and eventual destruction of the *Bismark* are open to the public.

### 2.6.7 – Chatham

An underground bunker using steel segments, as in the London Underground was built c.1939 as a secure HQ for the Nore Command. It closed in 1965 but was used by RN reserves for training purposes until 1984. It is closed, but reported to be partially vandalised.

## 2.7 – Defence of Ports and Harbours

- a) Coastal defences for a military harbour required co-ordinated efforts by the three services, and was therefore supervised by a Combined HQ. During the 1930s the issue of defending ports and harbours was re-examined, resulting in significant changes to the arrangement which had been used to date. In particular the shelling of Hartlepool during WWI suggested the need for long-range shore guns to combat this threat. The revised system provided the facilities described below.
- b) **Counter Bombardment Batteries**, equipped with 9.2in guns situated on cliffs just outside the port. These worked in conjunction with **Observation Searchlights**. These were narrow beam units and could be either fixed (sentry beams), or moveable (search beams) and were often remote controlled. Sometimes heavier, or smaller 6in guns were also used for this task. The criteria was to have high angle mountings, and ideally the time to reload the gun would be less than the shell flight time.
- c) These units were under the local control of a **Fire Commander (FC)**, typically a Lieutenant-Colonel, who reported back to the Combined HQ. He was assisted by an **Officer Commanding Defence Electric Lights, (OCEL)**.
- d) Also reporting to HQ was a naval **Extended Defence Officer (EDO)**, and a **Selected Military Officer (SMO)** from the Army. The former was responsible for activities in the immediate vicinity of the harbour entrance, and the latter would liaise between the Fire Commanders, and the Examination Service which, via the **Port War Signal Station**, controlled shipping entering or leaving a port by the coastguard.
- e) A stretch of water typically between one half and four square miles was designated **the Outer Examination Anchorage**, and was in the field of view from shore based **Fighting Lights**.

<sup>11</sup> The Future of Fort George – [www.illex-urc.com/index.cfm/do/EbringtonHistory](http://www.illex-urc.com/index.cfm/do/EbringtonHistory)

These searchlights were again narrow beam units and worked in conjunction with **the Close Defence Battery**, or **Examining Battery** of 6-inch guns alongside. Again, these units were under the supervision of the FC and the OCEL.

- f) These weapons would normally have a 15 degree traverse. The water was patrolled by the **Examination Vessels** and ships wishing to enter the harbour would be inspected here for legitimacy. Vessels refusing to comply would be fired on by the Examining Battery.
- g) The perimeter of the outer entrance to the harbour would have submerged magnetic Indicator Loops connected to a shore based **Loop Indicator Station** for detecting the passage of vessels, particularly submarines. Later in the war **Harbour Defence Asdic** (HDA) was used in many locations.
- h) One or more Controlled Minefields would be installed at the entrance to the harbour, and were electrically operated via a shore based **Mine Control Station**.
- i) The actual entrance to the harbour would be protected by a boom with access via a **Main Gate**. Usually 'Tidal' and 'Emergency' gates would also be provided.
- j) Between the controlled minefield and the boom was an area extensively protected by a number of searchlights. These were designated **Area Lights** and were generally fixed, with 'cheese shaped' beams of up to 45 degrees. They were ideal for spotting fast vessels such as MTBs, and were under the control of the FC, and operated in conjunction with the quick firing guns of the **Anti-MTB batteries**.
- k) Inside the boom was an **Inner Examination Anchorage**, again under the cover of a 6-inch shore battery, and a pair of fighting lights.
- l) A variety of intelligence and observation positions were provided:
  - **Battery Observation Posts** – used to observe the effects of a bombardment. They were often external to the battery itself, and replaced the earlier Battery Control Post
  - **Fortress Observation Posts** – provided general information to Fire Commanders. A similar unit was the **Advanced Look Out**.
  - **Director Posts** – used for close range work particularly with anti MTB systems.
  - **Coast Watching Posts** were located some distance from a fortress, and provided information via a local army Sector HQ.

### 2.7.1 – Combined HQ Communications Links

- a) The diagram on the following page shows the communication links for the anti-ship and submarine defences of a large port or harbour, which would involve joint efforts by the Army, Navy and RAF.<sup>12</sup> The lines indicate that communication is possible between the various centres. Detailed communication links are not shown as they would frequently involve more than one system, i.e. radio and telephone. In addition there would be a comprehensive anti-aircraft system in place.

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<sup>12</sup> Source CB 3031(39), ADM 239/183

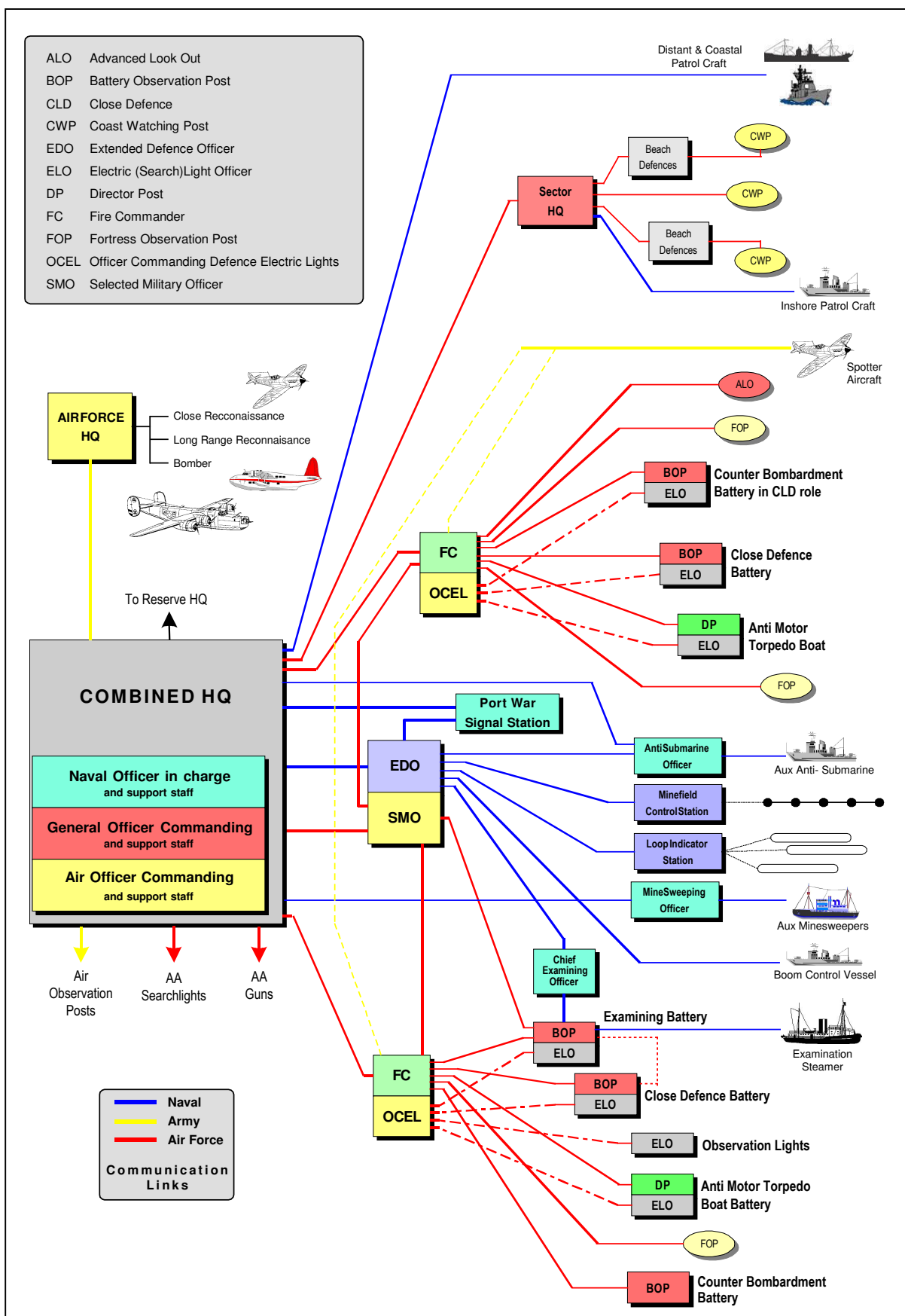


Fig. 15: Communication Links for a Coastal and Harbour Defence System



## Part 3 – Naval Organisation and the Admiralty

### 3.1 – Overview

- a) In 1960 the Admiralty was a government department consisting of members who met regularly in a boardroom. Its members were both naval officers and civilians. The former were officers typically of rank commander and above, who would serve up to three years before returning to normal duties. The civil servants included professionals, executives, scientists, engineers, clerical, and typing personnel.
- b) The HQ was based in Whitehall together with a few other London premises; there was also a very substantial complement at Bath, as well as Cricklewood, Pinner, and Slough.
- c) Naval commands were either afloat or shore-based, and consisted of ships, air stations, and other shore establishments. Each was commanded by a Commander in Chief or a Flag Officer, who were agents of the Admiralty Board for the execution of naval policy. The Home Fleet was the only command entirely afloat.
- d) The other UK commands were Portsmouth, Plymouth, Scotland, and the Home Air Command.
- e) Shore based establishments were of two types:
  - Fleet Establishments, e.g. HMS *Seahawk* – the Naval Air Station at Culdrose, or HMS *Royal Arthur* – the Petty Officer training facility at Corsham, and were manned principally by naval staff
  - Civil Establishments, e.g. Hydrographics Department which were manned mainly by civilians, and were distinct from the fleet, although they came under the Commander-in-Chief of the command in which they were located.
- f) Historically they were conveniently located close to the dockyards, and as many of them were maintenance or supply bases and were termed ‘outports’. This term continued to be used even though many bases were located a long way from the sea, or performed tasks which were not connected directly with the activities of the sea-going fleet.
- g) These establishments were of four principal types, all of which would communicate directly with the Admiralty on most business matters:
  - The four dockyards at Chatham, Devonport, Portsmouth, and Rosyth
  - Stores for their armament, naval supplies, and victuals
  - Repair and maintenance depots
  - Scientific research and development facilities.
- h) There were also the regional organisations, which generally comprised offices located outside London and the dockyards, which liaised with companies performing work on behalf of the Navy, e.g. fuel and weapons suppliers.
- i) Some ten years after the end of WWII the organisation employed over a quarter of a million personnel. This included some 33,000 salaried professional / technical / administrative and clerical staff, plus 100,000 weekly paid manual workers. They were known as non-industrials and industrials respectively.

## 3.2 – The Control of the Navy

- a) Prior to the mid 19th century the Navy was managed by two distinct organisations: an Admiralty, and a Navy Board.
- b) Until the late 14th century, control over England's Navy was vested in two positions, the Admiral of the North, and the Admiral of the West, these two gentlemen having responsibility for the Northern, Southern, and Western Fleets. Around 1380 Richard II amalgamated these positions into one, known as the Admiral of England. This later became the Lord Admiral, and finally the Lord High Admiral. The position was that of an 'office' rather than a rank, and thus could involve more than one person. Effectively therefore it was the beginning of what 250 years later produced the Admiralty Board, and was directly responsible for the command of the force.
- c) The second entity, the Navy Board, created some 180 years later was responsible purely for its administration; the operational control, policy direction, and maritime jurisdiction remained the province of the Lord High Admiral. In the early 19th century the two organisations merged, however the intervening period is extremely complex, involving much political wrangling and the following represents a simplified overview.

### 3.2.2 – The Navy Board

- a) The first of the boards set up to administer the Royal Navy was The Council of the Marine, established in 1546, in the reign of Henry VIII. Its job was to organise the business of the Navy and advise the Lord Admiral, one of the officers of state. The King appointed a High or Lord Admiral to command the fleet at sea, plus a deputy – the Vice-Admiral of England and Lieutenant of the Admiralty.
- b) The latter then appointed four administrative officials who became the Council of the Admiralty, forming the first stable authority responsible for building and maintaining ships, and control of the dockyards. These officials were:
  - The Treasurer of Marine Causes – for accounts and payments
  - The Controller of Ships – an experienced mariner for quality control
  - The Surveyor of the Ships – control of ships, stores, moorings and wharves
  - The Clerk of the Ships (later Clerk of the Acts) – for contracts and records.
- c) Unfortunately the duties of these administrators were very loosely defined, such that some degree of overlap was both inevitable and essential which led to a high degree of rivalry. Later two other members; the Victualler of the Navy, and the Master of Naval Ordnance were added, eventually becoming separate Boards.
- d) After the death of the King economic constraints caused some restructuring with the loss of the Lieutenant, and the elevation of the Treasurer. The name changed first to the Principal Officers of the Navy, and then to the Navy Board, a name which remained. Its headquarters was in an office in Tower Hill. Around 1620 a commission of enquiry exposed the Board as incompetent and dishonest leading to its temporary replacement by a Navy Commission. It later reformed and continued to exist with varying good and bad relationships with the Admiralty, until finally being abolished in 1832, when its functions were passed directly to the Admiralty.

### 3.2.3 – The Admiralty Board

- a) In 1628 Charles I effectively created the first Board of Admiralty. It then consisted of the following:

Lord Treasurer	Great Chamberlain	Lord Steward
Queen's Chamberlain	Vice Chamberlain	Secretary of State.

- b) Ten years later it was disbanded and the Earl of Northumberland was appointed Lord High Admiral; the office then went in and out of commission until 1709 when the Board of Admiralty was, in legal form, given all the powers that had been vested in the Lord High Admiral of England. There was a very brief interlude between 1827 and 1830 when the Duke of Clarence was appointed Lord High Admiral.
- c) For a very long period Admiralty Board members were almost always Members of Parliament, who acted as political representatives for the Navy. They were responsible to the public for obtaining supplies from Parliament and disbursing them efficiently. Acting on the advice of the Navy Board, the Admiralty could only carry out a broadly supervisory role since, apart from the Admiralty Secretary, it was not permanent and often changed with a new political ministry.
- d) Until the mid 17th Century the Admiralty Board covered all aspects of naval administration. As various specialised departments also developed, the Navy Board concentrated on building and maintaining Navy ships, and advising the Board of Admiralty. Members of the Navy Board tended to be professional men drawn from the service, either officers or former shipwrights, though struggles between Crown and Parliament ensured that the Board was a volatile entity, which for example in the mid 1600s somewhat ineffectively consisted purely of Members of Parliament. Once again economics resulted in reticence to spend money on the Navy in peace time. During the 18th century the Board consisted principally of civilians plus a few naval officers, an arrangement which was generally unsuccessful since the former had little knowledge of the requirements, and the latter were usually at sea.
- e) The Admiralty was not responsible for naval operations or senior appointments. Operations were handled by the Senior Secretary of State. Operations and senior appointments were discussed in Cabinet, which included the First Lord of the Admiralty, and often with the Monarch. Orders and instructions were issued through, rather than by the Admiralty. But the Secretary of State sometimes dealt directly with Commanders in Chief, for speed and secrecy. The Admiralty, therefore, though executive head of the Navy, was not a monolithic entity but part of a largely decentralised administrative structure.
- f) Since 1806, the Admiralty had become an authority managed by a civilian council and the professional head of the Navy was officially the First Sea Lord, and so the Admiralty and the Navy Board were merged into one administrative organisation.
- g) The Admiralty Act of 1832 embodied the suggestions made by the then First Lord, Sir James Graham. It abolished the Navy and Victualling Boards, and established five Principal Officers of the Civil Departments of the Admiralty:
- The Surveyor of the Navy – later became the Controller
  - Accountant General
  - Storekeeper General
  - Controller of victualling
  - Physician of the Navy.

- h) Each of these reported to one of the five Lord Commissioners of the Admiralty Board, who in turn became the first Superintending Lords.
- i) This organisation did not perform well; its staff were scattered, many choosing to remain in Somerset House, and business was only undertaken when everyone was sitting round the table. By 1861 it was also realised that the dockyards were running in a very inefficient manner, and a Select Committee was established to report on the problem, but was disbanded before completion. Seven years later Gladstone attempted to clarify matters and appointed H C E Childers as First Lord, who then instigated a revised hierarchy for the organisation. Under this reformation the First Lord of the Admiralty now became solely responsible for the administration on the Navy.

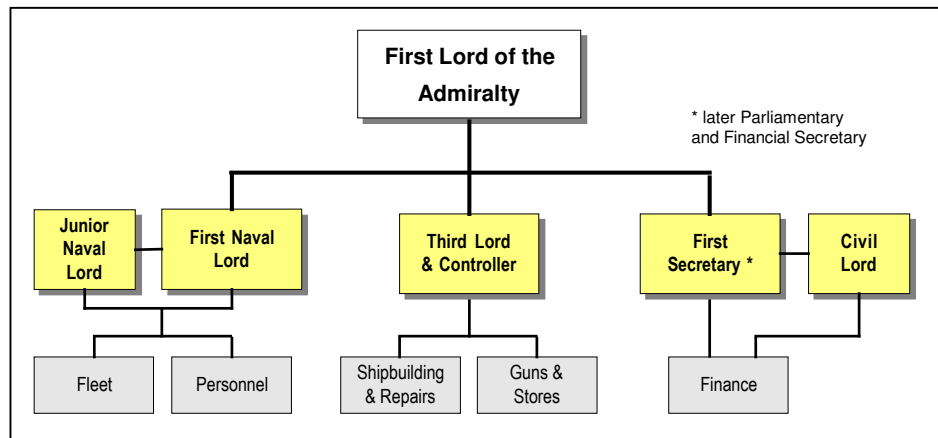


Fig. 16: Gladstone's Reformation of the Admiralty

- j) This change was unpopular and, following Childer's resignation in 1871, his successor G J Goschen introduced a revised Order-in-Council in 1872, which stated:
- The First Lord of the Admiralty is directly responsible to the Crown and to Parliament for all the business of the Admiralty
  - Three Naval Lords would then be directly responsible for fleet efficiency, movements, and personnel. They reported to the First Lord
  - The Controller would continue to administer shipbuilding, maintenance, and stores. He would not however be a full member of the Board
  - The Parliamentary and Financial Secretary would be in charge of finance
  - The Civil Lord would perform various duties as assigned by the First Lord.
- k) Regular Board meetings were revived in order to provide information for the First Lord with significant matters such as shipbuilding programmes, and the naval estimates. This then became the format for the Admiralty Board until well into the 20th century; it was such that, in 1940 the Esher Committee remodelled the War Office on the Admiralty structure. However in the intervening years several other significant changes took place:
- In 1882 the Controller became a full member of the Board
  - In 1904 the term 'Naval Lord' was replaced by 'Sea Lord'
  - In 1921 the two Secretaries achieved Board status
  - The Parliamentary and Financial secretary became a Lord Commissioner in 1929
  - The Permanent secretary also became a Lord Commissioner in 1942.

l) Other members were added as required:

- In the 1930s the Deputy Chief of the Naval Staff was created – in charge of plans
- A Vice Chief of Naval Staff was also created, as was a Director of Naval Intelligence
- In 1938 a Fifth Sea Lord was created to administer Naval Aviation. In 1945 the position was abolished, the duties being transferred to the DCNS.

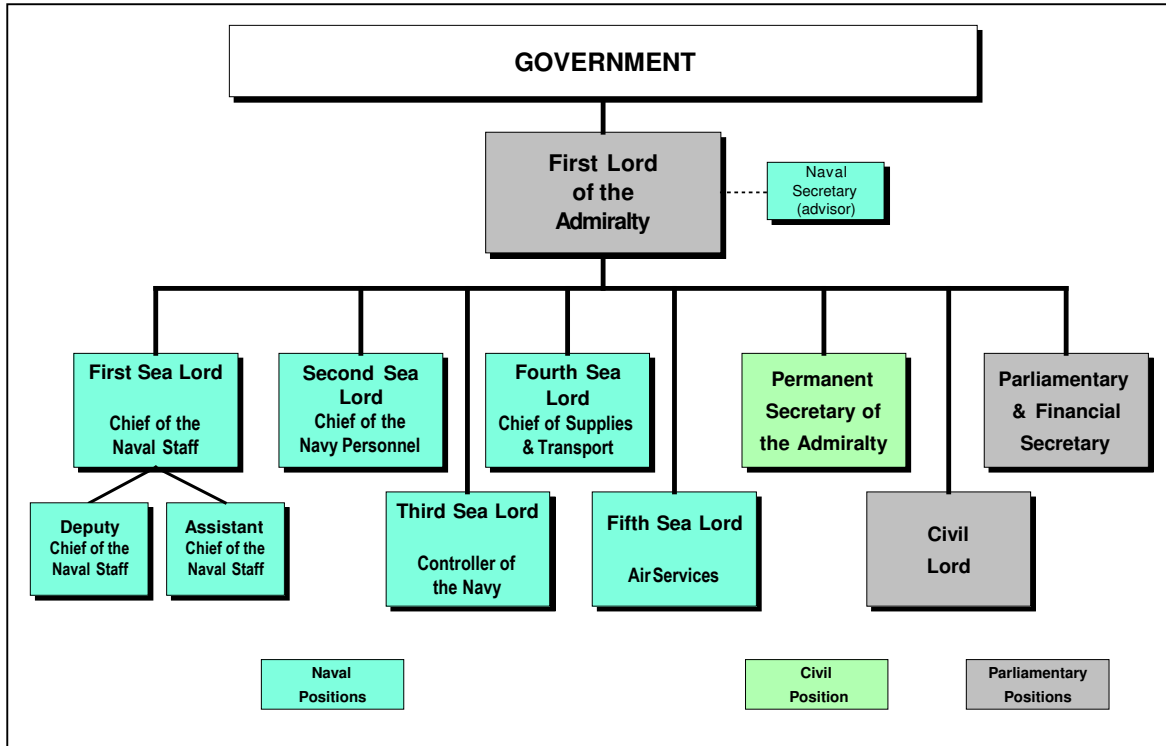


Fig. 17: The Admiralty Board in September 1939

m) The members of the Board were now:

First Lord	Parliamentary and Financial Secretary
Civil Lord, Permanent Secretary	First, Second, Third, Fourth and Fifth Sea Lords
Vice-Chief of Naval Staff	Deputy Chief of Naval Staff.

- n) On 1 April 1964, the Admiralty, War Office, Air Ministry, and Ministry of Defence were merged to form a new style Ministry of Defence.
- o) At the beginning of WWII, the Admiralty Board consisted of eleven members as shown above. The head of the Board was the First Lord of the Admiralty, a political member who was advised on naval matters by a military secretary, (in rank a rear-admiral), though the latter was not a Board member.
- p) There were two other political, or parliamentary members, the Civil Lord, and the Financial Secretary. There was also a civilian, the Permanent Secretary. The remaining Board Members were all naval personnel – the five Sea Lords, plus two support members for the First Sea Lord, i.e. the Assistant, and Deputy Chiefs of the Naval Staff, (ACNS, and DCNS).
- q) There was one very important difference regarding the functioning of the Admiralty, in that, unlike the War Office and the Air Ministry, it was an operational centre. In a memo to the Minister for Aircraft Production in October 1940 regarding the need for a secure HQ for the

Admiralty against bombing, Austin Hudson, the Civil Lord described his organisation as, ‘.. a sort of War Office and GHQ, or an Air Ministry, plus Bomber and Fighter Commands’.<sup>13</sup>

- r) The composition of the Board of Admiralty changed considerably as WWII progressed, and as new requirements arose. Within the naval staff new divisions were formed to meet new responsibilities.

### 3.2.4 – Other Administrative Organisations.

- a) There were two other minor boards which were instrumental in the management of the Navy prior to the 18th century.
- b) The Victualling Board – prior to 1684, the fleet was supplied with its food and drink by private contractors. In 1691 the office of Assistant Controller of Victualling Accounts was created as part of the Navy Board, and lasted until 1731, when the responsibility was transferred to a separate Victualling Office.
- c) The Sick and Wounded Board – this organisation was formed in 1740 prior to the construction of two naval hospitals at Haslar and Stonehouse. From 1653 until 1740 responsibilities were undertaken by the Navy Board, except in times of war, when Sick and Hurt commissioners were in existence.

### 3.2.5 – The Sea Lords

#### 3.2.5.A First Sea Lord (1SL)

- a) The First Sea Lord was in his capacity of Chief of Naval Staff, responsible to the First Lord for the issue of orders to the fleet that affected war operations, and the movements of ships all over the world. He was also the responsible advisor to the Board of Admiralty on all questions of naval policy and maritime warfare.
- b) Soon after Admiral Pound became First Sea Lord in June 1939 he made recommendations regarding operational procedure. He proposed that the normal procedure should be for the Admiralty to give the Commander-in-Chief all the information, and leave him to make the necessary dispositions, unless the fleet is at sea and keeping radio silence.

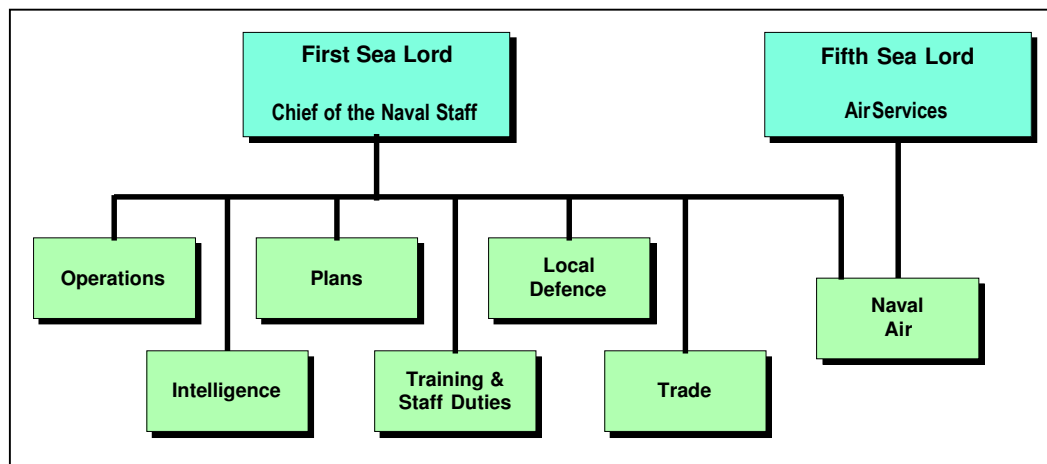


Fig. 18: Principal Naval Staff Divisions, September 1939

<sup>13</sup> ADM1/10832

- c) The principal departments under 1SL were:
- Operations – was responsible for the movement of ships and fleets around the world, and mobilisation and strategy when enemy shipping may be involved
  - Intelligence – collected often seemingly unimportant or unrelated information from all parts of the world in order to produce an accurate picture of enemy movements and activities
  - Plans – operated at a higher level than Operations and was responsible for campaign and plan-of-action preparation for almost any eventuality which would involve the enemy.
  - Training and Staff Duties – self explanatory; it also allocated duties and tasks accordingly
  - Local Defence – was responsible for the protection of ports, harbours and other bases from enemy attack
  - Trade Division – prime responsibility was the organisation of convoys and their protection. This included merchant shipping.
- d) At the beginning of WWII the Naval Air Division had some control from the First Sea Lord, but this was eventually transferred almost totally to the Fifth Lord.

### **3.2.5.B Second Sea Lord (2SL)**

The responsibility for the manning of fleets, and for the training of all officers and men, rested with the personnel departments of 2SL. The Department of the Adjutant General, Royal Marines also came under the jurisdiction of the Second Sea Lord. The Royal Marines supplied detachments to all of the major warships and fulfilled a long tradition of instant readiness to fight on land. They also manned an organisation called the Mobile Naval Base Defence Unit which was held in readiness to proceed overseas to set up temporary bases.

### **3.2.5.C Third Sea Lord (3SL)**

He was responsible for the design and construction of all warships, all their machinery, weaponry and equipment. When naval aircraft began to occupy an ever increasing importance in maritime war, an additional member was added to the Board, with responsibility for all air material.

### **3.2.5.D Fourth Sea Lord (4SL)**

This position was responsible for the procurement and distribution all over the world, of stores and supplies, including fuel, on which the mobility of the maritime forces depended.

### **3.2.5.E Fifth Sea Lord (5SL)**

- a) The responsibilities of the Fifth Sea Lord originally included the staff side as well as the material side of naval air warfare, but in January 1943, the two were separated and an Assistant Chief of Naval Staff (Air) was appointed to the Board. On the outbreak of WWII, the Naval Air Division became responsible for the whole staff work of that aspect of maritime war, but as it rapidly gained in importance, the work was split between several new divisions. On the material side the fulfilment of the Admiralty's requirements for naval aircraft, their weapons and stores was the responsibility of the Air Ministry until July 1937, when control of the Fleet Air Arm was returned to the Admiralty. New departments to handle air material and personnel were then formed.
- b) On 1 December 1937 the Air Ministry issued a directive that the primary role of RAF Coastal Command in war would be trade protection, reconnaissance and co-operation with the Royal

Navy. It guaranteed that aircraft belonging to Coastal Command would only be employed on other duties, when the threat to sea communications was insignificant. During the war only one major change took place to the original 1937 agreement, and that was the transfer of the operational control of Coastal Command aircraft to the Admiralty in April 1941.

### **3.3 – Principal Divisions of the Twentieth Century Admiralty**

#### **3.3.1 – Operations Division (Home) & Operations Division (Foreign Theatre)**

- a) Operations Division was responsible for the distribution of the fleet all over the world, and for the day-to-day and hour-to-hour movements of each of these units. This was achieved through the C-in-C controlling the movements of ships and squadrons allocated to him. The responsibility of distribution of maritime strength rested under the Board of Admiralty with the Operations Divisions.
- b) Operational plots were maintained showing all movements and future intentions. Comprehensive records of all damage received, all refits in progress and the current state of all important ships in regards to fuel, ammunition and stores were also kept. The success of the operational control of ships at sea required the careful collaboration between Plans, Intelligence and Operations Divisions.

#### **3.3.2 – Intelligence Division**

Intelligence Division gathered the day-to-day, even hour-to-hour reports and deductions regarding the actions and movements of the enemy. The work of the division was carried out in the Operational Intelligence Centre underneath the Admiralty. Included were two operational rooms called the Submarine Tracking Room and a Surface Ship Tracking Room. Telephone and teleprinter communication was maintained with all naval operational HQs, as well as RAF Coastal and Fighter Commands.

#### **3.3.3 – Plans Division**

- a) After war had broken out Planning of Operations replaced Preparation of War Plans. Its director was a member of the Joint Planning Committee (JPC), Army, Navy and Air Force, which advised the Chiefs of Staff on all inter-service planning problems. Another function was long-term policy regarding the composition of the fleets and squadrons, also the planning in advance of the naval construction programme. The work of Plans Division was closely linked to Intelligence Division. The former prepared all naval plans in conjunction with colleagues from the Army and Air Force to form the JPC but only a small proportion of the plans received met with the approval of the Board of Admiralty or Chiefs of Staff.

#### **3.3.4 – Naval Air Division**

- a) Under a 1924 agreement the Air Ministry remained responsible for the provision of naval aircraft, though the Admiralty specified the numbers and types of required. The Admiralty provided the ships in which they were embarked as well as their specialised equipment. The Fleet Air Arm pilots held Air Force rank, but the rest of the aircrews were all naval staff, and the RAF provided the skilled maintenance staff on the aircraft carriers. From 1937 this partnership ended and the FAA became solely an Admiralty responsibility. As a result a 'Fifth Sea Lord and Chief of the Naval Air Services' was added to the Admiralty Board.



### 3.3.5 – Trade Division (Merchant Navy)

- a) The Admiralty assumed control of a British merchant shipping on 26 August 1939, and this control was exercised through the Director of the Trade Division and the Naval Control Service staff stationed in all ports used by British Shipping. Admiralty's responsibility began shortly before a ship sailed on an outward voyage and ended with its safe return. Another responsibility of the division, was the arming and protection of British merchant shipping.

### 3.3.6 – Naval Administration prior to the New Ministry of Defence

The organisation of the Admiralty just before the formation of the new ministry is shown on the following three pages. (Source: Admiralty Newcomers' Guide)

- Diagram 1 shows the Board of the Admiralty and the organisational structure of the First Sea Lord, and Chief of the Naval Staff
- Diagram 2 shows the organisational structure of the Second Sea Lord, and Chief of Naval Personnel
- Diagram 3 shows:
  - The organisational structure of the Controller of the Navy – the Third Sea Lord.
  - The departments of the Fourth Sea Lord – Chief of Supplies, Transport and Vice Controller
  - The Civil Lord's administration.

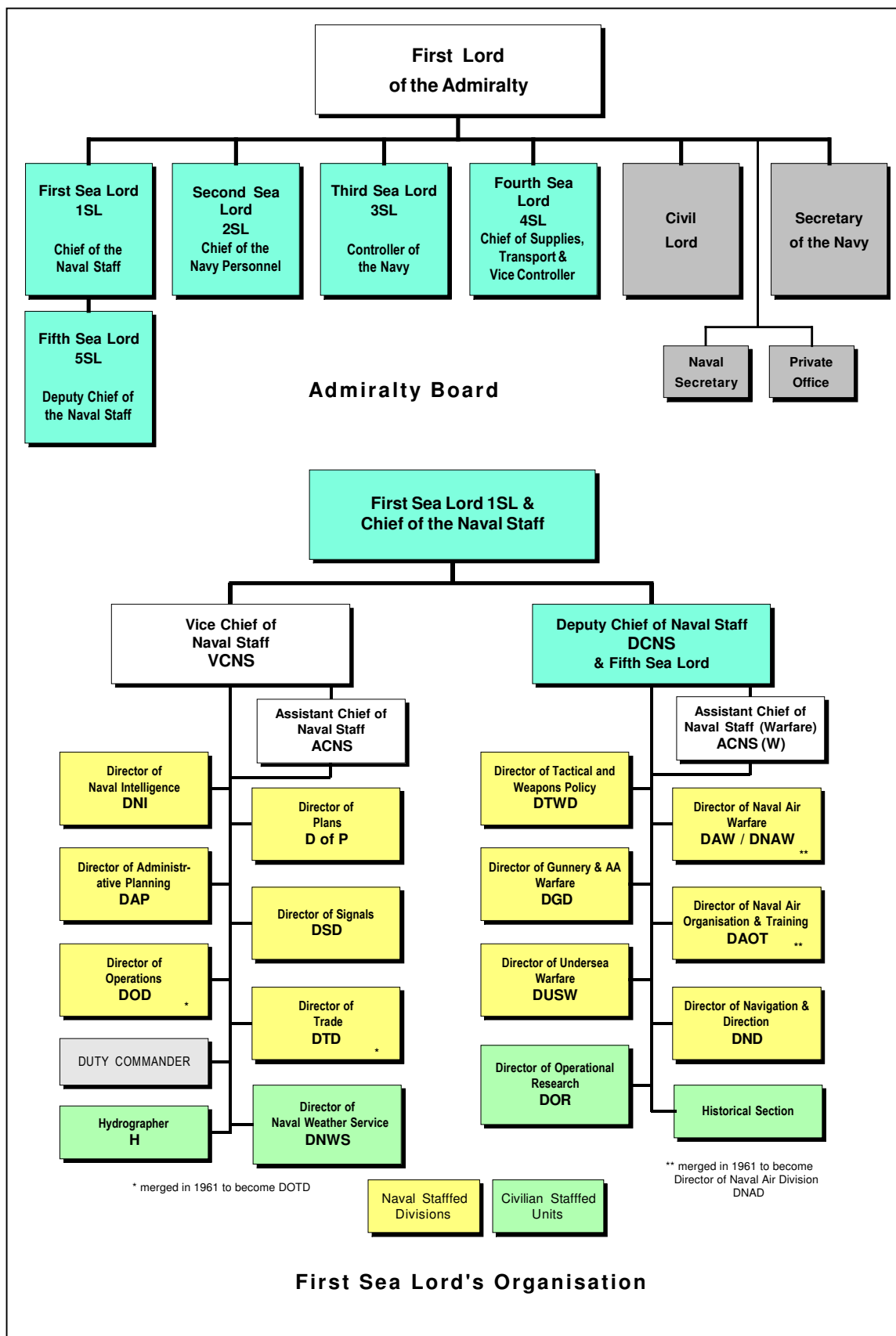


Fig. 19: The Admiralty Board and First Sea Lord's Organisation, c.1960

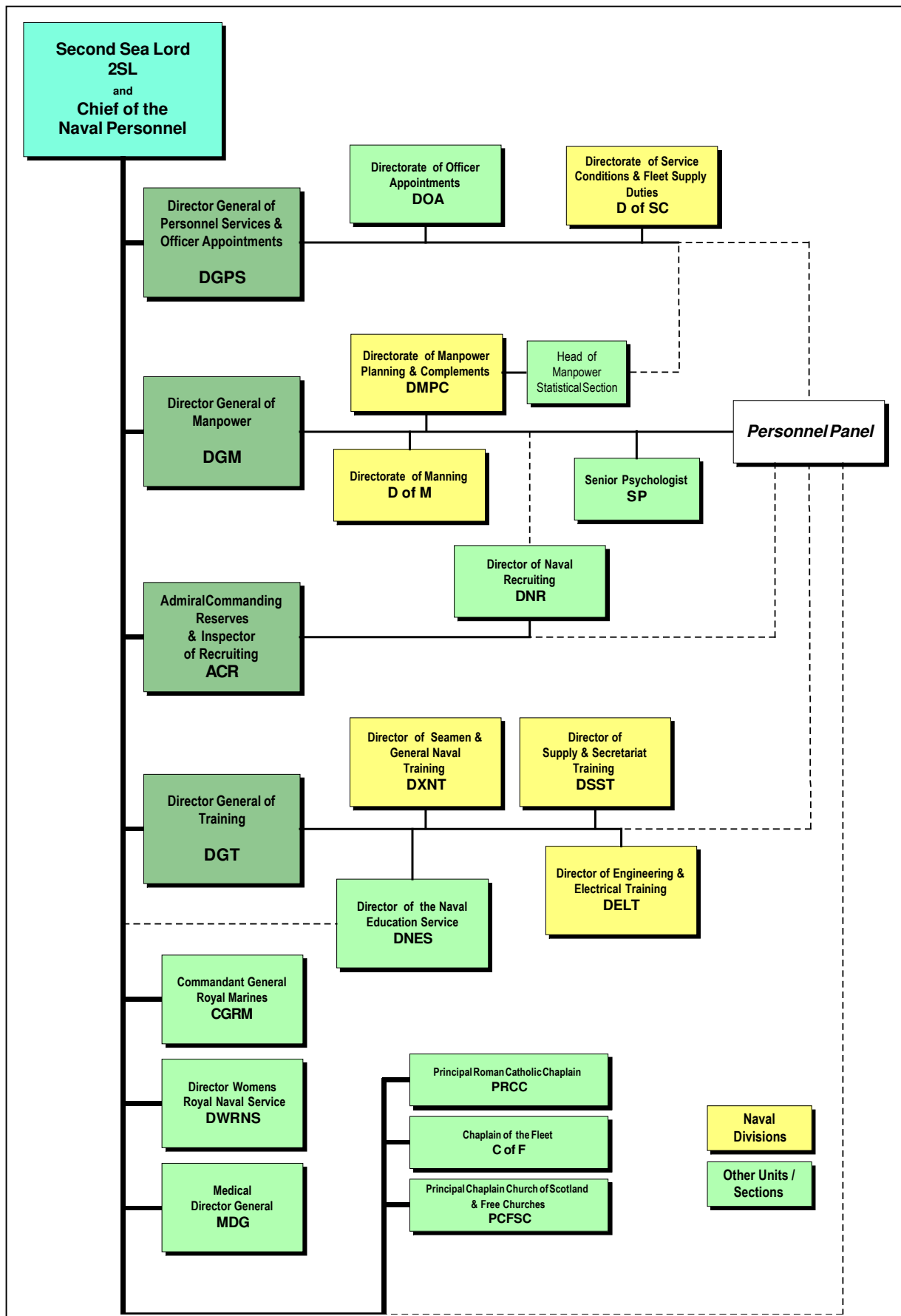


Fig. 20: The Second Sea Lord's Organisation, c.1960

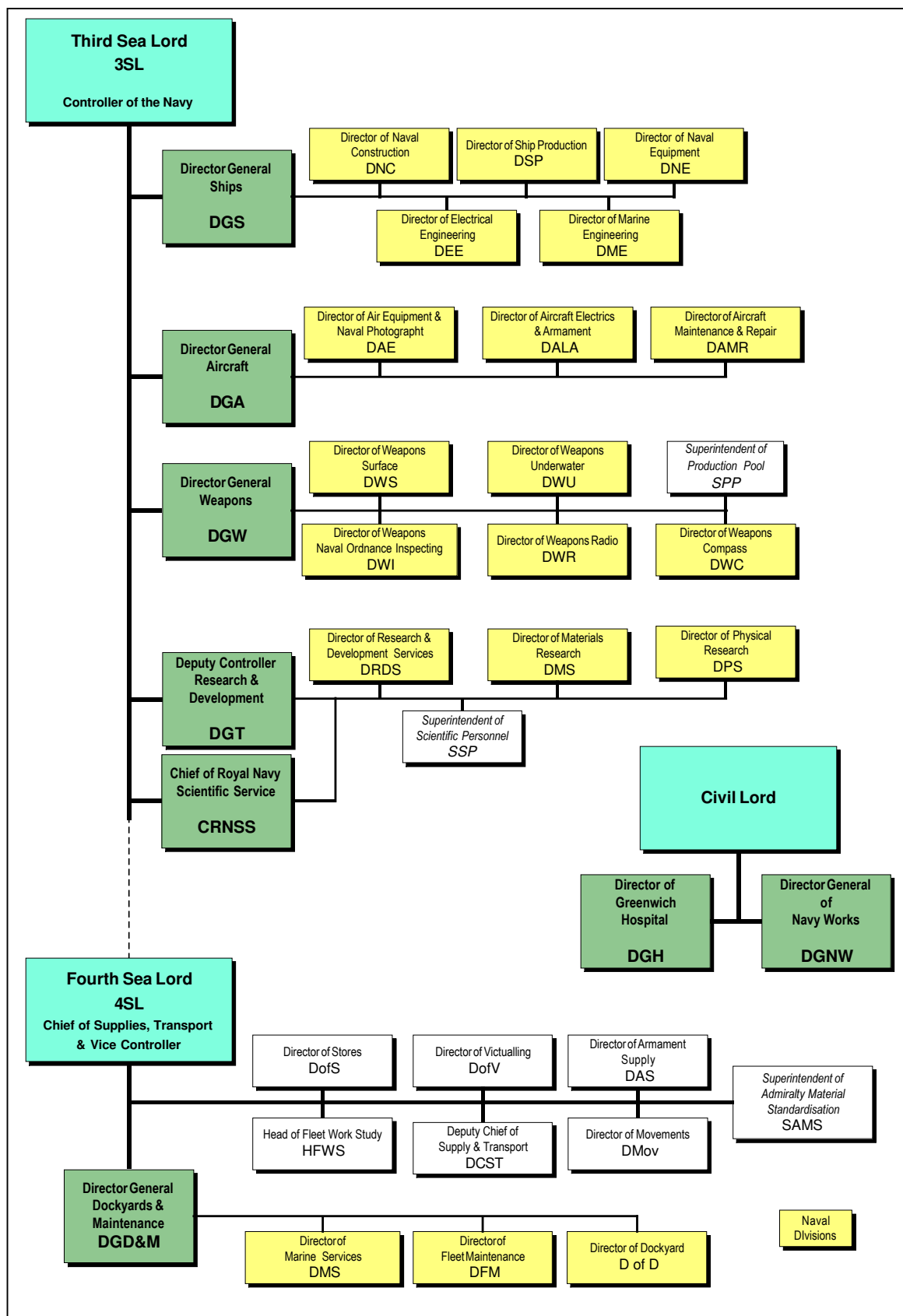


Fig. 21: The Third and Fourth Sea Lord's Organisation, c.1960

### 3.4 – The Organisation of the Navy since WWII

#### 3.4.1 – The Ministry of Defence

- a) A few years before the beginning of WWII an attempt was made to co-ordinate the activities of the three armed forces. An assistant, the Minister for the Co-ordination of Defence was created to help the Prime Minister on matters regarding the defence of the nation. In April 1940 the post was abolished, but within a month Churchill, the new Prime Minister, assumed the title of Minister of Defence. The following chart shows how the ministry integrated into the Government at the time.

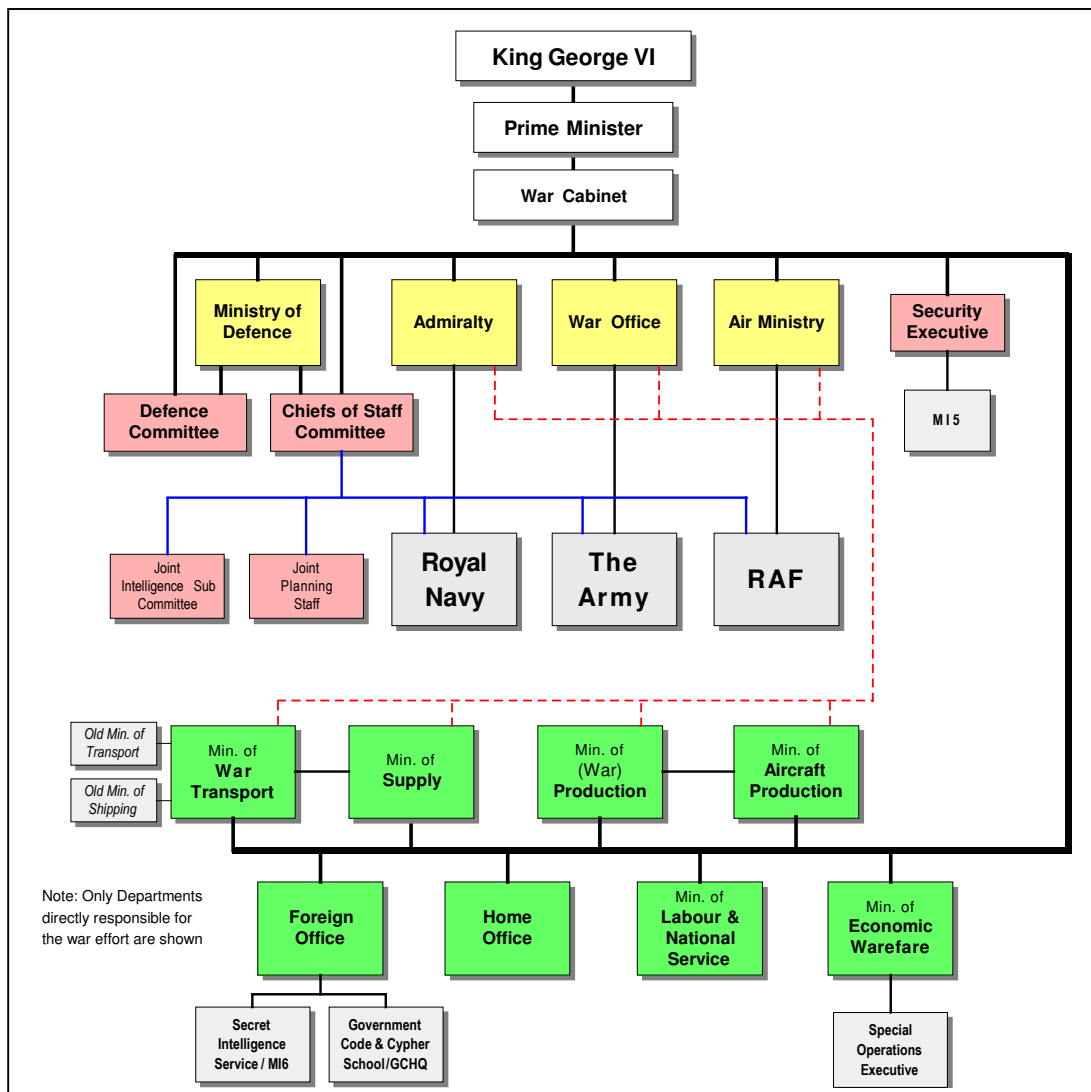


Fig. 22: Government Structure and Military High Command, c.1943

- b) The 1946 Ministry of Defence Act proposed the creation of a new ministry which, on the basis of the original idea some ten years earlier, would be directly responsible to Parliament for the interaction of the three armed services and their supply. Consequently a Minister of Defence was appointed on 21 December 1946, and the organisation itself was formally constituted the following New Years Day.
- c) In July 1958 the White Paper on Central Organisation for Defence confirmed some earlier speculation that the MoD was to have increased authority regarding matters of general defence policy which affected the size, shape, organisation, and equipment of the three forces.

- d) A further proposal in July 1963 recommended the establishment of a unified Ministry of Defence which would have complete authority and responsibility for the armed forces. It would be under the control of a single Secretary of State, rather than the three current single-service seats in the Cabinet.
- e) On 1 April 1964 the three armed forces, plus the recent MoD were combined under the Defence (Transfer of Functions) Act. The new Ministry of Defence would operate principally on a 'joint' basis, however sections of the Army, Naval, and Air Staffs with similar responsibilities would remain separate within their own departments, but would be brought together for joint committees.
- f) Typical changes within the new organisation were:
  - The General, Naval, and Air staffs of the earlier Joint Service Staff Ministry, became the new Defence Staff, and were responsible to the Chiefs of Staff Committee
  - The creation of two new scientific committees: the Defence Research Committee and the Weapons Development Committee. These were headed by the Chief Scientific Adviser
  - Intelligence matters were completely integrated between the services, under the Defence Intelligence Staff.
- g) Three years later there was a re-organisation of the Ministry which attempted to replace the current service based ideology by a functional structure. This resulted in the three single-service ministerial posts being replaced by two functional ministerial positions:
  - The Minister of Defence (Administration) was responsible for managing personnel and logistics, for the entire defence organisation. He was assisted by the Chief Adviser, Personnel and Logistics
  - The Minister of Defence (Equipment) assumed responsibility for managing research, development, production, procurement, and sales. He was assisted by the Chief Adviser (Projects), who was formerly the Chief Scientific Adviser.
- h) Two new posts were created to assist the latter in general questions of research and development, procurement and production, and sales:
 

The Head of Defence Sales                      Deputy Under-Secretary of State (Equipment).
- i) The three single-service, Second Permanent Under-Secretaries were replaced by two functional Second Permanent Under-Secretaries, They had responsibility for administration and equipment; ministerial responsibility for the single-service departments was delegated to the Parliamentary Under-Secretaries of State.
- j) The Defence Staff was formed from the existing Naval, General, Air and Joint Service Staffs, and was responsible to the Chiefs of Staff Committee rather than the Chief of Defence Staff. The appointment of Deputy Under-Secretary of State (Civilian Management), created a single civilian management organisation for all civilian staff.
- k) Other significant organisational changes took place within a few years:
 

1969 – The Directorate for Statistics, Management Services, Accounts and Contracts was created.

1970 – A major change resulted in the appointment of three single-service Parliamentary Under-Secretaries of State, appointed under one Minister of State. This was the opposite of the earlier trend to a move away from the service based administration towards a

centralised ministry. This represented an attempt to streamline the MoD, and also aimed to increase the military presence overseas irrespective of NATO.

1971 – The Procurement Executive was established. Until 1940 the three armed forces were individually responsible for sourcing and obtaining their own military hardware. The first change from this situation came in 1940 when procurement of aeroplanes was transferred from the Air Ministry to the new Ministry of Aircraft Production. In 1946 with a vastly reduced demand for aircraft, the MAP was amalgamated into the existing Ministry of Supply. Subsequent changes in 1959 and 1967 resulted in the task being transferred first to the Ministry of Aviation, then to the Ministry of Technology. Three years later the responsibility changed yet again to the Ministry of Aviation Supply. On 2 August 1971 the current Procurement Executive was formed which became responsible for the task for all three armed forces. It included all defence research, development, and production and the HQ became the Abbey Wood complex at Filton, Bristol.

1972 – The Directorate of Internal Audit was created.

1972 – The Atomic Weapons Research Establishment became the province of the Controllerate of Research and Development Establishments and Research. Civil Aviation research transferred to the Department of Trade and Industry. There would however be a new Ministerial Aerospace Board, attended by both secretaries of state to ensure communication between the two departments on related matters.

### 3.4.2 – MoD Organisation

#### 3.4.2.A Defence Ministers

- a) The Ministry of Defence was headed by the **Secretary of State for Defence**. He was responsible for the overall formulation and administration of defence policy.
- b) Three Defence Ministers supported the above:
  - The **Minister of State for the Armed Forces** had responsibility for operational and policy issues affecting the Armed Forces
  - The **Under-Secretary of State, and Minister for Defence Procurement** was responsible both for the procurement of defence equipment and for defence exports
  - The **Under-Secretary of State and Minister for Veterans' Affairs** had responsibility for environmental and regulatory issues, service and civilian personnel casework, public service matters and issues relating to veterans.
- c) These four Defence Ministers were accountable to Parliament, whose role was:
  - to approve the level of defence expenditure
  - to provide oversight through exposing, advising and holding the Government of the day to account for its decisions.

#### 3.4.2.B Principal Advisers

- a) The above Ministers had two principal advisers:
  - The **Chief of the Defence Staff** (CDS) – a military adviser who was the professional head of the Armed Forces and the principal military adviser to the Secretary of State and the Government
  - The **Permanent Under-Secretary** (PUS), who was a civilian and was also the Government's principal civilian adviser on defence matters. He had primary responsibility

for administration, policy, and finance in the department; and in addition was personally accountable to Parliament for the expenditure of all public money provided for defence purposes.

- b) They worked independently with equal status and shared responsibility for much of the department's business.

### 3.4.2.C Defence Committees

The four Defence Ministers, plus a number of senior officials were member of a number of committees involved in the management of UK defence policies and strategies. There were four civilian and six military members. The principal committees were:

- The Defence Council – chaired by the Secretary of State and provided the formal legal basis for the conduct of defence
- The Defence Management Board – was a non-ministerial committee, providing top level leadership and strategic management of defence, to maximise defence capability and the UK's contribution to international peace-keeping. In essence it was essentially a corporate board.

### 3.4.3 – MoD Headquarters Operation

- a) This was headed by the two deputies to the principal advisers described above:

Vice Chief of the Defence Staff

The 2nd Permanent Secretary.

- b) Their overall responsibilities were:

- Strategy and Leadership – to provide a strategic vision for defence and top level leadership of the British Army, Royal Navy, and Royal Air Force.
- Setting Policy – imparting long term strategic planning, defining requirements e.g. force levels, and the formulation and dissemination of departmental level policy.
- Corporate Planning and Image – the management of the ministry's planning processes, which included the development of outputs, targets and undertaking the annual planning process.
- The Setting of Targets and Allocation of Resources – including performance measurement of both criteria.

- c) Outside the Central Staff were three military Chiefs of Staff:

- Army – Chief of the General Staff
- Navy – First Sea Lord and Chief of the Naval Staff
- RAF – Chief of the Air Staff.

- d) These were members of both the Defence Council and the Defence Management Board, and were primarily responsible for the fighting effectiveness, morale and efficiency of their own service. They also however undertook high level decisions on a corporate basis with each other. One final member of the board was the **Chief Scientific Adviser**.



### 3.4.4 – The Top Level Budget System

a) Within the MoD there were eleven **Top Level Budget Holders** (TLB) who were responsible for the major functions performed by the organisation:

- Three global defence TLBs.
  - The **Defence Logistics Organisation** (DLO) provided logistical support to the armed forces. It was headed by the **Chief of Defence Logistics**
  - The **Defence Procurement Agency** (DPO) was responsible for sourcing and purchasing all major equipment for the three forces. It was headed by the **Chief of Defence Procurement**
  - The **Central TLB** was responsible for MoD HQ, plus a large number of ancillary corporate services, e.g. MoD Police and staff pay. It was headed by the earlier mentioned **Vice Chief of Defence Staff**, and the **2nd Permanent Secretary**.
- Personnel TLBs for each of the three services. They were responsible for training and recruitment and were controlled by:
  - Army – Adjutant General
  - Navy – 2nd Sea Lord / C-in-C Naval Home Command
  - RAF – C-in-C Personnel and Training Command.
- Operational TLBs for each of the three services, plus one for the Army in Northern Ireland, and a fifth for Joint Operations. Each is responsible for planning and management of military operations and the delivery of frontline military capability.
  - Army – Land Command, based in Wilton near Salisbury
  - Navy – Commander in Chief Fleet, based in Portsmouth
  - RAF – Strike Command – High Wycombe
  - Army, Northern Ireland – the General Officer Commanding it is responsible for military aid to the civil power and counter terrorist operations
  - The Chief of Joint Operations is responsible for running all military operations. It is based at the Permanent Joint Headquarters in Northwood.

b) The Permanent Under-secretary granted each of the above TLB holders with wide-ranging delegated powers over his resources of cash, land and personnel.

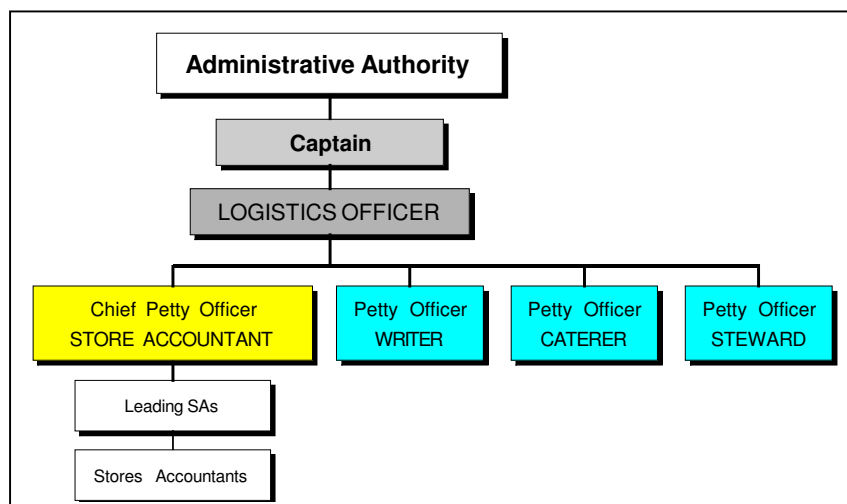


Fig. 23: A Typical Naval Logistics Organisation

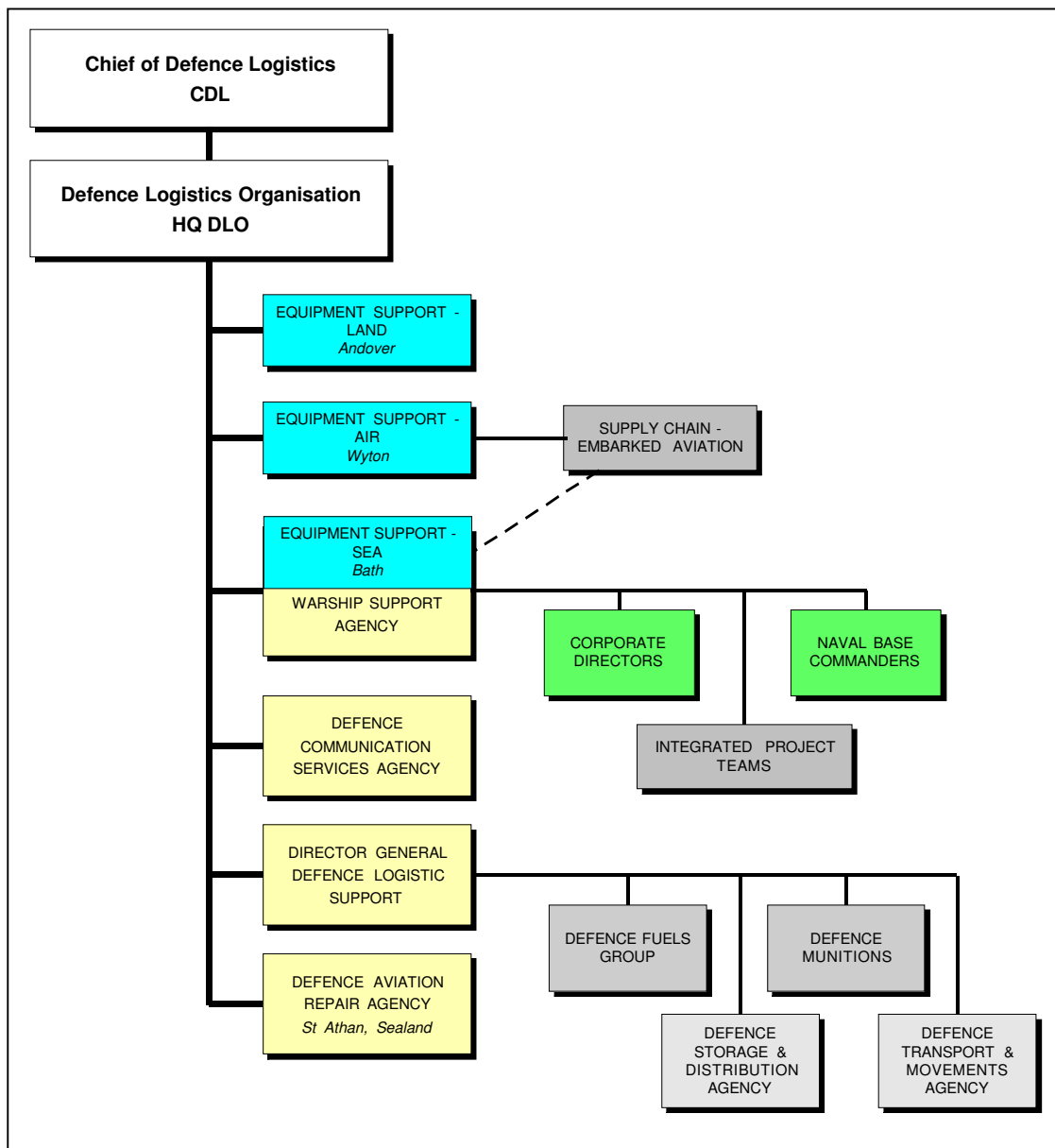


Fig. 24: The DLO and Naval Organisation, c.2000

### 3.4.5 – The Defence Logistics Organisation

During the last decade of the 20th century the joint operational activities of the Army, Navy and RAF were merged with its HQ at Northwood, Middlesex. This prompted a need to also combine the logistics functions of the three fighting forces. The DLO was formed in 2000 following recommendations from the Strategic Defence Review; it was essentially a combination of:

- The former Naval Support Command
- The Quartermaster General
- RAF Logistics Command.

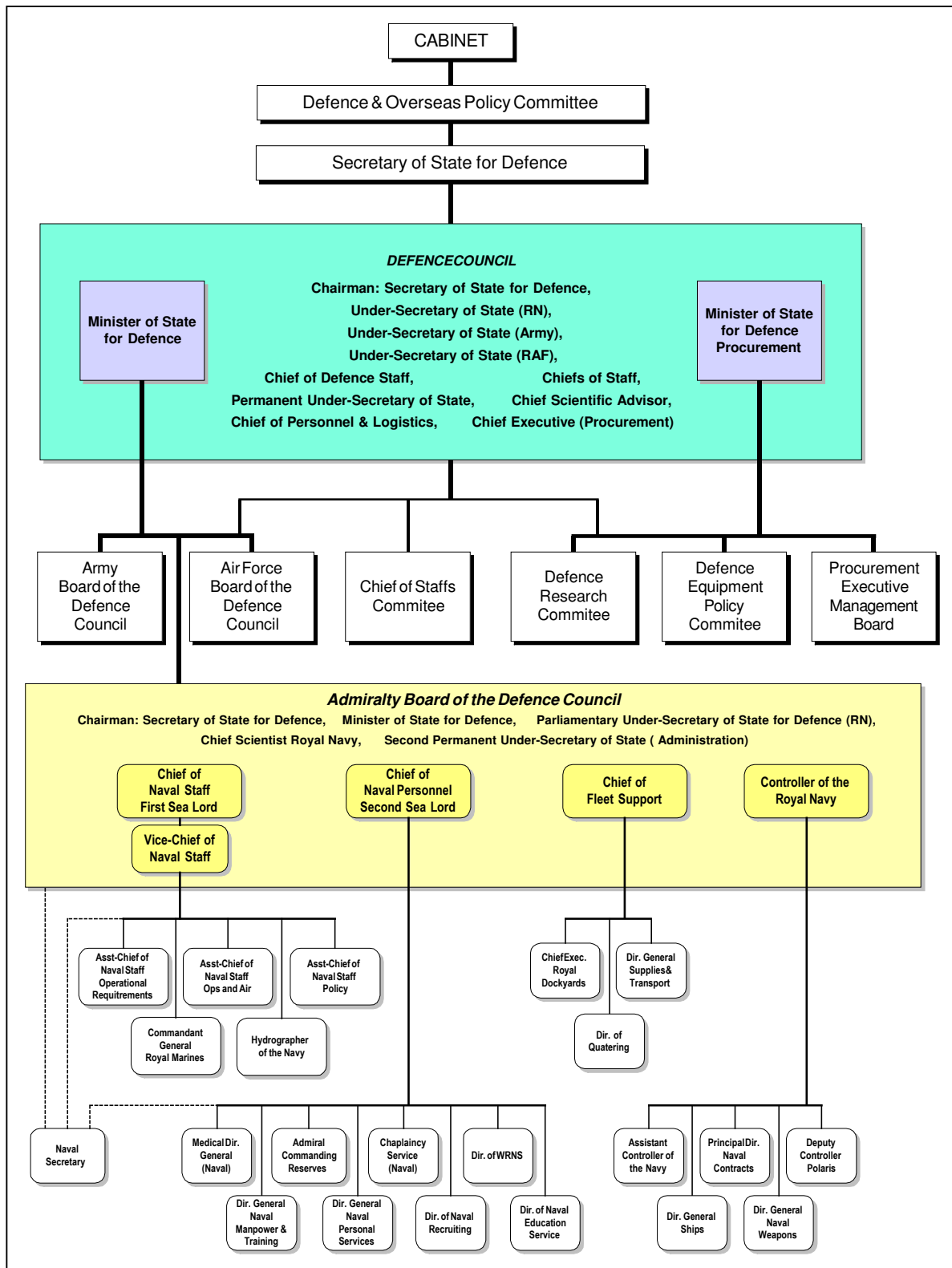


Fig. 25: Naval Administration in 1975

Source: Book of Reference 1938 (1975 edition)

### 3.5 – Naval Headquarters

- a) A requirement of any military HQ has always been that it must be close to the seat of government, and in the time of Henry VIII the Naval Board was accommodated on Tower Hill, adjacent to the Tower of London. The first purpose built constructions were close to the old Palace of Whitehall. Other buildings in the area were used from time to time; these included Derby House, Samuel Pepys's house in York Buildings, and a house in Duke Street once occupied by the infamous Judge Jeffreys. William III was responsible for moving the Admiralty Office to Wallingford House in Whitehall.
- b) At the end of the 18th century the Board moved along with several other institutions into the new Somerset House on the Strand at Aldwych. Wallingford House was demolished and rebuilt on a couple of occasions, until finally forming the nucleus of the current block of buildings, eventually into which all staff relating to the Navy Board had moved by 1870.
- c) At the northern and eastern end of Whitehall there is a small complex of buildings which was the HQ of the Admiralty through most of the 20th century, until 1964. The complex is bordered by Whitehall, The Mall and Horse Guards Parade. After 1964 the staff moved promptly into the MoD building on the opposite side of the road. Today these original building are used as Cabinet offices and function rooms.

### 3.6 – Admiralty Establishments

- a) The most prominent building was generally known as **The Admiralty**, and today appears on maps as the **Old Admiralty**. Its address is 26 Whitehall and official title is the **Ripley Building**, after its architect / builder, Thomas Ripley, a former carpenter and protégé of Sir Robert Walpole. Completed in 1726 the three-storey building contained offices and apartments for the Lords of the Admiralty, plus a board room and other state rooms. In 2006 it accommodated the Deputy Prime Minister's Office, plus a small number of civil servants.
- b) South of the Ripley Building is **Admiralty House** which, until 1964, served as the residence of the First Lord of the Admiralty, (Winston Churchill lived here for a few years before WWI). It was built in the 18th century by Samuel Pepys Cockerell, and unusually has no external entrance – access being obtained through the Ripley Building. It too is a three-storey construction in yellow brick. There are now three ministerial flats in the building.
- c) The **Admiralty Extension**, also confusingly called the **Old Admiralty**, opened in 1895 and is the largest building in the complex. It is built in red brick and white stone, and currently houses the Foreign and Commonwealth Office.
- d) Straddling the entrance to The Mall from Trafalgar Square is **Admiralty Arch**. It was completed in 1911, designed by Sir Aston Webb as part of a new processional route to Buckingham Palace for the Coronation of King George V and Queen Mary, and contains further offices, now used by the Cabinet, and three flats for use by senior government ministers. It is linked by a bridge to the Old Admiralty Building, the Ripley and Kirkland House (22 Whitehall).
- e) The **Admiralty Citadel** opened in 1942 as an hardened operations centre. It is an ugly squat structure now covered in Russian vine, with a lawn on the roof, and is described later.

### 3.6.1 – London Ancillaries

- a) Just before the beginning of WWII the following London premises were also in use. The bracketed figures represent staff levels.

Cornwall House, Waterloo Road SE1 (341)	Directorate of Naval Accounts, Hydrographic Department, Naval Construction Department
85 Whitehall SW1(23)	Naval Recruiting Department
Queen Anne's Chambers, Tothill Street SW1 (34)	Naval Reserves Office
2 Fitzmaurice Place W1 (346)	Naval Construction Department Armament Supply Department Hydrographic Department Inspector of Torpedo and Mines
2-6 Bainbridge Street WC1 (466)	Naval Construction Department Naval Store Department Victualling Department Central Copying Branch Contract and Purchase Department
58 Victoria Street SW1 (5)	Physical Training and Sports Branch
64 & 70 Victoria Street SW1(45)	Contract and Purchase Department Naval Construction Department
Vincent House, Vincent Square SW1 (4)	W/T Board
Crown House, 5 Millbank SW1 (10)	Engineer-in-Chief's Department
Union House, Lower Regent Street SW1 (52)	Naval Construction Department Engineer-in-Chief's Department Naval Law Branch
Great Westminster House, Marsham Street SW1 (487)	Directorate of Naval Accounts Expense Accounts Department Civil Engineer-in-Chief's Department Education Department
Dorland House, 18-20 Regent Street SW1 (2)	Historical Section
50 Charing Cross Road (Drummonds Bank) WC2 (7)	Paymaster Director Generals Department
Buckingham Gate SW1 (43)	Imperial Defence College
Sanctuary Buildings, Great Smith Street SW1 ?	W/T Board

- b) There were also a large number of staff in the vast Rex House at the bottom of Regent Street, plus Aerial House, Alhambra House in Charing Cross Road, and Norfolk House, St James Square.
- c) Most of these buildings were emptied in the years following WWII, but a few remained, including the Empress State Building in Lillie Road, Fulham SW6, which housed a number of MoD departments, including the Naval Historical Branch.

### 3.6.2 – Evacuation from London

- a) Four plans were considered in the late 1930s to evacuate essential staff, both governmental and military, from central London, should enemy bombing make the situation untenable. These personnel were categorised as 'A' staff, or 'B' staff. The former were those key to the day-to

day running of the war, e.g. operations and intelligence departments of the fighting forces. 'B' staff were essential to the war effort, though not on the day-to-day basis and included personnel, production, accounts and design departments. The intended destinations, many of which were 'spa' towns, were top secret at the time and referred to only by letter pairs, e.g. Cheltenham was 'KA', Droitwich was 'GJ'. The plans were:

- The North-West Suburban Plan – involved all key war departments and the Cabinet relocating to the London outskirts around Harrow and Neasden
  - The Black Move – Up to 30,000 'A' staff would transfer to the West Country, roughly between Gloucester and Bromsgrove. The Cabinet and the Royal Family would be included
  - The Yellow Move – was for 'B' staff and up to 70,000 were involved. The locations were in the Midlands and north, including North Wales
  - The Blue Move, which would have involved 7,500 very senior and key personnel relocating to Bournemouth. This was a strange location, since being on the south coast it was be very easy for enemy bombers to locate.
- b) It was anticipated that any of the moves could occur at any time, though they would be sequential, a second move only taking place on completion of the first. For a variety of reasons none of the these plans as originally defined, ever came to fruition. Enemy bombing of London was nowhere near as bad as anticipated. Many of the ministers affected felt that the evacuation and disruption of government departments under the Black Move would be very destructive of the machinery of government, and would be as serious in its consequences as intensive air attack.
- c) It was recommended that the Black Plan should be reworked, and in the event a much smaller number of war staff from all services were relocated. The Yellow Plan was also restructured, and renamed the Grey Move. In the event there would be no Yellow or Grey Move for the Admiralty, however a very large number of staff were relocated to Bath in 1939. Essential staff would transfer to Malvern as part of the Black Plan should this become necessary.

### 3.6.3 – North-West Suburb Plan

- a) If the situation in Whitehall became untenable, then the Government would initiate the North-West Suburban plan, which would result in the essential war staff moving some five miles or so to residential areas around Harrow and Hendon.
- b) Primary accommodation for the Admiralty was to be at the Dollis Hill Post Office Research Station in Brook Road, Neasden. This would provide accommodation for up to 240 staff, including:

1st Lord of the Admiralty	1st Sea Lord	Deputy Chief of Naval Staff
Parliamentary Secretary	Permanent Secretary	Secretaries for previous (16)
Plans Division (17)	Operations Division (36)	Intelligence (OIC) Division (20)
War Registry (36)	Navigation Branch (7)	M Branch (35)
W/T operators (10)	HQ Branch secretaries (8)	Typists (28).

- c) In 1940 the first Admiralty Citadel became available in Cricklewood, as part of the North-West Suburb scheme It was codenamed 'IP' which stood for 'Insurance Party'.

- d) A secure bunker would eventually be provided at Neasden, but until this became available local school accommodation would be used. The Admiralty allocation was as follows:

Table 2 – North-West London Accommodation for the Admiralty			
School	Location	Staff	Intended Occupants include:
Braincroft Junior Mixed and Infants	Warren Road, Neasden NW2	140	?
Brent Modern Senior Mixed	Sturgess avenue, Hendon NW4	140	2nd Sea Lord, Naval Air Service
Algernon Road Junior Mixed and Infants	Montagu Road, Hendon NW4	180	Assistant Chief of Naval Staff, Tactical & Staff Duties, Trade Division, Naval Air Division
The Clitterhouse JM and Infants	Clitterhouse Road, Cricklewood NW2	70	Admiral Commanding Reserves, DNA?
Childs Hill Mixed and Infants	Greenfield Gdns, Childs Hill NW2	190	Naval Intelligence
Bell Lane Mixed and Infants	Bell Lane, Hendon NW4	160	Personnel Services, PM?, Navigations
Kingsbury Senior Mixed	Edgware Road, Colindale NW9	160	4th Sea Lord, Departments of: Naval Stores, Victualling, Signals, Medical Director General
The Oliver Goldsmith Junior Mixed and Infants	Coniston Gardens, Kingsbury NW9	140	?

### 3.6.4 – Move to Bath

- a) The following departments moved from London to Bath (codenamed AA) in September 1939. A total of 3,937 personnel were involved. Those in *italics* consisted of the majority of the department, but less the senior HQ staff who remained in Whitehall:

*Armament Supply Division*

*Contract & Purchase*

Dockyard Expense Accounts

*Engineer in Chief's*

Nautical Almanac Office

Naval Equipment

Chief Inspector of Naval Ordnance

*Naval Store*

*Signals*

*Victualling*

plus 30% of the Secretaries Department.

Civil Engineer in Chief's

*Dockyard*

Electrical engineer

Exchequer & Audit

*Naval Construction*

*Naval Ordnance*

Inspector of Torpedoes & Mines

*Scientific Research & Experiment*

*Torpedo & Mine*

Whitley Council

- b) All staff were billeted in local housing, an issue which caused severe problems for the city which was simply not used to such a large influx in a short period of time. Office accommodation was in the following buildings:

Table 3 – Bath Accommodation for the Admiralty	
Empire Hotel (AA13)	Orange Grove
Grand Pump Room Hotel (AA2)	Stall Street
Pulteney Hotel (now Connaught Mansions)	Great Pulteney Street
Royal York House Hotel	York Buildings, George Street
Royal & Literary & Scientific Institution	18 Queen Street
The Holborne of Menstrie Museum	Sydney Place, Bathwick
The Pavilion	North Parade Road
Royal School for Daughters of Officers of the Army	Lansdowne Road
Technical College (AA10)	Lower Borough Walls
Domestic Science Training College	Brougham Hayes
Prior Park College	Ralph Allon's Drive
Kingswood School	Lansdowne Road
Fernley Hotel	North Parade
The Guildhall	High Street
Jubilee Hall	Broad Street
Brook Hall	Brock Street
Baptist Hall	Oldfield Park
The Pump Room	Abbey Churchyard
Victoria Art Gallery	Bridge Street
Kingswell Hall School	High Littleton
Convent School	Pulteney Road
St Christopher's School	North Road, Bathwick
Bath & County Club	21 & 22 Queens Square
Pratts Hotel	4,5,6 & 7 South Parade
Spa Hotel	Sydney Road
Francis Hotel	6-11 Queens Square
Westbourne Hotel	1,2,3 & 4 Duke Street
Lansdowne Grove Hotel	Lansdowne Road
Southbourne Hotel	9,10 & 11 South Parade, and 5 Duke St.
Regina Hotel	Russell Street
Royal Hotel	Railway Place
Cleveland Hotel	57, 58 & 59 Great Pulteney Street
Carfax Hotel	13,14 & 15 Great Pulteney Street
Bromley Hotel,	5, 6 & 7 Russell Street
Grosvenor Hotel	8/9 North Parade
Christopher Hotel	High Street



- c) On Sunday 17 September 1939 the first 500 staff left Paddington Station for ‘a secret destination’, though reputedly many had already been informed via Lord Haw-Haw’s propaganda broadcasts that ‘the Navy would be moving to Bath which had been codenamed AA’.<sup>14</sup>
- d) The following accommodation was used; in the case of the hotels, the majority of residents had been given 48 hours notice to leave:
- Naval Construction – Grand Pump Room Hotel
  - Electrical Engineers – Technical College
  - Secretaries – Empire Hotel
  - The Directorate of Dockyards – Pulteney Hotel
  - Contracts Department – Royal School for Daughters of Officers of the Army
  - Engineer in Chief – Spa Hotel.
- e) Severe overcrowding in the city led to the construction of three special sites in 1942, using the now proven Temporary Office Buildings (TOBs) which had been designed by the Ministry of Works in 1939. Fourteen TOBs were built for the Navy, capable of housing 5,600 staff of whom some 4,700 would relocate in the near future. Progress was speeded up considerably as a result of the Baedeker Raids by the Luftwaffe on the city in late April, and the first was available by late May. They were located at:
- Fox Hill: South Bath / Combe Down, (North Road / Fox Hill) – 7 TOBs
  - Warminster Road: Central Bath, (Warminster Road / Darlington Road) – 2 TOBs
  - Ensleigh: North Bath, (Lansdown Road / Granville Road) – 5 TOBs.
- f) The Department of Naval Construction was the first to move, into the newly completed site at Warminster Road, and by the end of WWII the number of staff had risen to 8,804, and the TOB sites had the following staff allocation:
- 2,606 in Fox Hill,
  - 612 in Warminster Road
  - 1,585 at Ensleigh.
- g) A small number of staff were also sent to Bristol (AJ)

Table 4 – Bristol Accommodation for the Admiralty	
Messrs. Fry & Co's Warehouse	Pithay Street
Clifton Downs Hotel	Gloucester Row, Clifton Down
25, Julian Road	Stoke Bishop
Clergy Daughters' School	Great George Street
Merchant Venturers' College	Unity Street
Guildhall	Broad Street
Bothy's Hotel	Elmdale Road
Hawthorn's Hotel	El ton Road
Bristol University	Various locations

<sup>14</sup> Brown, D K, 1983

- h) In addition 1,550 staff were relocated to Malvern, codenamed OJ. Initially Ashfield House in west Malvern was requisitioned as HQ and a number of telephone lines re-routed to the building. The occupants of Malvern School had relocated to Blenheim, which would immediately allow almost 1,100 staff to use the town.

Table 5 – Malvern Accommodation for the Admiralty	
St James School	De Walden Road
Winter Garden	Grange Road
Ellerslie School	Abbey Road
Southlea School	Albert Road
Lawnside School	Avenue Road
Malvern Girls College	Avenue Road
Malvern Boys College	College Road
Wells House School	Holy Well Road
Abbey School,	Wells Road
The School (Prep) Malvern Link	Somers Road
St Cuthbert's School	Worcester Road
Hillstone Preparatory School	Como Road
Abbey Hotel	Abbey Road
Beauchamp Hotel	Graham Road
County Hotel	Abbey Road
Grosvenor Hotel	Church Street
Malvern Hotel	Abbey Road
Mount Pleasant Hotel	Belle Vue Terrace
Royal Foley Hotel	Worcester Road
Tudor Hotel	Wells Road
Clarendon School	60 Cowleigh Road
Cleeve Court School	Cleeve Court, Hanley Road
St Richards School	Goodson Road

- i) In the spring of 1940 the decision was made to develop two sites on the outskirts of Malvern, each of which would have five TOBs. This would allow Malvern College to be released to its former occupants. The new sites were Pale Manor Farm in the north – which was later used by TRE, and St Andrews Road in the south. A total of twelve blocks were constructed on these sites, of which seven were used by the Navy.
- j) A post war survey revealed that 9,429 Admiralty staff were evacuated from central London during WWII, which (apart from the above) included 107 in Glasgow and 452 at Oxford.

#### 3.6.4.A Post War Bath

- a) Bath was originally chosen because of its good road and rail communications with London, Portsmouth, Portland, and Plymouth, plus reasonable accessibility to the Midlands and Wales.
- b) By the late 1960s the forthcoming M4 and M5 motorways offered improved accessibility to the city. More staff had moved from London, and due to local recruitment some 20% of the city then worked for the Navy in various capacities. Six sites were in use – the three TOB sites, plus

the Empire & Pulteney Hotels, and rented accommodation in Northwick House in the city centre. The Polaris team had recently moved 550 staff into Foxhill. A decision to vacate the Empire Hotel by 1967 was overturned, and the Pulteney was rented as extra office space.

- c) The Temporary Office Buildings at Ensleigh, Foxhill and Warminster Road, having stood for 25 years, were now renamed Standard Office Buildings, and were estimated to remain good until at least 1980. Unfortunately the fact that the first two sites were five miles apart on opposite sides of the city was causing severe communication problems. Ships were designed at Foxhill, weapons at Ensleigh; the staff needed to talk on regular occasions. At Foxhill itself there was a half mile walk from one end of the site to the other, which was found to discourage communication in bad weather. This caused serious concern and it was planned to replace most of the buildings with a brand new multi-storey office block on the Foxhill site.
- d) Despite a lengthy survey involving the logistics of large numbers of personnel arriving and departing from the new establishment, the project was eventually cancelled. The fact that the foundations would be on land which had been extensively under-mined for Bathstone over the centuries was almost certainly a factor.
- e) In January 1971 there were over 5,500 employees of the Navy in Bath:<sup>15</sup>

Site	Staff	HQ Occupancy (principal departments only)
Foxhill	2,785	Ship Design, Chief Engineer Dockyards, Polaris
Ensleigh	1,377	Weapon Design, Defence Contracts
Warminster Road	665	Defence Accounts
Northwick House	207	Defence Accounts
Empire Hotel	274	Defence Accounts, Supplies & Transport
Pulteney Hotel	220	Defence Accounts, Supplies & Transport

- f) In 2007 the first three sites, composed mainly of Standard Office Buildings, were still in use, though vacation of Warminster Road was expected soon.

### 3.7 – The Hydrographic Department

- a) This vital component of the Admiralty was also very closely connected with Government emergency plans for the evacuation of HQ facilities in the event of Whitehall becoming unsustainable.
- b) The production and maintenance of accurate charts of the world's oceans were fundamental to the safe and efficient operation of the Navy, and hence the position of Hydrographer to the Navy had been in existence since 1795. During the 20th century the department was under the direct control of the First Sea Lord, with an Admiral in charge.
- c) It had two principal components – the oceanographic branch and the chart branch. The latter was run by a naval officer known as Superintendent of Charts.
- d) The Department also had its own printing works, known as the Chart Factory. This was located in Oxgate Lane Cricklewood, and in 1937 work began on the construction of a new three-storey building, which included a two-level very secure basement adjacent to the site. Situated at the

<sup>15</sup> ADM1/10288

junction of Oxgate and Edgware Road, this was to become the Admiralty Citadel in the event of an evacuation from Whitehall. It formed part of the North-West Suburban Plan, which eventually produced an RAF Citadel, ('Station Z' at Wealdstone), and the Standby Cabinet War Rooms (Paddock) around the corner in Brook Road, Neasden.

- e) The Oxgate building was available from December 1939 and was referred to as '**The New Building**', or as the '**IP**' which stood for Insurance Party, referring to the fact that some senior Admiralty staff were permanently resident there in the early days. This party consisted of a naval captain and seven commanders, together with their support and secretarial staff. Residential accommodation was provided just under a mile away at Neville's Court, Dollis Hill Lane, which had been requisitioned earlier. This was a large block of attractive 'up-market' flats opposite Gladstone Park which had been built within the last five years. A recent conversion included protected rooms for the Prime Minister and the Cabinet. The Navy party occupied four standard flats, (15–17 & 54), plus a larger one (9) for the First Lord from August 1939.<sup>16</sup> More flats were then taken over, such that Admiralty staff eventually occupied all units on the second and third staircases. Although much of the block was derequisitioned in early 1941, the Admiralty retained around 16 flats until the end of the war.
- f) The two basements of Oxgate were structured so as to replicate the war basement in the Admiralty building; office accommodation for the senior staff was normally above ground. These offices also included the Parliamentary Secretary, and members of the Admiralty Board. By 1942 the hardened Citadel in Horse Guards Parade, adjacent to the Admiralty building had become available, and hence Oxgate would be used only in an emergency.
- g) At the beginning of the war three central London building were in use by the Hydrographer's Department: Admiralty Building itself, Ariel House, and Cornwall House. The work of this unit was so vital that it was evacuated from London shortly before the beginning of WWII. In times of war, charts would need to be updated on a daily basis, since newly submerged wrecks were now a frequent occurrence, as were the prolific minefields laid down by either side.
- h) The department moved to central Bath in 1941 and later occupied the new TOB at the junction of Colliers Lane and Granville Road at Ensleigh, Lansdowne on the northern side of the city.
- i) In 1943 the Charts Department was tasked with producing very accurate maps relating to the French coast – in particular the Normandy region. Existing information was revised with recent updates from reconnaissance missions, and thousands of holiday postcards were studied for useful additional material.
- j) By November 1941 almost the entire unit had been dispersed, with only 70 HQ staff remaining in London. Some 85 staff had been sent to Exeter for the Production Section; 140 were now resident in Bath, comprising the Chart Branch, the Sailing Directions Branch, the Tidal Branch and the Nautical Almanac Office. Over 500 staff had been sent to a new establishment at Creechbarrow House in Taunton. They were connected with Issues, Production, Sales, and Chronometers, and the establishment is today the United Kingdom Hydrographic Office in Admiralty Way.
- k) As insurance, the latest issues of all charts had been copied and were stored at Cornwall House in Waterloo, a somewhat surprising decision since it was situated in central London.

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<sup>16</sup> 16 was reserved for the Secretaries, and 17 for the Vice Chief of the Naval Staff. 54 was later exchanged for flat 10 for convenience.

- l) The Cricklewood building was not considered to be secure, firstly the Admiralty were in no doubt that that one 'lucky' large bomb would leave it in ruins, and secondly the area was surrounded by a number of other factories important to the war effort, plus railway goods yards and sidings, the latter being easily spotted from the air. This was in addition to the very obvious landmark of the Kingsbury Reservoir (Welsh Harp); at one time plans had been discussed regarding its possible drainage to reduce its prominence. The building was maintained as a reserve until 1943, but was non-operational by the end of 1944.
- m) Hydrographics had produced its first chart in 1801, eighteen years later it was granted permission to sell its products, and for two hundred years most of the world has relied on maps and documents produced by the department.

### 3.7.1 – The Citadel

- a) The Admiralty building contained a substantial basement which was made available for use in the event of enemy bombing of the city. It was soon realised that it was not really secure against anything other than the smallest general-purpose, or light-cased bombs, since a large section of it lay beneath the open courtyard. The Admiralty already had the above mentioned reserve Citadel, 'IP', but they were adamant that it would only be used as a last resort, since they felt that communications with the Cabinet and the other fighting forces necessitated staying in Whitehall as long as possible.
- b) The concept of a citadel was proposed by Sir Sidney Barnes, Deputy Secretary of the Admiralty on 28 October 1940, as there was no way in which the Admiralty Building itself could be hardened against aerial attack. The Citadel would be erected as a temporary construction on ground adjacent to the Admiralty's West Block. The King was informed and no objection was raised on the grounds that, *'When the war is over every effort will be made to restore the amenities of the Parks, and the fate of the structure will be decided accordingly'*.<sup>17</sup>
- c) Construction began in 1941, and the building with its nine-metre deep foundations, and six-metre thick concrete roof, became available the following year. Labour shortages, plus the discovery of an enormous high-pressure gas main which had to be moved, seriously delayed the completion date. Most unusually the project was undertaken with no input from the Office of Works – it was financed by the Admiralty and constructed by their contractors.
- d) Throughout the war it played a most vital part in naval operations. The two-level structure, one above ground, one below contained over 150 rooms and employed around 230 staff per shift. The multiple communications facilities included radio, which used the aerials on the roof of the main building, and secure landlines to communicate to shore-based WT stations.
- e) Towards the end of hostilities its future came under consideration as the original intention was that it must be demolished. Having paid for it the Navy were obviously keen for its retention. The Treasury Solicitor then stated that special legislation was necessary to regularise the position, and an Act of Parliament would be required for the retention of the structure. By 1945 it was accepted that the cost of its destruction was prohibitive. The case for keeping it was stated accordingly:
  - It cost a lot of money to build, and will require even more to remove it
  - It proved to be a most essential and worthwhile structure.

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<sup>17</sup> WORK 16/2030

- f) The current pattern of defence requirements was very unstable that in the short term it would be most advisable to leave things as is. This would therefore require the legalisation of the building, an exercise which in itself would expose the problems and probably instigate a campaign for its demolition. The Citadel stayed, and remained in use throughout the 20th century.
- g) Radio Communication had been provided via a number of W/T Stations. The principal ones were at Scarborough (Irtton Moor) in North Yorkshire, and HMS *Flowerdown* to the north of Winchester. There were a number of significantly smaller stations located at:
- |                            |                      |             |
|----------------------------|----------------------|-------------|
| Chicksands, Bedfordshire   | Cleethorpes          | Horsea      |
| Cupar (Hawklaw), Fifeshire | Pembroke             | Shetland    |
| Portrush, Northern Ireland | Sutton Valence, Kent | Whitchurch. |
- h) Facilities were shared at a number of other sites:
- |                                      |                  |
|--------------------------------------|------------------|
| GPO: Burnham / Portishead / Criggion | RAF: Greatworth. |
|--------------------------------------|------------------|
- i) In the event of serious damage to central London, the reserve at Malvern was equipped for W/T communications.
- j) In 1958 all secure and protected cross-Channel communications line terminations were either within, or beneath the Citadel. However reserve / alternative communications facilities were then catered for by a new W/T facility at Forest Moor, near Menwith Hill Harrogate, which became operational in 1960, replacing the installation at Flowerdown.

### 3.8 – Production, Inspection and Repair Areas

- a) A large amount of naval work was undertaken by contract companies spread across the UK. In order to optimise the management of this work the country was divided into a number of sub-areas or districts, each controlled by an Admiralty appointed person, who could be typically an overseer or inspector. In cases which involved ship repair, then the area would come under the jurisdiction of the appropriate local Commander-in-Chief.
- b) The geographical divisions were very different for each department, and they were reviewed on a regular basis and altered in order to cope with changes in the workload. The naming of the sub-areas was also inconsistent, for instance Electrical Engineering had a 'Scotland' region, whereas most other departments used the term 'Scottish', and confusingly Naval Ordnance had both 'Scottish', and 'North Eastern Scottish' districts.
- c) In April 1940 geographical sub-division had been applied to the following disciplines:<sup>18</sup>
- Director of Naval Contracts, Warship Production
  - Engineer in Chief – Overseers
  - Director of Electrical Engineering – Overseers
  - Director of Naval Ordnance – Inspectors
  - Director of Naval Ordnance – Gun Mounting Overseers
  - Department of the Civil Engineer in Chief, – Works Districts
  - Department of the Civil Engineer in Chief – Visiting Engineer

<sup>18</sup> CB04078 (ADM 239/292)

- Naval Store Department – Commercial Ports Sub-areas
- Dockyard Department, Yard Machinery – Overseers
- Merchant Ship Repairers – Admiralty Sub-areas
- Anti Submarine Department – Progress Officers
- Director of Contracts – Inspection and Progress Districts
- Naval Ship Repair at Commercial Ports – Local Naval Officer in Charge

### 3.8.1 – Naval Ordnance Inspection

a) Each district was under the control of an inspector who would be one of the following:

- FNOIO Fleet Naval Ordnance Inspector
- NOIO Naval Ordnance Inspection Officer
- INO Inspector of Naval Ordnance
- DINO Deputy Inspector of Naval Ordnance
- AINO Assistant Inspector of Naval Ordnance.

b) In 1940 there were 13 districts, by 1943 there were still the same number, but the allocation had changed significantly. In 1945 the number had dropped to eight, and two more districts were to disappear by 1946. This is shown in the following table which gives the Regions and HQs from 1943 to 1946:

Area	1943	1944	1945	1946
1	FNOIO Scapa	FNOIO Scapa	FNOIO Lyness	DINO Crombie
2	FNOIO Glasgow	FNOIO Invergordon	DINO Crombie	DINO Nottingham
3	NOIO Crombie	AINO Dundee	AINO Liverpool	NOIO Milford Haven
4	DINO Newcastle	NOIO Crombie	INO Bridgend	DINO Plymouth
5	FNOIO Liverpool	FNOIO Glasgow	NOIO Bath	DINO Portsmouth
6	INO Sheffield	FNOIO Liverpool	DINO Plymouth	NOIO Chatham
7	INO Birmingham	INO Sheffield	DINO Portsmouth	
8	INO Bridgend	FNOIO Grimsby	NOIO Chatham	
9	FNOIO Grimsby	INO Birmingham		
10	INO Woolwich	NOIO Milford Haven		
11	DINO Plymouth	NOIO Chatham		
12	NOIO Bath	DINO Portsmouth		
13	DINO Portsmouth	NOIO Bath		
14	NOIO Chatham	DINO Plymouth		
15	AINO Londonderry	AINO Belfast		

### 3.8.2 – Typical Geographical Districts

The diversity in dividing and naming areas and districts for four different departments is shown in the diagrams on the following page:

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| 1) Engineer in Chief's Department | 2) Electrical Engineers Department |
| 3) Naval Ordnance Inspection      | 4) Naval Ship Repair Districts.    |

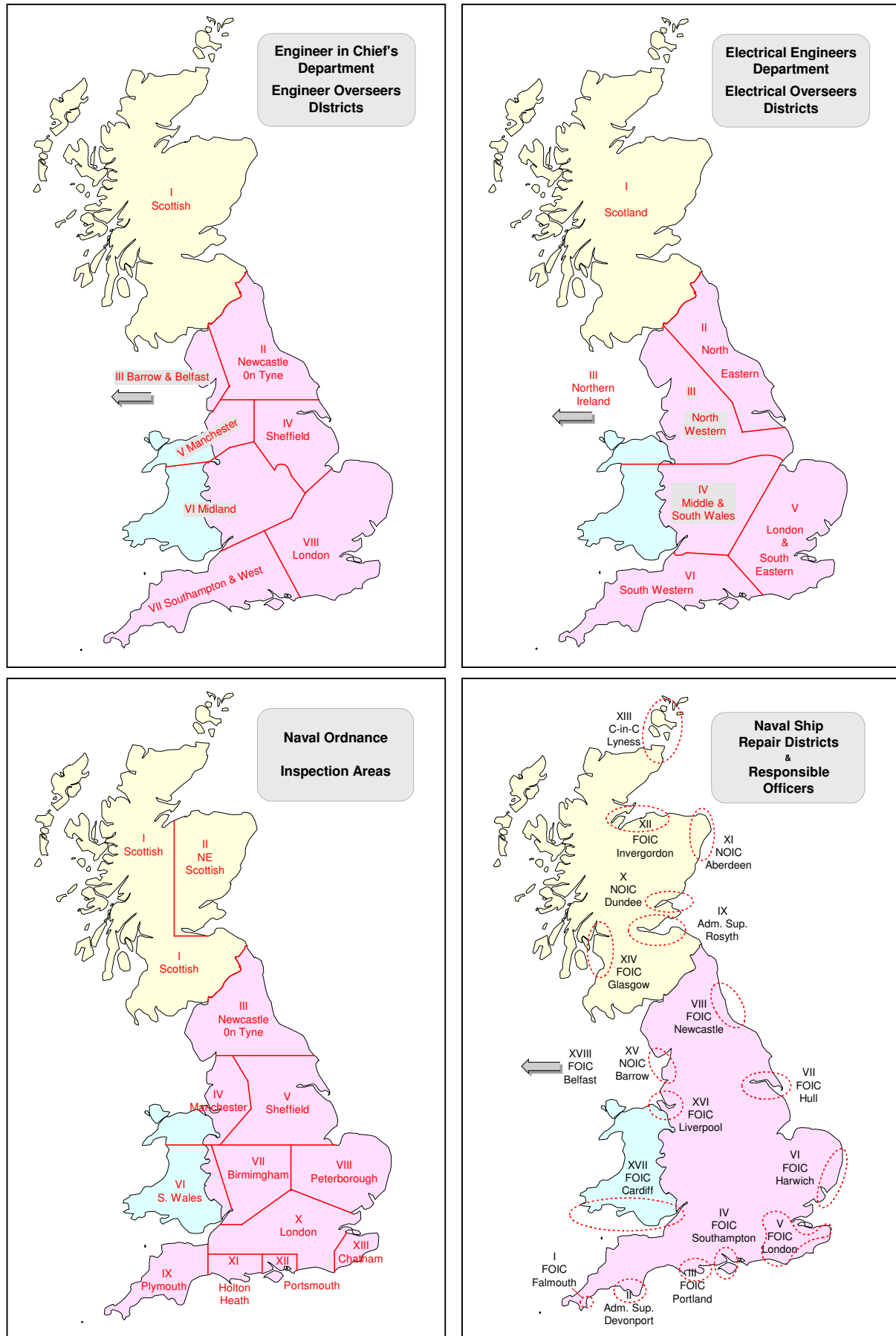


Fig. 26: Districts of Admiralty Production, Inspection and Work Areas in April 1940



### 3.9 – Departments of the Admiralty in June 1944

#### Department of the Secretary of the Admiralty

##### Divisions of Naval Staff

Naval Intelligence Division

Plans

Local Defence

Anti U Boat

Anti Submarine Warfare

Minesweeping

Trade

Economic Warfare

Operations

Combined Operations

Training and Staff Duties

Naval Air Warfare and Flying Training Division

Naval Air Organisation Division

Gunnery and Anti Aircraft Warfare Division

Signals

Hydrographic including Hydrographic Supplies, Chart Supply and Navy Met Branch

##### Second Sea Lords Office for Appointments

Office for Engineering Personnel

Principal British Naval Liaison Officer to Allied Navies

Department of the Director of Personnel Services

Department of the Director of Naval Recruiting

Department of the Director of Physical Training and Sports

Department of the Medical Director-General of the Navy

Department of the Paymaster Director General

Chaplain of the Fleet and Chaplain of the Royal Hospital Greenwich

Education Department

Office of the Admiral Commanding Reserves (Queen Anne's Mansions, St James' Park SW1)

Royal Marine Office (Queen Anne's, St James' Park SW1)

Office of the Director – Women's Royal Naval service

Office of the Senior Psychologist

Combined Operations

Naval Training Department

##### Department of the Director of Naval Construction

Admiralty Experimental Works: Haslar

Admiralty Undex works: Rosyth

Warship Production Superintendents

##### Department of the Engineer in Chief

Admiralty Engineering, West Drayton

London District: St George's House, 195 Waterloo Road SE1

Midland District: 75 New Street, Birmingham

Southampton and West of England Prudential Buildings, Above Bar, Southampton

Scotland District 14 Crown Terrace, Dowanhill, Glasgow

## Coal Inspection

North of England: Dene House, Ellison Place, Newcastle  
 Manchester and Liverpool: 70 Spring Gardens, Manchester 2  
 Sheffield and Leeds: 169 Norfolk Street, Sheffield  
 Barrow: c/o Vickers Armstrong

## Department of the Director of Electrical Engineering

Warship Electrical Superintendents  
 Admiralty Regional Electrical Engineers

## Department of the Director of Naval Ordnance

Chief Inspector Gun Mountings  
 Gun Mounting overseers and staffs

## Chief Inspector of Naval Ordnance, officers at:

Bath	Birmingham: Civic Centre, Broad Street
Caerwent	Chatham: RN Gunwharf
Oxford (Torpedoes)	Crombie: 48 Clevedon Drive, Glasgow W2
Greenock (Torpedoes)	Holton Heath

## Fleet Naval Ordnance Inspectors

London: 2 Fitzmaurice Place W1  
 Manchester: Beech Lawn, Dunham Rd, Altrincham  
 Newcastle: Vickers Armstrong, Elswick Works  
 Northern Ireland  
 Peterborough: Peter Brotherhood Ltd  
 Portsmouth: Priddy's Hard  
 Plymouth: Bull Point  
 Sheffield: Janson Street  
 Swynnerton  
 South Wales, (Bridgend, Glascoed, Milford Haven)  
 Weymouth  
 Woolwich: Middle Gate House, Royal Arsenal

## Department of the Director of Armament Supply

Liaison offices at Bridgend, Chorley, Glascoed

## Department of the Director of Torpedoes and Mining

### Net Defence Department

Superintendent of De-Magnetisation

### Department of the Director of Boom Defences

### Department of the Director of Naval Equipment

Admiral Superintendent of Contract Built Ships: Dene House, Ellison Place, Newcastle

### Combined Operations Material Department

### Salvage Department

### Scientific Research and Experiment Department

Compass Department: Ditton Park, Slough

### Department of the Director of Dockyards

## Principal Emergency Repair Overseers at:

Aberdeen	Belfast	Cardiff	Clyde
Liverpool	London	Southampton	SW England
Tyne	Nore		

Anti Submarine Materiel Department

Radio Equipment Department

Department of Miscellaneous Weapon development  
including Kite and Balloon Section

Small Vessels Pool

Department of the Director of Unexploded Bomb Disposal

Department of the Director of Wreck Dispersal

## Staff of the Fourth Sea Lord's Office

Naval Store Department

Victualling Department

Airfields and Carrier Department

Air Equipment Department

Department of the Director of Aircraft Maintenance and Repair

Press Division

Department of the Civil Engineer in Chief

Including Surveyors of Lands

## Department of the Director of Merchant Shipbuilding and Merchant Ship Repairs

West Scotland and Northern Ireland: St Enoch Hotel, Glasgow

North-East England: Central Exchange Hotel, Grey Street, Newcastle

North-West England: Royal Liver Buildings, Liverpool

East Scotland: Caledon Shipbuilding and Engineering Ltd, Dundee

Bristol Channel: Mountstuart Dry Docks, Cardiff

## Contract and Purchase Department

Technical Costings Section

Accountancy Division

Chief Industrial Adviser to the Board

Chief Adviser on Operational Research

Statistical adviser to the Fifth Sea Lord

## WRNS Headquarters

## Combined Operations HQ

Experiments and developments

Information Summaries

Operational Planning Section

Amphibious Warfare Branch

Signals

Administration

Intelligence

Joint Planning Branch

Training

Special Boats Unit

Plans Advice Section

Naval Attaches to Embassies and Legations

Royal Observatory at Greenwich

Ordnance Board

### 3.10 – The MoD and Admiralty Board in 1980

#### Ministry Of Defence

- Secretary of State for Defence
- Central Defence Staff
- Defence Intelligence Staff
- Defence Signal Staff
- Defence Personnel and Logistics Staff
- Central Defence Scientific Staff
- Department of the Permanent Under-Secretary of State

#### Admiralty Board

- Secretary of State for Defence
- Minister of State for Defence
- Parliamentary Under-Secretary of State for Defence for the Royal Navy

#### Members:

- Chief of the Naval Staff and First Sea Lord
- Chief of Naval Personnel and Second Sea Lord
- Controller of the Navy
- Chief of Fleet Support
- Vice Chief of the Naval Staff
- Chief Scientist RN
- Second Permanent Under-Secretary of State (Administration)
- Deputy Under-secretary of State (Navy)

#### Assistant Chiefs:

- Naval Staff (Policy)
- Naval Staff (Operational Requirements)
- Naval Staff (Operations)
- Fleet Support

#### Assistant Under-secretary of State:

- Naval Personnel
- Naval Staff
- Material– Naval
- Fleet Support
- Naval Secretary
- plus secretaries for above

#### Deputy Under-Secretary of State (Navy)

#### Naval Staff

- Directorate of Naval Plans
- Directorate of Naval Assistance Overseas
- Defence Operations Staff– Naval Offices
- Defence Policy Staff – Naval Offices
- Directorate of Naval Operations and Trade
- Hydrographer of the Navy

Directorate of Naval Oceanography and Meteorology  
 Directorate of Naval Operational Requirements  
 Directorate of Naval Warfare  
 Chief Naval Signals Officer  
 Directorate of Naval Air Warfare  
 Directorate of Naval Management and Organisation  
 Naval Historical Branch and Reference Library  
 Commandant General Royal Marines  
 Naval Personnel  
 Naval Secretaries Department  
 Directorate of Naval Officer Appointments

#### Naval Personal Services

Directorate of Naval Service Conditions  
 Directorate of Naval Physical Training and Sports

#### Naval Manpower and Training Department

Directorate of Naval Manpower Planning  
 Directorate of Naval Manpower Requirements  
 Directorate of Naval Manning and Training (Seaman)  
 Directorate of Naval Manning and Training (Engineering)  
 Directorate of Naval Manning and Training (Supply and Secretariat)  
 Directorate of Naval Manning and Training (Instructor)  
 Directorate of Naval Education and Training Support  
 Directorate of Naval Foreign and Commonwealth Training  
 Naval Manpower and Statistical Division

Department of the Medical Director General (Naval)  
 Women's Royal Naval Service Headquarters  
 Chaplain of the Fleet

#### Controllers Department, Controllorate of the Navy

##### Weapons Department (Naval)

Underwater Weapons Projects (Naval) Directorate  
 Surface Weapons Projects (Naval) Directorate  
 Weapons Resources and Programmes (Naval) Directorate  
 Directorate of Weapons Co-ordination and Acceptance (Naval)

##### Captain:

Surface Weapons Acceptance (Naval)  
 Naval Operations Command Systems  
 Polaris Weapons Acceptance (Naval)  
 Underwater Weapons Acceptance (Naval)  
 Weapon Trials (Naval)  
 Weapon System Tuning Group (Naval)  
 Admiralty Degaussing Service

## Navy Contracts Department

Directorate of Contracts / Ships  
 Directorate of Contracts / Supplies and Equipment  
 Directorate of Contracts / Surface Weapons  
 Directorate of Contracts / Underwater Weapons  
 Directorate of Weapons Production (Naval)  
 Naval Weapons Production Overseers  
 Polaris Weapons Department  
 Special Projects Executive  
 Naval Weapons Group  
 Directorate of Naval Ordnance Services

Naval Ordnance Service QA at Bath, with Regional QA Officers at:

Aldermaston	Beith	Bolton (Lostock)	Chorley,
Coulport	Glascoed	Glasgow	Manchester
Plymouth	Portsmouth	Sheffield	Trecwn
Woolwich			

## Ship Department

Naval Nuclear Technical Safety Panel  
 Directorate of Ship Design and Engineering  
     Sections: Constructive, Electrical, Mechanical  
 Directorate of Post Ship Design (Ships)  
     Sections: Constructive, Electrical, Mechanical  
 Submarine Project Team Directorate (Ship Element Department)  
     Sections: Constructive, Electrical, Mechanical  
 Directorate of Naval Ship Production  
     Sections: Constructive, Electrical, Mechanical  
 Directorate of Resources and Programmes (Ships)  
 Directorate of Naval Equipment  
 Directorate of Research (Ships)

## Commodore Naval Ship Acceptance

Shipyard Overseers at: Clyde, Southampton, Birkenhead, Tyne, Barrow,

## Ship Department Factory Overseeing Service at:

North: Townbury House, Blackfriars Street, Salford  
 East Midlands: Nelson House, Furnival Gate, Sheffield  
 West Midlands: City Centre House, 30 Union Street, Birmingham  
 South East: MoD Empress State Building, Fulham  
 South West: Government Building, Vassal Road, Bristol  
 East Anglia: MoD Empress State Building, Fulham  
 Scotland and Northern Ireland: 14 Crown Terrace, Dowanhill, Glasgow

## Chief Scientists Department

Naval Scientific Advisory Group  
 Department of Naval Operational Studies  
 Senior / Chief Psychologist (Naval)  
 Polaris Performance Analysis Group

## Chief Of Fleet Support's Department

Dockyard Department

Directorate of Dockyard Manpower and Productivity

Directorate of Dockyard Production and Support

Directorate of Dockyard Finance and Administration

Assistant Chief of Fleet Support

Directorate of Quartering (Navy)

Directorate of Naval Administrative Planning

Directorate of Fleet Maintenance at: a) Bath      b) Ship Maintenance Authority

Directorate General Aircraft (Naval)

Directorate of Marine Services

Directorate of Fleet Supply Duties

Naval ADP Co-ordinating Staff

Chief Polaris Executive

Royal Naval Supply and Transport Service

Armament Department

Finance Department

Fuel Movement and Victualling Departments

Naval Stores Department

RN Supply and Transition Service Establishments, and offices at:

Arrochar, RN Torpedo Range

Botley, RN Victualling Depot

Campbeltown, NATO POL Depot

Coulport, RN Armament Depot

Deptford, RN Store Depot

Exeter, RN Store Depot

Fleetlands, RN Aircraft Yard

Invergordon, HM Oil Fuel Depot

Loch Ewe, NATO POL Depot

Milford Haven, RN Armament Depot

Perth, RN Aircraft Workshops

Trecwn, RN Armament Depot

Woolston, RN Store Depot

Beith, RN Armament Depot

Broughton Moor, RN Armament Depot

Copenacre, RN Store Depot

Dean Hill, RN Armament Depot

Eaglescliffe, Spare Parts Distribution Centre

Faslane

Glen Douglas, NATO Ammunition Depot

Llangennech, RN Store Depot

Loch Striven, NATO POL Depot

Old Kilpatrick, HM Oil Fuel Depot

Portland

Slough, Admiralty Compass Observatory

Wroughton, RN Aircraft Yard

Directorate of Naval Security

Directorate of Public Relations (Naval)

Greenwich Hospital Department

Naval Regional Offices:

Northern, North East and Midland: 22 Pearson Park, Hull

London Eastern and South Eastern: MoD, Empress State Building, SW6

Wales and South Western: Washington House, Great George Street, Bristol

Midland and North Western: Townbury House, Blackfriars Street, Salford

Scotland and Northern Ireland: HMS *Scotia*, Pitreavie, Dunfermline, Fife

Ordnance Board

Naval Education Advisory Committee

Defence Signal Board

RN and RM Sports Control Board

Advisory Panel on Chaplaincy Services  
 Ships' Badges and Ships' Names Committees  
 RN Film Corporation  
 Shipping Policy Division (Sea Transport)  
 NAAFI

MoD Police HQ – Empress State Building, Lillie Road, SW6 – offices at:

Northern: Rosyth	Northern Ireland: HMS <i>Caroline</i>
Central: Stockport	Eastern: Medmenham
Western: Quedgeley, Devonport	Southern: Aldershot, Portsmouth, Chatham

Royal Corps of Naval Constructors  
 Royal Naval Auxiliary Service (RNXS)

Portsmouth Area: Portsmouth, Solent  
 Plymouth Area: Anglesey, Channel Islands, Cornwall, Mersey, Severn,  
 South Wales, Torbay  
 Medway: Dover, East Anglia, Humber, Sussex, Thames  
 Scotland and Northern Ireland Areas: Belfast, Clyde, Forth, North East Scotland, Orkneys,  
 Tees, Tyne

## **Chatham**

Captain of the Port and Queens Harbour Master's Department

General Manager HM Dockyard

Fleet Maintenance and Reserve Ships  
 General Manager Departments Production Department  
 Afloat Division  
 Structural and Outfitting Division  
 Yards Services Department  
 Engineering and Weapons Division  
 Nuclear Projects (Refitting) Department  
 Technical and Administrative Services  
 Planning Department  
 Design Division  
 Nuclear Planning  
 Personnel Department  
 Management Services and Productivity Department  
 RN Barracks (HMS *Pembroke*)  
 Finance Department  
 Nuclear Power Department  
 Quality Department Group  
 HQ Audit Department  
 Supply and Transport Department  
 CPRO and Accounts Department  
 Computer Bureau  
 RN Barracks



**Portsmouth**

Captain of the Ports Department

Swanmore

FO Portsmouth Engineering Staff

Fleet Maintenance Base

General Manager HM Dockyard

Production Department

Control / Administration Division

Ship – Group 1 Division

Ship – Group 2 Division

General Trades Division

Weapons / Machine Shop Division

Planning Department

Yard Services Department

Personnel Department

Management Services and Productivity Department

Finance Department

Quality Department

Dockyard Material Support Group

AMTE Dockyard Laboratory

Supply and Transport Department

Portsmouth RNSD, RNSD Woolston

RNAD Gosport, RNAD Dean Hill

HM Navy Victualling Depots: Botley, Royal Clarence

Medical

Chaplain

Naval Ordnance Inspecting Offices

**Devonport**

General Manager HM Dockyard

General Manager Departments Production Department

Administrative Division

Control Division

Production – Frigates Division

Production – Submarines Division

Division 4 – Weapons, Radio and Electrical

Division 5 Constructive Shops and Afloat Support – Small Craft including Survey Ships

Division 6 Mechanical Shops and Afloat Support

Planning Department

Quality Department

Yard Services Department

PSA – DoE Element

Personnel Department

Management Services and Productivity Department

Nuclear Power Department

Finance Department

Civilian Pay / Records / Accounts

Naval Baser Computer Bureau

Supply and Transport Departments:

    RNAD Bull Point, Ernesettle, Stonehouse

    RNSD Devonport, Exeter

    HM Navy Victualling Depots: Wrangaton, Royal William

HMS *Drake*

Captain of the Ports Department

Fleet Maintenance Base

Medical Department

Chart Supply Officer

## **Rosyth**

General Manager

    GMs Department's Production Department

    Constructive Division

    Mechanical Division

    Electrical and Weapons Division

    SSBN Team Planning Department

    Management Services and Productivity

    Nuclear Power Department

    Quality Department

    Yard Services Department

    Personnel Department

    Finance Department

    Civilian Pay and Records Office (Scotland), and Accounts Office, Rosyth

    Computer Bureau

    Supply and Transport Department

        RNAD Crombie & Nuclear Submarine Department Rosyth

HMS *Cochrane*

Captain of the Ports Department

Fleet Maintenance Base

Medical Department

Chart Supply Officer

## **Portland**

    RNAY Fleetlands

    RNAY Wroughton

    RNAW Perth (Almondbank)

    Accounts Department

    Teddington

    Mooring and Marine Salvage Depots at:

        Clyde, Fairlie, Portland, Plymouth, Pembroke Dock

## Controllerate of Research and Development

### Research Establishments:

Admiralty Marine Technology Establishment, Teddington  
 Admiralty Marine Technology Establishment, Holton Heath  
 Admiralty Marine Technology Establishment, Haslar  
 Admiralty Surface Weapons Establishment, Portsdown, Portsmouth  
 Admiralty Underwater Weapons Establishment, Portland  
 Aeroplane and Armament Experimental Establishment, Boscombe Down  
 Chemical Defence Establishment, Porton Down  
 Military Vehicles and Engineering Establishment, Chobham Lane, Chertsey  
 National Gas Turbine Establishment, Pyestock, Farnborough  
 Propellant, Explosives And Rocket Motor Establishment, Westcott and Waltham Abbey  
 Royal Aircraft Establishment, Farnborough and Thurleigh  
 Royal Armament Research and Development Establishment, Halstead, Sevenoaks  
 Royal Signals and Radar Establishment, Baldock and Malvern  
 Atomic Weapons Research Establishment, Aldermaston  
 National Gas Turbines Establishment, West Drayton, Cobham, and Portland  
 Admiralty Marine Technology Establishment, Queens Road, Teddington  
 Fort Road, Alverstoke  
 St Leonards Hill, Dunfermline  
 Dockyard Laboratory, Portsmouth  
 Experimental Diving Unit, HMS *Vernon*, Portsmouth  
 Glen Fruin, Helensburgh  
 Hydrodynamics and Auxiliary Machine Division, Haslar  
 Materials Department, Holton Heath  
 Loch Goil, Douglas Pier  
 Naval Aircraft Materials Laboratory, Fleetlands  
 RN Nuclear Propulsion Test and Training Establishment, Dounreay  
 Admiralty Underwater Weapons Establishment, Portland  
 Admiralty Surface Weapons Establishment, Portsdown  
 and Compass Observatory

Royal Signals and Radar Establishment, Malvern

### Medical Establishments

Institute of Naval Medicine, Alverstoke	
Royal Naval Hospital, Haslar	Royal William Yard, Plymouth
RN Hospital, Plymouth	RN Medical Staff School, Haslar
RNAS Culdrose	RM Depot, Deal
HMS <i>Neptune</i>	HMS <i>Cochrane</i>
HMS <i>Heron</i> , RNAS Yeovilton	HMS <i>Dauntless</i>
WRNS Burghfield	RNSQ HMS <i>Pembroke</i> , Chatham
HMS <i>Mercury</i> , Leydene WRNS	HMS <i>Nelson</i> , RN Portsmouth
HMS <i>Drake</i> , Devonport	WRNS Quarters, Furse House, SW7

Admiralty Medical Board, MoD Empress State Building, SW6

## Educational Establishments

RNC Greenwich, and RN Staff College

Royal College of Defence Studies, Seaford House, 37 Belgrave Square SW1

National Defence College, Latimer, Chesham

Britannia Royal Naval College, Dartmouth

Defence ADP Training Centre: Blandford

## Part 4 – Naval Establishments

### 4.1 – The Dockyards

#### 4.1.1 – Overview

- a) The Royal Dockyards were established to build and maintain ships for the Navy. They required a number of ancillary establishments which included ordnance stores, victualling yards and eventually medical facilities. Prior to the 18th century warships would rarely venture out to sea during the winter months, hence storage accommodation was needed for both the vessels and elements of the crew, though most of the latter were usually paid off.
- b) During the 17th and 18th centuries the Royal Navy possessed six dockyards in England, four sited just south of the Thames – Deptford, Woolwich, Chatham and Sheerness, plus two on the south coast – Portsmouth and Plymouth. The Tudor monarchs were responsible for the earliest establishments, the rest would develop over the next 400 years.
- c) Portsmouth was the first, but then several more were constructed in the Medway, principally for the protection of London; additionally they were close to the main armoury at that time, i.e. the Tower of London. Woolwich was established in 1512, followed a year later by Deptford; Chatham came in 1570, and Sheerness in 1665. Two smaller yards appeared briefly during this period – Erith, which was available for just seven years from 1514, and Harwich in 1653, which was also short lived.
- d) By the late 17th century these yards were becoming less effective – mainly due to the increase in size of warships which created navigational problems in the tidal Medway area; newly equipped ships could often wait for weeks before being able to put to sea. In addition perceived threats now were not only from the Dutch, but France had become a significant factor. Consequently the Medway ports went into a slow decline, whilst significant expansion took place at Portsmouth, and major development began at Plymouth.
- e) Changing requirements in the 19th century meant the construction of facilities well away from the tradition ports. In Southern Ireland a dockyard was established on Haulbowline Island in Cork Harbour, which provided additional facilities for ships operating in the western approaches. This site was eventually handed over to the new Irish government after WWI. By then end of the first decade of the 20th century Germany had become a major threat and consequently substantial expansion took place in Scotland, well away from the south coast, with the development of Rosyth.
- f) A post WWII lull ended with the arrival of the nuclear age and in the sixties facilities were established at Chatham, Devonport and Rosyth. By 1980 the trend reversed with the closure of Chatham in 1984, and the relegation to a fleet repair base. Devonport and Rosyth, continued as the principal yards however they began to function as independent establishments, operating competitively, now being no longer directly responsible to the Admiralty.
- g) Today a Royal Dockyard forms a major part of a naval base which is under the supervision of a Port Admiral, while an HM Dockyard is under the control of a General Manager and he reports to the Chief Executive Royal Dockyards.

#### 4.1.2 – Administration

- a) Until 1832 all the naval dockyards were under the control of the Navy Board, storage depots and victualling yards were administered by the Victualling Board, and it in turn to the Navy Board and the Admiralty.
- b) The gunwharves, however, belonged to the Ordnance Board. This was an entirely independent body responsible solely to the Master-General of Ordnance and the Monarch; it was also responsible for supplies to the army. In 1855 the Ordnance Board was abolished and control of naval ordnance passed to the War Office. This state continued until 1909 when the Admiralty regained control.

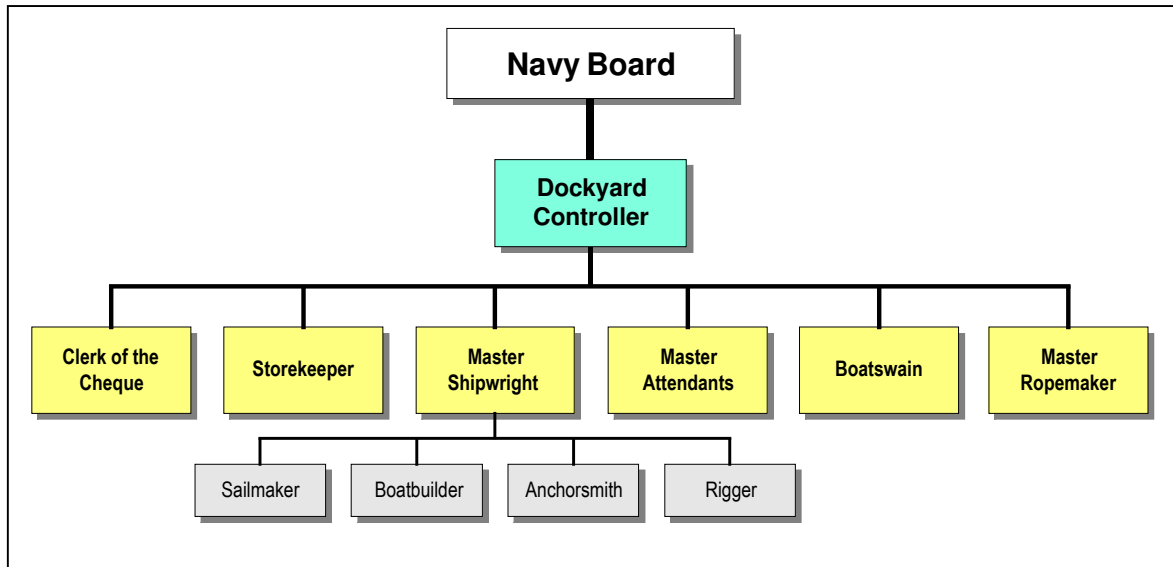


Fig. 27: Dockyard Organisation until 1832

- c) In their early history the dockyards were entirely run by naval officers who were civilian employees of the Navy Board. The latter appointed a Commissioner, usually a retired sea officer, to run the yard, via a number of senior personnel, known as Inferior Officers.
- d) Victualling yards were also under the control of an Agent Victualler, with a Clerk of the Cheque, and either a Storekeeper, or a Naval Officer.
- e) After 1832 all the facilities within each port came under the control of a single authority, with two exceptions – the gunwharves and the victualling yards. At the head was the Superintendent, certainly an admiral in the case of the large yards, or possibly a captain for smaller depots. The titles of the senior personnel changed many times, often caused by changes in technology, such as the advent of first steam propulsion, and then oil fired vessels. These personnel were either civilians or sea-officers.

#### 4.1.3 – Dockyard Organisation

- a) Twentieth century dockyards and associated support establishments would be administered by an Admiral, Commodore or Captain Superintendent who was also the second in command of the port. Though the dockyard comes under the overall authority of the appropriate Commander-in-Chief, the latter would not normally interfere with the management of the establishment.

- b) The Superintendent of the Dockyard was responsible to the Director General of Dockyards and Maintenance at the Admiralty regarding matters of production work, and also to the C-in-C for the general administration of the base. Normally the Deputy Superintendent would be the Captain of the Dockyard, and the Queen's Harbour Master.
- c) Organisation and Areas of Responsibility:
- Captain of the Dockyard (CD) – Berthing, pilotage, riggers and sailmakers, tugs and other harbourcraft – including floating cranes
  - Manager, Constructive Department (MCD) – Hull and miscellaneous fittings, docking and undocking, shipwrights, ship fitters, coppersmiths, plumbers, joiners, blacksmiths, painters
  - Manager, Engineering Department (MED) – Machinery, boilers, gun and torpedo mounts, shore based cranes, engine fitters, coppersmiths, boilermakers, gun mounting fitters
  - Manager, Navy Works (MNW) – Dockyard Buildings, dredging, works and repairs to naval establishments, railways
  - Electrical Engineer Manager (EEM) – Electrical and radio equipment, power supplies, telephones, electricians
  - Superintending Naval Store Officer (SNSO) – Naval and air stores, mechanical transport, fuel
  - Superintending Armament Supply Officer (SASO) – Ammunition, armament stores, ordnance repairs
  - Superintending Victualling Store Officer (SVSO) – Victualling stores, fresh water
  - Naval Ordnance Inspecting Officer (NOIO)
  - Expense Accounts Officer (EAO) – Time and pay records of dockyards personnel, costings for dockyard work
  - Secretary to the Superintendent
  - Cashier – Pay of dockyard employees, representative of Accounting Officer for Navy votes
  - Superintendent of Police – Security, fire-fighting
  - Senior Medical Officer
  - Chaplain Dockyard – Church
  - Principal, Dockyard Technical College – School for apprentices.

## **4.2 – Dockyard Establishments**

### **4.2.1 – Deptford Dockyard**

- a) Founded in 1513, this was the principal dockyard for over a century, but it then became less useful, due to the silting of the Thames. By the 18th century its use was restricted to shipbuilding and the distribution of stores. Well suited for the latter task due its proximity to London and its commercial markets, it also was frequently visited by the Navy Board as much experimental work was performed at the site.
- b) Its relatively small size, and location resulted in the gradual shutdown of the yard from around 1820, leading to its eventual closure in 1869. Today the site is restricted, however a covered slipway and the Master Shipwright's house may be seen.

#### 4.2.2 – Woolwich Dockyard

- a) This was the first of the Thames / Medway yards and was founded in 1512. During the following century two important developments took place; by 1610 a large ropery was in operation, and the Royal Laboratory opened in 1696, becoming Woolwich Arsenal in 1805.
- b) Along with Deptford it was particularly important during the 16th and 17th centuries, but having the same problems it went into gradual decline. By 1800 it was restricted to shipbuilding, fitting vessels built at either at Deptford or merchant yards, and refitting small ships from the Nore. The introduction of steam ships resulted in the construction of a pair of steam yards, the first opening in 1831 and the second twelve years later. The ropery closed in 1835, followed by one of the steamyards in 1859, and the entire site by 1860. Major redevelopment of the area has since taken place, however the Admiral Superintendent's house and a pair of 19th century dry docks are still extant.

#### 4.2.3 – Chatham Dockyard

- a) This establishment became important in the Dutch wars, owing to its strategic position on the Medway. Starting life as the Gillingham Dockyard, it opened as a Royal Dockyard for Elizabeth I in 1567; by the late 17th century it was not only the Navy's largest dockyard, but the most important, with the overwhelming majority of warships being laid up and repaired during the winter months. It was superseded first by Portsmouth, then Plymouth when the main naval enemy became France, and the Western Approaches consequently became the chief theatre of operations. In addition, the Medway had silted, navigation was more difficult, and Chatham became a building yard rather than refitting base.
- b) In the 1860s the yard had a large building programme involving some 380 acres and St Mary's basin was constructed for the steam Navy. A large number of factories and workshops were also erected. It eventually possessed three enclosed basins and four dry docks. With the closure of the yards at Deptford and Woolwich in 1869, Chatham again became relatively important, launching a number of submarines around the time of WWI, and remained so until 1983 when, as a result of the 1981 Defence Review, it shut down.
- c) Today the site is the Chatham Historic Dockyard Trust, and includes many 18th century artefacts, including the resident commissioner's house, a ropery, mast house, sail house, hemp store, plus the largest naval storehouse in the UK. There are five covered slips, the earliest of wooden construction, the rest being cast iron.

#### 4.2.4 – Sheerness Dockyard

- a) This establishment, opening in 1665, was constructed principally for storing and refitting ships. It was situated at the mouth of the River Medway, and by 1720, a second dry dock had been added at the site. It then developed into a ship construction yard, primarily for fourth and fifth rate ships, chiefly in peacetime, however it also supported some of the work from Chatham. Within easy reach of the North Sea it later saw importance as a service base for warships anchored nearby in the Thames, or moored in the Medway. Between 1815 and 1826 it was completely rebuilt and in 1854 a steam yard was established.
- b) It closed between 1957 and 1960, and became a container port. Several of the original buildings remain including storehouses and with an impressive iron-framed boathouse built in 1859. Unfortunately the huge Quadrangle Storehouse from 1823 was demolished in the 1970s.



#### 4.2.5 – Portsmouth Dockyard

- a) Established around 1495, this was the very first dockyard, and was used throughout Henry VIII's reign. It incorporated a somewhat expensive dry dock allowing warships to be efficiently cleaned and repaired, and was the first major shore based item actually owned by the Navy. Over the next 150 years it decayed somewhat, until the Civil War when it came back into use with the addition of new buildings, and the appointment of permanent officers. The yard improvements continued during the Dutch wars, and at specific periods up until 1723. Having doubled in size it was now the most important dockyard in England. The adjacent harbour was among the safest in England, and could be used for the laying-up of warships in peace-time. The Spithead anchorage served as an assembly point for convoys during times of war.
- b) In the late 19th century more expansion took place, including two locks, three docks, and four basins until it occupied over three times its original size. Perhaps the most significant addition was the Steam Basin, built between 1843 and 1848 – it is now the Frigate Refit Complex. The site continued to expand throughout the 20th century.
- c) Many of the original 18th century buildings remain: there are three storehouses (1764–84), and a porters' lodge c.1708. The church, commissioner's house and Naval Academy may be viewed with permission.

#### 4.2.6 – Plymouth Dockyard

- a) Founded in 1690, and sited on the Hamoaze, overlooking Cornwall, it was often known as Plymouth Yard, or Plymouth Dock, until in 1825, the term Devonport dockyard came into regular use. The Great Storehouse was built in 1692 and massive ropeyards were added between 1763 and 1771. The Western Squadron was maintained here during hostilities in the 18th century; in peacetime it built and repaired ships. Serving as the principal port for Atlantic shipping, it also acted as a maintenance base for the Channel Fleet.
- b) Further development took place in the 18th century, making the base the second largest in England, but the period of greatest expansion came with the construction of the two enclosed basins of the Keyham Steam yard, in the mid 19th century, to the north of the existing base yard. The old dockyard then became the South Yard. It was later significantly extended around the turn of the century.

#### 4.2.7 – Harwich Dockyard

Throughout the 18th century the yard was especially important during the Dutch wars, serving as a small refitting and storing base until closure in 1829. During the 20th century it served as wartime base for coastal forces.

#### 4.2.8 – Pembroke Dockyard

- a) The Navy had maintained a small building yard at Milford Haven since 1800. A new site was required in the UK after a period of rapid expansion at the turn of the century following the French Revolutionary and Napoleonic Wars. Work started at a site called Paterchurch, five miles up the Haven near Pembroke, which became available from 1815; equipment and personnel was then transferred from the old yard. Unlike the other yards, Pembroke specialised entirely in the building of new warships and possessed no maintenance or repair facilities.
- b) Pembroke yard closed in 1926, however the Navy retained a small part of the facility for storing the Haven's anti-submarine boom defences. As tensions mounted in Europe, two

Admiralty Oil Fuel Depots were built at Pembroke Dock, followed by the Royal Naval Armament Depot at Newton Noyes, near Milford Haven. Throughout WWII the Haven was used principally as an RAF flying boat station, though the Navy reactivated a corner of their yard as a maintenance base, since a number of escort vessels used the waters as anchorages. The naval dockyard elements remaining at Pembroke were gone by 1947.

#### 4.2.9 – Rosyth Dockyard

This base opened two years into WWI after a seven year construction programme, and soon became host to the massed warships of the Grand Fleet. Sited on the northern shore of the Firth of Forth, it played an important role in the repair of warships damaged in WWI, in particular during, and after the Battle of Jutland. Economic issues however forced it into care and maintenance by 1926, until the prospect of another war with Germany resulted in a period of massive re-development around 1938. Post World War II the dockyard and naval base were developed as a refitting centre for conventional and Polaris submarines, plus frigates, minesweepers, and fisheries protection vessels. In 1996 the base became the first dockyard to become privatised.

### 4.3 – Other Major Naval Bases

#### 4.3.1 – HMNB Clyde

- a) During WWII a military port was constructed at Faslane on Gare Loch by the army. In the sixties, following negotiation with the USA the site was selected to become a base for submarines equipped with the Polaris nuclear missiles. It was known as Faslane Naval Base, and in August 1967 it was commissioned as HMS *Neptune*. A Royal Naval Ammunition Depot was constructed at Coulport some eight miles away; this would store, maintain and issue both nuclear and conventional weapons for the submarines. The complex became Her Majesty's Naval Base Clyde, and was the home of the UK's nuclear deterrent. This involved the four submarines: *Renown*, *Repulse*, *Resolution*, and *Revenge*. One, or occasionally two of these, was always on patrol at any time.
- b) It then became the HQ of the Royal Navy in Scotland, under the command of Naval Base Commander Clyde (NBC). Also resident was the Flag Officer Scotland, Northern England and Northern Ireland (FOSNNI).
- c) At the end of the 20th century it employed some 7,000 personnel, of which 4,000 were civilians. It was the home of the four Vanguard class nuclear powered and nuclear armed submarines *Vanguard*, *Vengeance*, *Victorious*, and *Vigilant*.

#### 4.3.2 – Cromarty / Invergordon

- a) Naval ships began to use the Cromarty Firth from 1848; the Channel Fleet first arrived in August 1863, and returned on a regular basis on many occasions into the early 20th century. Being large, deep, sheltered and easily defended, it had been described as, 'the best natural harbour in Europe'.
- b) In 1912 First Sea Lord Winston Churchill proposed a series of plans to create a fortified naval base in the Firth. The natural anchorage had a narrow entrance, either side of which were two red sandstone hills, the North and South Sutors. This entrance was to be defended by three 9.2in naval guns, a submarine boom, a torpedo boat squadron and a mine laying station. Unusually all of these were to be manned by the Royal Marines, rather than the army. The

fortifications were inspected by the Churchill in 1914, during the construction of the giant underground oil tanks.

- c) Cromarty continued to be used after WWI and in 1931 was the location of the Invergordon Mutiny when Ramsay MacDonald's National Government cut naval pay by 75%. The entire complement of the Atlantic Fleet went on strike, resulting in a period of passive resistance when no ships were permitted to sail. Within two years, and following direct intervention by King George V, the situation had just about returned to normal, and in 1933 the largest fleet ever seen in the Firth arrived with some 20,000 men and this then became a common occurrence until WWII.
- d) Expansion throughout the area took place in the late 1930s with new RAF airfields and seaplane stations at Evanton, Tain, Fearn, and Ainess. Some of these were eventually transferred to the Admiralty.
- e) The Royal Hotel in Cromarty was commandeered by the Navy in 1939, who manned the examination vessels inspecting neutral shipping in the Moray Firth. The hotel was also responsible for the control of all alcohol in the area. The small town lies on the south bank of the Firth at its entrance, however most of the facilities used by the Navy were located in Invergordon, five miles inland and on the north coast. The anchorage ceased to be used by the Navy in 1956.

#### 4.3.3 – Scapa Flow

- a) In 1812 Scapa Flow in the Orkneys was suggested as a temporary rendezvous of the Royal Navy. In the same year the United States had declared war against Britain, and this resulted in the construction of coastal defences to be built around the waters.
- b) In 1905 the Admiralty again showed interest in Scapa as a base for the Home Fleet. The Navy held exercises in most years, often involving up to 100 ships: these could be accommodated in the natural harbour, which offered excellent anchoring conditions. By 1909 a fleet of 82 ships under the command of Admiral Sir William May had assembled in the anchorage. When possible, victualling was performed from the local area, resulting in an increase in population within the islands of well over 50%. Just before the start of the war the Grand Fleet put to sea and dispersed to Scapa – a total of 96 ships, plus a flotilla of 18 were based here in August 1914. Its intention was to prevent the German High Seas Fleet, based in Baltic ports, from entering the Atlantic. The Northern Patrol covered the sea area between Iceland and Norway, and intercepted some 15,000 ships during WWI. This successful blockade was carried out by the 10th Cruiser squadron, a large proportion of which were armed merchant vessels.
- c) The base was brought into operation again in 1939, but within a month witnessed the impossible. The anchorage was believed to be submarine proof, however the U-47 entered the bay and torpedoed and sank the battleship HMS *Royal Oak*.
- d) The Prime Minister visited the base shortly afterwards and initiated building of the 'Churchill Barriers' – causeways linking together the five eastern islands of the group thus ensuring that Scapa Flow would in future be wholly secure. The barriers were only completed in May 1945, and remain in use as causeways today. The majority of shore establishments used during the conflicts were constructed at Lyness, including a barrage balloon centre, and a vast underground fuel dump. During the conflict sections of the camp became HMS *Proserpine*, which was later absorbed by HMS *Pomona*, the boom defence depot.

- e) Scapa ceased to be used as a main base by the Navy in 1956, however it was occasionally used over the next few decades by international navies, for a variety of purposes including NATO exercises and courtesy visits. In 1974 an oil terminal was built on Flotta, and two years later, the first of many of some of the world's largest oil carriers began to use great harbour.

#### 4.4 – Ports and Harbours

In 1939 with the potential for a German invasion of the UK, defence facilities were ensured at a large number of smaller ports and harbours, as well as those mentioned above.

Table 6 – Ports and Harbours with Naval Presence, 1939		
Authority	Area	Port or Harbour
Commander-in-Chief	All	Home Forces, Nore, Portsmouth, Rosyth, Western Approaches
Flag Officer	All	Dover, Orkneys and Shetland
Flag Officer, or Naval Officer-in-Charge	Home Forces Command	Chatham, Port Edgar, Portsmouth, Plymouth, Rosyth, Sheerness
	Scottish	Dundee, Greenock, Invergordon, Kirkwall, Lochalsh, Methil, Oban
	Northern	Blyth, Humber
	Eastern	Harwich
	South Eastern	Dover, Newhaven
	Southern	Dartmouth, Falmouth, Portland, Weymouth
	Western	Milford Haven
	Northern Ireland	Belfast, Larne, Londonderry
Ports having no Flag Officer	Scottish	Aberdeen, Ardrrossan, Campbeltown, Leith / Granton, Lerwick, Peterhead, Stornoway, Stranraer, Thurso
	Northern	Hartlepool, Middlesbrough, Sunderland, Tyne
	Eastern	Lowestoft, Yarmouth
	South Eastern	Ramsgate
	Southern	Avonmouth, Portishead, Southampton
	Western	Barrow, Barry, Cardiff, Holyhead, Newport, Penarth, Swansea
Other ports with naval presence	Scottish	Arbroath, Ayr, Buckie, Burnt Island, Fraserburgh, Inverness, Irvine, Macduff, Montrose, Rothesay, Tobermory, Troon, Wick
	Northern	Boston, Bridlington, Mablethorpe, Seaham, Scarborough, Skegness, Whitby
	Eastern	Brightlingsea, Hole Haven, Ipswich, King's Lynn, Thames Haven, Tilbury
	South Eastern	Folkestone, Gravesend, Jetty Cliffe Creek, Littlehampton, Margate, Rye, Shoreham
	Southern	Appledore, Barnstaple, Bideford, Brixham, Charlestown, Exmouth, Fowey, Hayle, Ilfracombe, Looe, Mevagissey, Newquay, Padstow, Poole, Porthleven, Teignmouth, Torquay
	Western	Aberystwyth, Caernarfon, Douglas IoM, Fishguard, Fleetwood, Heysham, Llanelli, Porthmadog, Preston, Silloth, Whitehaven, Workington

## 4.5 – Naval Hospitals

- a) By the middle of the 18th century seamen were spending considerably longer times at sea than at any time in the past. Inadequate diets and tropical diseases meant that large numbers were eventually returning to ports in England in very poor condition. All large warships carried a surgeon who could administer emergency treatment, but there was now an urgent need for nursing facilities ashore. Temporary hospital facilities were available in, or close to the ports, as an example the Fortune Hospital, near Portsmouth had capacity for 700 patients in 1713.
- b) An Admiralty commission of 1702 recommended the construction of naval hospitals, and several were established outside the UK in the early 18th century. Forty years later the Commissioners for Sick and Wounded sent a memo to the Admiralty which resulted in the proposal for two 750 bed hospitals to be constructed at Queenborough, near Sheerness, and Plymouth; a third 1,500 bed building would be located at Gosport to serve Portsmouth.
- c) The proposals were not implemented, and three years later the Earl of Sandwich, Lord Commissioner of the Admiralty revised the intention. The following year, in 1745, construction began on Haslar hospital at Gosport. It was sited such that it had easy access to disembarking ships via its own jetty, but was also well away from the nearest community, which would help contain infectious disease, and deter infectious patients who might try to desert. The 1,500 patient building was completed in 1761, and by 1779 had been extended to cater for well over 2,000.
- d) Construction also began in 1758 on a second hospital at Stonehouse in Plymouth in: designed initially for 600 it was soon extended for 960, and by the end of the century it could accommodate 1,200. The Chatham site was postponed until construction began on the Melville Hospital in 1827, and in the meantime a hospital for 300 was built at Great Yarmouth. At the beginning of the 20th century five separate hospital blocks were erected at Shotley, HMS *Ganges*, and the Hardy Block was built at the Britannia Royal Naval College at Dartmouth. A significant hospital was constructed in Scotland at Butlaw, which served the South Queensferry and Port Edgar complex.

## 4.6 – Principal Training Establishments used by the Royal Navy

*This section does not cover Fleet Air Arm, Medical, or Royal Marine bases.*

### 4.6.1 – The Royal Naval College Greenwich

- a) Probably the most famous institution of its type in the UK, this was operational from 1873 to 1998, relocating originally from Portsmouth. Designed by Sir Christopher Wren, and subsequently modified by other distinctive architects, including Campbell, Hawksmoor, Ripley, Stuart and Vanbrugh, it had originally been built as the Greenwich Royal Hospital for Seamen, catering mainly for pensioners. This opened in 1712, and closed in 1869. The subsequent college also encompassed the School of Naval Architecture and Marine engineering, which moved from South Kensington. After closure it became known as the Old Royal Naval College, its naval occupants having relocated to Shrivenham.
- b) During its life as a training establishment the RNC developed facilities which included the Royal Navy Staff College, which from 1919 catered for mid-ranking officers. An Argonaut series operational nuclear reactor called JASON was also provided for training and research. Housed in the King William Block, this was a 10kW unit was used between 1962 and 1996.

Though only a tiny fraction of the size of a submarine power plant, it was unusual to find a device of this type housed within a major population centre, being subsequently removed in 1999. From the early eighties the Joint Service Defence College, located in the King Charles Building, trained senior personnel including Naval Commanders, RAF Wing Commanders and Army Lieutenant Colonels. This training replaced the older Senior Officers' War Course.

#### **4.6.2 – Royal Naval College, Osborne**

- a) This institution known, as HMS *Racer* was built in the grounds of Osborne House, East Cowes, Isle of Wight and opened in September 1903. It was used as a preparatory school for entrants to Dartmouth. The Selborne Scheme took cadets at the age of 13, who would spend two years at Osbourne, then two at Dartmouth – they would eventually become lieutenants. In 1913 a double intake was required in preparation for the anticipated war, and consequently the format was changed from 'two-plus-two' to 'one-plus-three' years. A reduction in requirements after WWI resulted in the run down and closure of the school between 1921–23.
- b) The future King George VI was a student here in 1909, followed by Louis (later Lord – Earl of Burma) Mountbatten in 1913. Another of its students George Archer-Shee was expelled in 1908 for apparently stealing a five-shilling postal order. This incident, which was tried two years later in the High Court, was the inspiration behind Terence Rattigan's play, '*The Winslow Boy*'.

#### **4.6.3 – Britannia Royal Naval College**

- a) The shore-based college at Dartmouth was designed by Sir Aston Webb, who also designed Admiralty Arch, and was completed in 1905. Prior to this date naval officer training had been undertaken for the last forty years in wooden ships moored in the River Dart. The base was initially named HMS *Britannia* after one of these ships, but the 'HMS' was dropped in 1953 when the Royal Yacht was launched. It then became HMS *Dartmouth* but this name was rarely used. A succession of training vessels moored at Sandquay for well over a hundred years have borne the name of the second original vessel HMS *Hindustan*.
- b) The age of entrants for officer training varied from fifteen, down to fourteen years in the early days, then up to sixteen in 1948, and seventeen in 1955. The current entry age is generally post university, with a few school leavers, with courses ranging from six to twelve months. Post WWII additions to the syllabus included Special Duties Officers Pre-qualifying Course, and the WRNS Officers' Training Course. The latter closed in 1990 with the integration of female officers. The Special Duties Officers' Course based at Greenwich moved to Dartmouth on its closure.
- c) Following an attack by the Luftwaffe in September 1942, the college was relocated to Eaton Hall in Cheshire, returning in September 1946. During this period the site was used as a Combined Operations HQ in the preparations for D-Day with particular regard to the American amphibious build up in Dartmouth. Dartmouth is now the only naval college in the United Kingdom.

#### **4.6.4 – Royal Naval Engineering Colleges, Keyham and Manadon**

- a) Engineering training became increasingly important in the Navy as a result of the introduction of steam driven ships. Royal Dockyard Schools, founded in the mid 19th century at Devonport, Portsmouth, Sheerness, and Woolwich introduced a formal training scheme for engineer students.

- b) In 1880 a purpose built establishment opened at Keyham in Plymouth as the Royal Naval Engineering College. The base struggled to provide enough trained men throughout WWI, but it was the threat of a further major conflict which forced the development of a new site at Manadon.
- c) This establishment opened in May 1940, on the 100 acre Manadon House country estate two miles north of Plymouth centre. Originally on the books of Devonport Barracks it became HMS *Thunderer* in 1946. Expansion was rapid throughout WWII, with permanent buildings replacing the original temporary accommodation. Expansion continued well into the fifties, with the imposing wardroom and accommodation blocks being completed in 1956.
- d) Keyham ceased to be used after WWII, and the site became part of the Devonport Dockyard Technical College in 1959, until its demolition in 1985. Long courses of up to four years were common at the college, and by 1965 Manadon was producing graduates in electrical engineering as external candidates of the University of London.
- e) Manadon closed in 1995, following a decision to train naval engineering students at civilian universities and RN specialist facilities.

#### **4.6.5 – HMS Bruce**

Located at Crail Airfield, Fife, this was the last Boys' Training Establishment to be set up in the UK. It opened in April 1947, with the first intake from a class from *Ganges*, and closed in October 1949.

#### **4.6.6 – HMS Cabbala**

- a) Formed as a coding school for telegraphists in March 1941 at Tortworth Court, Falfield in Gloucestershire, it moved in September 1942 to Lowton St Mary near Warrington. This site adjacent to Hesketh Meadow lane had been requisitioned in 1939 for a camp to accommodate up to 600 workers from the adjacent ROF Riseley. It had twelve 'H' blocks, plus a cinema, medical quarters and a chapel. On completion however the site was immediately transferred to the Navy. Courses were typically six months in duration and included procedure, coding, receiving, transmitting, technical and theory modules.
- b) A tender opened at Highnam Court, Gloucestershire, for a month and apparently then transferred to Brox Fair, Nottinghamshire, but no details of the move or the location can be traced. In November 1946 *Cabbala* was joined by the remaining staff and trainees from HMS *Scotia* and took the name of the latter.
- c) The name was later used for an EVT (Education and Vocational Training) facility located at Millmeece, the FAA training unit at Swynnerton, Staffordshire. EVT aimed to prepare servicemen for the return to civilian life, and the base was later paid off in February 1948.

#### **4.6.7 – HMS Caledonia**

In 1940 the Rosyth site was responsible for (Engine Room) Artificer Training, six years later becoming HMS *Caledonia*. This facility continued until 1985 when the function was transferred to HMS *Sultan*.

#### 4.6.8 – HMS *Cambridge*

- a) This name had been used from 1856 as a gunnery training school in Plymouth. It was originally a hulk moored in the Hamoaze, but was replaced c1868 by a much larger vessel, the *Windsor Castle*, which was then renamed *Cambridge* and was joined a few years later by the *Calcutta*, another hulk to which it was physically connected by a bridge. These vessels formed the Devonport Gunnery School, training typically 8 officers, and up to 300 boys and 500 men at any time. Shortly before the end of the century the establishment began to move ashore to what is now part of HMS *Raleigh*. In October 1907 the school occupied the naval barracks, and the hulks were disposed of. A number of other vessels were then attached to HMS *Vivid*, for use by the gunnery school. In November 1909 the name was changed to HM Gunnery School, Devonport.
- b) A few miles to the south east of Plymouth was an old holiday camp on Wembury Point. This was requisitioned in 1940 as a joint Army / Navy gunnery range, known as the Cambridge Gunnery School. It overlooked stretches of water at Heybrook and Penlee which had been commandeered by the Navy a few months earlier.
- c) Almost exactly 100 years since the first HMS *Cambridge*, Wembury was commissioned as an independent command using the same name. For the next 33 years it continued to train students from around the world in naval gunnery. It specialised in the following:
  - Close Range Gunnery with Oerlikon, 30mm Bofors, or 20mm decoy launchers
  - Medium Range Gunnery using 4.5in Mk.8 Single Turret
  - Small Arms
  - Board and Search Deployment.
- d) The base closed in 2001, its facilities being shared between *Collingwood*, *Dryad* and *Raleigh*. Computer simulation has since replaced much of the hardware used at Cambridge.

#### 4.6.9 – HMS *Defiance*

- a) This vessel was commissioned in 1884 as the Torpedo School Ship, moored in the Hamoaze, south of Saltash, off the Wearde Quay. Soon two other vessels were added, namely *Inconstant* and *Vulcan*; all were lashed together and walkways provided; later a shore base was brought into operation. The school had at that time some of the most advanced electrical systems in the country, and its Commanding Officer, Henry Jackson demonstrated a wireless communication system between *Defiance* and a gunboat HMS *Scourge* in 1896. At that time the only other successful experiments in the UK were being conducted by one Guglielmo Marconi.
- b) During WWII the school provided electrical instruction for warrant officers, torpedo ratings and electrical artificers of Devonport Division. It closed in July 1954 and the three vessels were towed away and scrapped. In 1981 *Defiance* became the name of the Fleet Maintenance Base at Devonport.

#### 4.6.10 – HMS *Dolphin*

- a) Throughout its life *Dolphin* was based at Fort Blockhouse in Gosport, which had been occupied originally by the Royal Engineers, then transferred to the Navy in 1904. It was used both as a submarine base, and as the RN Submarine Training School – eight years later developing into part of an independent submarine command, HMS *Dolphin*. In the early 1920s the fort became



the home of an early simulator, the Submarine Attack Trainer, constructed with some haste following experiences of WWI, and believed to be the world's first.

- b) Between 1997 and 1999 most of the facilities were transferred to the newly constructed Dolphin Block at HMS *Raleigh*. Only the unique Submarine Escape Training Tank (SETT), completed in 1954, remains at what has since returned to the Fort Blockhouse site. Later the Astute Block at *Raleigh* was brought into use, and the trainee submariner division became known as Dolphin Squadron.
- c) From 1963 to 1978 the RN Submarine Museum was located within the site; it is now situated elsewhere. *Dolphin* and its facilities appeared in the film, '*Above Us The Waves*'.

#### 4.6.11 – HMS *Dryad*

- a) This was originally a gunboat tender attached to the Royal Navy Navigation School which was created at Portsmouth Dockyard in 1906. It moved to its present location at Southwick Park in 1941 as a result of enemy bombing of the dockyard. Throughout WWII the school trained personnel in navigation and direction, developing a standardised system of Warfare Direction in 1943 as a result of a fleet requirement. In the sixties it housed the Navigational and Tactical Schools, and later a number of other courses were created or absorbed including:
  - WRNS Training from Burghfield
  - Navigation – from HMS *Mercury*
  - Ceremonial Training – from HMS *Excellent*
  - Point Defence Weapon Systems – from Fraser HMS *St George*
  - The Maritime Warfare Centre
  - Underwater Warfare, Mine Warfare, and Maritime Trade – from HMS *Vernon*
  - The Applied Oceanography and Meteorology Centre.
- b) The Wardroom, Southwick House, was requisitioned by the Navy in 1941, three years later becoming the planning and operational HQ of the Supreme Commander of the Allied Expeditionary Force, General Dwight Eisenhower, and the Naval Commander for Operation Overlord, Admiral Sir Bertram Ramsey. The decision to proceed with the Normandy Landings on D-Day, 6 June 1944 was made in this building.

#### 4.6.12 – HMS *Excalibur*

Formally HMS *Tiger's Whelp* from November 1942, and renamed one month later, this camp was opened on the outskirts of Alsager in Cheshire as a New Entry Seamen establishment.<sup>19</sup> After two years, it became a Royal Marine Driver Training camp before reverting briefly to its original function from May 1946 to December 1947.

#### 4.6.13 – HMS *Excellent*

- a) Early in the 19th century a need was realised for training naval staff in gunnery. Until this time the cannon was a very inaccurate weapon which had to be fired at very close range to stand any chance of hitting its target. Improvements in technology meant that by 1820 it was becoming a weapon capable of being used at greater ranges with some accuracy. This however required skilled personnel and by the end of the decade a proposal had been made for a training school.

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<sup>19</sup> Often incorrectly referred to as in Staffordshire

HMS *Excellent* was duly obtained and moored in Portsmouth dockyard for this purpose. It later became an independent command and was responsible for developing new weapons as well as providing training in established artillery. The ship itself was replaced on several occasions before the school moved ashore onto what is now Whale Island.

- b) The latter began as a pair of mudbanks created during the dredging of the entrances to Portsmouth Harbour. A small amount of work had been done since their purchase from the Corporation in 1953, and by 1864 access via a pontoon had allowed the construction of a building named 'The Excellent House that Jack Built'. This was to become the basis for a rifle school, urgently needed on land close to Portsmouth itself.
- c) Over the next two decades the site was enlarged considerably, mainly as a result of vast quantities of soil being dumped by over 1,000 convicts working on excavations in the dockyard. A railway had been constructed onto the island from the mainland to hasten this task. In 1883 it was decided to abandon the ship and to relocate the whole gunnery school ashore. The Gunnery School was extant on the island for over a hundred years until it became part of HMS *Nelson* in October 1985.
- d) The Fraser Battery between Eastney Fort East and Fort Cumberland on Portsea Island had existed since 1941. In September 1963 the battery became part of *Excellent* as the Fraser Gunnery Range and Training School. It was then commissioned as an independent command called *St George* in August 1968. Some time later it became part of the Admiralty Research Establishment, and gunnery training ceased.
- e) It was re-established as an independent command in April 1994, when it became the RN School of Management and Leadership on the closure of *Royal Arthur*. Other units which came under its wing were the RN Military Training School, the *Phoenix* NBCD School, and the RN Regulating School. It is currently the HQ of the CINC Fleet, and part of the Maritime Warfare School with HQ at nearby *Collingwood*.

#### **4.6.14 – HMS *Fisguard***

There was an Artificer Training Establishment at Chatham which moved to Torpoint, Plymouth in October 1940. In December 1946 it became HMS *Fisguard*, until disbanding at the end of 1983.

#### **4.6.15 – HMS *Formidable* / National Nautical School**

- a) The Marine Society was founded in the middle of the 18th century by Jonas Hanway, a governor of the London Foundling Hospital and promoter of the 1766 Act to remove young children from London workhouses. It soon acquired a number of training ships whose purpose was to teach boys from an early age to become seamen. At this time the Society had a secondary function in recruiting young men for the Seven Year War with France. By 1911 over 65,000 boys had passed through the organisation and some 28,500 had joined the Royal Navy; a large proportion of the remainder went to the Merchant Navy.
- b) Fourteen ships, based at eleven locations were used before the 20th century. One of these was the *Formidable*, based at Portishead, Somerset, and originally financed to reduce the number of urchins wandering the streets of nearby Bristol. The ship could accommodate 350 boys aged from ten to fifteen, and proved very successful in its task, however storm damage in 1906 meant that alternative accommodation was needed.

- c) A permanent establishment had been built on the cliffs two miles south-west of Portishead. It became the Incorporated National Nautical School, and was designed by Edward Gabriel, later becoming an approved school before closing in 1983.



Plate 2: The National Nautical School Building, Portishead, in 2007

- d) There were also Nautical Schools at Heswall and Liscard in Cheshire.

#### 4.6.16 – HMS *Ganges*

- a) Work began on a new shore based camp near Ipswich in Suffolk in 1902. It was to be named Royal Naval Training Establishment, Shotley, and throughout its seventy-four year life it would train some 150,000 recruits. The following year the first of two resident training vessels, HMS *Ganges* arrived, followed some time later by HMS *Caroline*. The first recruits affectionately known as ‘nozzers’ arrived in 1905, occupying some of the 20 newly constructed messes. Several other vessels were to form part of the establishment over the next few months, however *Ganges* was renamed *Tenedos III* and left for Chatham where it was to become the Boy Artificers Training Establishment. *Caroline* was then renamed *Ganges*, and the other vessels became *Ganges II*. In 1913 a Signal School was created, followed by a WRNS Section, and HMS *Ganges II* became an independent command.
- b) Expansion continued with additional messes and two more gymnasiums being added: by the beginning of WWI some 1,800 trainees were in occupation. Up to 400 of these had been accommodated aboard HMS *Ganges II*, but by August all had been moved ashore, as the vessel sailed to Harwich.
- c) In 1927 a change in Admiralty policy resulted in the renaming of RNTE Shotley to HMS *Ganges*, the latter being without a depot ship. Later that year some 450 boys from the camp’s complement of over 2,000, were transferred to a brand new establishment at Gosport, HMS *St Vincent*. Organisational restructuring took place with the creation of eight ‘divisions’, each incorporating a number of messes and named after an admiral.
- d) Six months into WWII the decision was made to discontinue boys training at Ganges, and to use it instead for ‘Hostilities Only’ ratings, the first of which arrived in April 1940. The following month the first 600 boys then left Shotley for HMS *St George*, a camp which had

been requisitioned earlier at Douglas, Isle of Man, and which already contained trainees from *Caledonia* and *St Vincent*. The remainder left within the month for Devonport and Liverpool. In an effort to get more trainees away from Shotley, which was dangerously close to enemy occupied Europe, and easy to spot from the air, being on the coast, a new tented accommodation camp was set up early in 1941 at Highnam Court, Gloucestershire for the training of W/T and signals ratings. It became a tender of *Ganges* and had accommodation for 3,000. The base was extremely primitive, consisting largely of tented accommodation, with no running water or electricity, a possible reason for the closure of the tender in November 1942. During the course of the war, almost 61,000 ratings passed through *Ganges*, which reverted to a boys' establishment in October 1945.

- e) Between 1956 and 1966 a number of new courses for juniors began at the camp, including Engineering Mechanics, Naval Airmen, Assistant Cooks, Sick Berth Attendants, and Electrical Mechanics. New buildings appeared with the construction of the Enright Block and a hangar.
- f) At the beginning of 1973 *Ganges* accepted its last boy trainees, becoming a basic new-entry training establishment for all specialisations. The age limit had been increased to thirty-two. All courses were now limited to six weeks, after which trainees would relocate to specialised training establishments. Just over three years later on 6 June 1976 the base closed, with all activities being transferred to HMS *Raleigh*, near Plymouth.

#### **4.6.17 – HMS *Glendower***

In June 1940 Butlins Holiday camp at Pwllheli was requisitioned by the Admiralty for use as a tender for HMS *Royal Arthur*, another ex Butlins camp at Skegness. It was named Glendower Royal Naval Training Establishment, and that October it became a command in its own right as HMS *Glendower*, training seamen in basics, before they would move on to the specialised schools. The tender was paid off in September 1946, and returned to Billy Butlin.

#### **4.6.18 – HMS *Marlborough***

The requirement for a reserve training base which mirrored the work of *Vernon* and *Defiance* was proposed in late 1941, and Eastbourne College in Old Wish Road was selected. Staffing began in June the following year and on 24 September it was commissioned as HMS *Marlborough*. Its principal function was to provide electrical training for commissioned officers, warrant officers, artificers, and ratings from the Chatham and Portsmouth divisions. It also provided air electrical instruction to FAA air artificers and air fitters. The last training courses completed in April 1947, and the base was paid off one month later.

#### **4.6.19 – HMS *Mercury***

- a) The importance of signals within the Navy really began in the 20th century, with the development of telegraphy and radio. Before that time 'long-distance' communication was limited to that which could be achieved with the aid of semaphore and flags. The first permanent signal school was established in 1904 at HMS *Hercules*, a vessel anchored at Portsmouth. Within two years it had moved to the adjacent RN Barracks, using initially 'K' Block, followed by 'L', 'M' and 'V', as rapid expansion took place. Temporary buildings were then added, but a plan to relocate the entire school to a purpose built site in Portsmouth never materialised.
- b) Luftwaffe attacks on the city hastened the need to disperse the base, which began to take place from May 1941. Lythe Hill House, Haslemere was requisitioned for the Experimental

Department, together with King Edward School at Witley, which also became the home of the Radar Department Section. Close to 30 satellites were eventually used, including industrial, and university premises at Bristol and Cambridge. Radar facilities were established in Southsea at Onslow Road, and in Eastney. Tantallon in East Lothian became the Trials base.

- c) HMS *Mercury* was commissioned on 16 August 1941 with its HQ at Leydene House, East Meon, to administer most of these sites; however *Mercury II* appeared nine days later as HQ for the Admiralty Experimental Signal Establishment at Haslemere. The relationship between these two is highly complex with a very great degree of overlap. By 1945 Leydene had become a large sprawling complex of Nissen huts.
- d) *Mercury II* closed in 1952, and over the next 20 years Leydene was extensively developed, with adjacent land being used for the construction of the Mountbatten, Dreadnought, Eagle, Nelson and Soberton (WRNS) blocks. Its staff and student personnel now numbered over 2,000. At the end of the century all facilities were transferred to HMS *Collingwood*.

#### 4.6.20 – HMS *Osprey*

- a) Shortly before the end of WWI Captain Fisher, Director of the Admiralty's Anti-Submarine Division expressed the urgent need for a training establishment and suggested Portland as a suitable location.
- b) Temporary accommodation was made available, under the name of HMS *Sarepta*, on and around an old rifle range. By April 1918 facilities were available to train 200 officers and men, but following the Armistice *Sarepta* closed and its work was transferred to a ship, namely HMS *Gibraltar*. However, within a very short time, *Sarepta* was reformed, its principal tasks being the development of hydrophones for undersea detection. There then followed a period where both establishments may have been active, but by 1923 *Gibraltar* had been paid off, and on 1 April 1924 HMS *Osprey* became the Anti-Submarine School. The years leading up the WWII were spent developing a number of devices for detecting, tracking and destroying submarines. Asdic in particular was proving very successful and by the late thirties emphasis had been placed on the need for 1,300 fully trained operators by June 1940.
- c) The importance of the work and vulnerability of the site, both from a bombing and possible invasion perspective, necessitated a move to a safer location, and initially a tender was established at HMS *Nimrod* at Campbeltown, Kintyre in March 1940; it became known as the Asdic School. By the following January most of the Portland establishment had relocated to Dunoon, near Greenock, where it remained for the duration, returning in March 1946. *Nimrod* was then paid off in February.
- d) During this period an experimental section had been established in a yacht yard at Fairlie, south of Largs, a small town in Ayrshire. It was known as both the AERE, Asdic Experimental Research Establishment, and the ASEE, Anti-Submarine Experimental Establishment. This closed in 1947 and returned to Portland as the Underwater Weapons Establishment. The anti-submarine elements were transferred around this time to HMS *Vernon*.
- e) In 1959 *Osprey* took on the responsibility of Helicopter training which remained at the base until 1999 when it transferred to HMS *Heron* at Yeovilton; other elements moved to *Drake* and *Seahawk*.

#### 4.6.21 – HMS *Phoenix*

- a) Formed at Stamshaw, Portsmouth in 1946 and commissioned in July 1949 as *Phoenix*, the base incorporated the Officers' Damage Control School and the Anti-Gas School. These had been relocated respectively from Colet Gardens, Hammersmith, and from Tipner, Portsmouth. The RN School of Chemical Warfare, also at Tipner, was then incorporated and *Phoenix* was collectively named the RN Defence School; this later became the Naval Atomic, Bacteriological Chemical and Damage Control School. By 1964 the name changed again to the Naval Nuclear, Bacteriological Chemical and Damage Control School. A fire-fighting school was also extant.
- b) Seamanship Training was taken from *Dryad* in January 1971, and the location was given as Tipner, though the HQ remained at Stamshaw. HMS *Excellent* took over all facilities from September 1974 when the base was paid off, becoming *Phoenix* NCB School. Between March 1985 and July 1993 the unit came under the control of HMS *Nelson*, before reopening five weeks later as The NCB School, *Phoenix*.

#### 4.6.22 – HMS *Queen Charlotte*

This was the name given to an AA gunnery school which opened at Ainsdale Lido, Shore Road, Ainsdale-on-Sea near Southport, Lancashire between March and November 1941. FAA aircraft would tow targets over the sea at which the land base guns would fire. It closed in January 1946 with some facilities relocating to *Excellent*.

#### 4.6.23 – HMS *Raleigh*

- a) The Military Training Act of 1938 was responsible for the construction of a new shore base on the outskirts of Torpoint in Cornwall, just across the Tamar from Plymouth. It opened in January 1940 as a training establishment for 'called-up' ordinary seamen. For several months during the spring of 1944 the site was used extensively by US naval forces preparing for 'D' Day. The base continued to be used for new-entry seamen training for the next 25 years.
- b) Expansion took place in the early seventies and after a major rebuilding programme the site absorbed the WRNS Part 1 training on the closure of HMS *Dauntless*, Burghfield. The New Entry Training of Artificer Apprentices arrived from HMS *Fisguard*, and the Royal Naval Supply School was transferred from HMS *Pembroke*.
- c) In the nineties the Seamanship Training Squadron was disbanded, to be replaced by Royal Navy School of Seamanship. The RN Cookery School arrived from Aldershot, and the RN Submarine School transferred from HMS *Dolphin*.

#### 4.6.24 – HMS *Royal Arthur*

- a) Butlins Holiday Camp, Skegness was requisitioned at the outbreak of war in 1939 and became an Assessment and Training establishment named HMS *Royal Arthur*. The brightly coloured camp was soon toned down for camouflage purposes and the rose gardens were dug up to construct air raid shelters. Soon overcrowded, a sub-site was needed and HMS *Glendower* opened at another holiday camp at Pwllheli in North Wales.
- b) The Navy left Skegness in March 1946, moving to a purpose built site at Neston just outside Corsham in Wiltshire. This then became the Petty Officers' Leadership School, and later the RN School of Leadership and Management. The site closed in 1993, all facilities moving to HMS *Excellent*.

**4.6.25 – HMS *St George***

- a) Cunningham's Holiday Camp was located at Howstrake, Onchan to the north of Douglas, Isle of Man. It had been requisitioned during WWI first as an internment camp, then again during WWII by the Navy. In September 1939 it became HMS *St George*, catering for a large number of basic trainees previously located at *Caledonia* and *St Vincent*. Tuition took place in the brand new Ballakermeen High School in Douglas itself.
- b) The base closed in December 1945, though the name was later used from 1968 for the Fraser Gunnery Range, as part of HMS *Excellent*.

**4.6.26 – HMS *St Vincent***

- a) Located at Forton Barracks in Gosport, this site opened in 1927 as a Boys Training Establishment. At the beginning of WWII many of its trainees were evacuated to the HMS *St George* on the Isle of Man. It had a capacity for 800 people, and in 1939–40 additional courses were added for the WRNS, a Signal School, a Torpedo Training Establishment, and for future Fleet Air Arm pilots requiring basic training.
- b) Post war HMS *St Vincent* became the Juniors' Training Establishment, before closing in 1969.

**4.6.27 – HMS *Sea Eagle***

- a) Overlooking the River Foyle, Ebrington Barracks, Londonderry was part of the naval base HMS *Ferret*, and incorporated an Anti-Submarine Training School for British and American Navies operating from Derry. Practical instruction was undertaken at Castle Archdale on Lough Erne. In June 1947 the school was commissioned as HMS *Sea Eagle* and became the Joint Anti-Submarine School (JASS) for all NATO countries. JASS operated in conjunction with Eglinton airfield until June 1970 when it was handed back to the Army. The intention was for JASS to move to HMS *Dryad*, but this did not happen.

**4.6.28 – HMS *Scotia***

- a) Butlins Holiday Camp at Doonfoot, Heads of Ayr was requisitioned in May 1941, as an establishment for 1,500 visual signals and wireless telegraphy trainees. It became HMS *Scotia* the following January, and owing to its size had its own railway station constructed alongside. In November 1946 the camp was returned to Butlins, its facilities transferring to Lowton St Mary where it took over HMS *Cabbala*.

**4.6.29 – HMS *Sultan***

- a) HMS *Siskin*, RNAS Gosport closed at the end of May 1956. The following day HMS *Sultan* was commissioned at the site, as the Mechanical Training and Repair Establishment. Artificer Apprentice training was absorbed from *Caledonia* in 1982, and Marine Electrical training from *Collingwood* in 1987.
- b) By the end of the century and with the closure of HMS *Thunderer*, schools for post graduate Marine Engineers (surface and sub-surface), and Air Engineers, had been established, the latter increasing in size with the closure of *Daedalus*. The School for Aircraft Handling also moved in from the latter station. The Department of Nuclear Science and Technology moved from RNC Greenwich in 1998, followed by sections of submarine training on the closure of *Dolphin*.

- c) The site encompasses Palmerston's Grange and Rowner Forts, originally used for accommodation but later reverting to storage and leisure facilities.
- d) *Sultan*, along with *Collingwood*, was the premier naval training facility in Europe, with courses running from one-day basics, to three-year academic degrees, including post-graduate masters degrees. Some thirteen hundred students will be on site at any time. The site also contains the HQ for the Mobile Aircraft Support Unit at Fleetlands, the Admiralty Medical Board, the Admiralty Interview Board, and the Naval Pay and Pensions Organisation.

#### **4.6.30 – HMS *Temeraire***

This name was used initially for the Upper Yardman's Training College which was established at Port Edgar, Queensferry, West Lothian in 1955. The college close after just five years, and the name was then applied to a division at RNEC Dartmouth for a short period. In 1971 HMS *Temeraire* was allocated to Royal Navy School of Physical Training in Pitt Street, Portsmouth. In 1988 a new purpose-built establishment was opened in Burnaby Road, which became the centre of naval sporting activity. It also hosted a fleet recreation centre, and was the HQ for the Director of Physical Training and Sport.

#### **4.6.31 – HMS *Valkyrie***

- a) Two internment camps near Douglas on the Isle of Man were taken over by the Navy in 1941 and commissioned as HMS *Valkyrie*. They were originally known as Granville and Regent, but the former was renamed as Central Camp, becoming *Valkyrie II*. In excess of £3M was finally spent on the base which included a concrete three-storey 18 classroom training building, plus external facilities at Collinson's Café and the Douglas Head Hotel. Its function was a radar plotters' training establishment, principally for ratings, and the hotel with its tower situated high on the cliffs overlooking the bay provided an excellent platform for mounting a huge array of aerials.
- b) In 1943 *Valkyrie IV* was commissioned in Central Camp, but was paid off in March 1945, along with *Valkyrie II*. The Regent Camp remained operational until December 1946 after which the concrete building became the home of Manx Radio. The hotel was demolished in 1999, with the exception of its fine tower. Radar training had been relocated at the fort at Sheerness.

#### **4.6.32 – HMS *Vernon*, Portsmouth**

- a) *Vernon* had previously been allocated to a number of vessels connected with torpedo training, and some electrical work connected with ships and anti-submarine devices. In October 1923 a shore establishment of that name was created on the site of the old Gunwharf in Portsmouth. It had two departments, Electrical and Mining / Torpedo.
- b) HMS *Vernon's* responsibility throughout WWII was for mine disposal and countermeasures, and following a serious accident in 1940 involving 5 deaths and a number of other casualties, a defusing site was set up in a nearby quarry, which was known as HMS *Mirtle*, apparently short for Mine Investigation Range.
- c) Heavy enemy air raids on the Portsmouth area resulted in many sections of the unit being dispersed to other parts of the UK. Roedean School in Brighton, was requisitioned in the spring of 1941, followed by St Dunstan's Institute at Ovingdean. Other locations were Carlisle,



Havant, Hove, Purbrook, Stokes Bay, West Leigh, and Weston-super-Mare in England, plus Edinburgh, Helensburgh, and Port Edgar in Scotland.

- d) Roedean, now known as HMS *Vernon(R)* expanded rapidly and had some 250 officers, 1,500 ratings and 600 Wrens by late 1942. Additional sites were needed and various properties belonging to St Dunstan's, the Marina Gate complex, and the John Howard House were used as accommodation, while the Grand Hotel, and the Dreadnought Garage became instructional sites. The school was used until August 1945, returning to its previous function the following January.
- e) The Gunnery Branch at HMS *Excellent* was strangely responsible for the training of naval divers until October 1944, but that facility was then transferred to *Vernon's* Torpedo Branch, thus combining mining and countermeasures into mine-warfare.
- f) *Vernon(D)* was the name allocated to a diving school and experimental station developed at Brixham in October 1944. It was administered through Dartmouth, which explains the (D). Its work was heavily involved with port clearance in conjunction with the D-Day landings, and in October 1945, with its work complete the unit returned to Portsmouth.
- g) In October 1946 the electrical component of the Torpedo Branch base was transferred to the recently formed Electrical Branch, and merged with the Anti-Submarine Branch from HMS *Osprey* to become the Torpedo and Anti-Submarine Branch, which assumed control over all naval diving. That facility transferred to HMS *Dryad* at the end of 1974.
- h) In March 1986 HMS *Nelson* assumed responsibility for the establishment which became a sub-site of the former. It continued to exist as the primary demolitions, diving and mine-warfare site, together with Naval Control of Shipping. Named initially HMS *Nelson (Vernon)* it became HMS *Nelson (Gunwharf)* a year later until its closure in April 1966, by which time HMS *Dryad* had taken over mine-warfare training in its School of Maritime Operations, and the diving component had moved to new accommodation on Horsea Island, near Porchester.

#### 4.6.33 – HMS *Vulcan*

RNAS Dounreay was commissioned as HMS *Tern II* during WWII, though it never became operational. Post war the site became a significant nuclear power research facility, specialising in fast breeder reactors. In May 1970 HMS *Vulcan* was commissioned on site, as a test and training facility for submarine nuclear power plants. Reactors designed and manufactured by Rolls-Royce, Derby are fully tested and commissioned at Dounreay before installation on the submarine. It was known as the Naval Nuclear Propulsion Test Establishment in 1981, then the Nuclear Reactor Training Establishment in 1984. It later became the Vulcan Naval Reactor Test Establishment.

#### 4.6.34 – WRNS Training

- a) Wartime WRNS officers trained at the Royal Naval College in Greenwich. Initially of two weeks duration, the course was lengthened to three weeks after November 1941.
- b) Ratings underwent a two-week General Service Training course, held at Central Training Depots. This involved instruction on general and naval subjects, plus medical examinations, interviews, enrolment and kitting.

- c) The principal wartime training base for ratings was Westfield College in Hampstead, and as numbers increased the National Institute of Medical Research in Mill Hill was requisitioned, with up to 900 students on site at any time.
- d) A base in Scotland was needed and Tullichewan Castle at Balloch was used from 1943, followed by a northern English establishment at Wesley College in Leeds.
- e) These sites became part of the Central Training Depot which, during 1943 trained a total of 14,668 at Mill Hill, 1,999 at Westfield College, 2,616 at Tullichewan, and 1,371 at Leeds.
- f) Coders were trained initially at Dunfermline until a course structure was established at Westfield College. Writers went to the RN Accounts School, based at Channings School, Highgate, London N1.
- g) The scope of trades available to women expanded throughout the war and radio mechanics courses were set up at the Polytechnics in Chelsea and Walthamstow. Requisitioned accommodation was found in Shelley House, and the Wilfred Lawson Hotel respectively.
- h) In April 1943 it was decided to release more men for wartime duties, by training WRENS as naval mechanics, and a large camp at Millmeece in Staffordshire was taken from the Ministry of Supply for that purpose, becoming the first purely WRNS technical training establishment.
- i) In July 1945 it was necessary to return Westfield College to the University of London, and another ex Ministry of Supply camp at Burghfield near Reading became immediately available as the WRNS Central Training Depot and New Entry Centre. Initially named RNTE Dauntless, it became HMS *Dauntless* in December 1953 and closed in 1981 when the facility was transferred to HMS *Dryad*.

#### **4.6.35 – School of Supply and Secretariat – HMS *Cabot* / *Demetrius* / *Ceres* / *Pembroke***

- a) A training establishment was formed at HMS *Cabot* in July 1940 using the Muller Orphanage Building and the Gloucestershire County Cricket Ground both in Bishopston, Bristol. It appears to have been used as a tender to HMS *Drake*. In September 1942 it relocated to what had been built as accommodation for 1,000 workers from the adjacent ROF Filling Factory at Thorpe Arch. This was located to the north of the race course at Wetherby in North Yorkshire on the York Road. It was paid off in July 1944, becoming HMS *Demetrius* where it was joined by the Accounting School from Highgate, a section of HMS *President*, London. It appears that the Accounting School became the School of Supply and Secretariat in October 1944, but the entire establishment was renamed HMS *Ceres* two years later.
- b) *Ceres* continued to train mainly WRENS, though other schools for caterers and stewards were added, before the base closed in April 1958, its complement moving to HMS *Pembroke*, the barracks at Chatham. In 1983 the latter closed and the facility moved finally to HMS *Raleigh*.
- c) Between October 1984 and July 1994 HMS *Ceres* at Yeadon on the outskirts of Leeds was the Communications Training Centre.

## 4.7 – Navy establishments in July 1926

### 4.7.1 – Dockyards and Anchorages

Chatham	Sheerness	Portsmouth
Devonport	Rosyth	Portland
Haulbowline	Berehaven	Cromarty
Scapa	West India Docks (stores depot)	

### 4.7.2 – Armament Depots and Factories

Woolwich	Portsmouth (and Marchwood)
Plymouth (and Bullpoint and Gunwharf)	Crombie (and Bandeath)
Chatham (plus Lodge Hill, Upnor, and Gunwharf)	RN Torpedo Factory, Greenock
RN Cordite Factory, Holton Heath	

### 4.7.3 – Torpedo / Mine depots

Portsmouth	Weymouth	Devonport
Chatham	Rosyth	

### 4.7.4 – Mining Depots

Frater (Portsmouth)	Grangemouth	HMS <i>Vernon</i>
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### 4.7.5 – Medical establishments

#### 4.7.5.A Royal Hospitals:

Haslar	Plymouth	Chatham
Portsmouth	Yarmouth	South Queensferry

#### 4.7.5.B Royal Marine Infirmaries:

Deal	Portsmouth	Plymouth	Chatham
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#### 4.7.5.C Royal Naval Sick Quarters:

Dartmouth (cadets)	Shotley
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### 4.7.6 – Educational establishments

#### 4.7.6.A Principal Establishments

Royal Hospital School, Greenwich	RN College, Dartmouth
RN Engineering College, Keyham	Signal School, Portsmouth
Royal Naval College Greenwich, including War College, Staff College, and Navy Medical School	

#### 4.7.6.B Dockyard Schools:

Portsmouth	Devonport	Chatham
Sheerness	Rosyth	

#### 4.7.6.C Mechanical Training Establishments:

Portsmouth (artificers)	Chatham (mechanics)
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## 4.8 – Naval Shore establishments in Jan 1935

### 4.8.1 – HM Dockyards

Berehaven (Ireland)	Chatham	Cromarty	Deptford
Devonport	Pembroke Dock	Portland	Portsmouth
Rosyth	Sheerness	West India	

includes Killingholme – East Halton – Habrough Lincolnshire (Oil Fuel Depot)

### 4.8.2 – Victualling Yards

Deptford: Royal Victoria Yard    Gosport: Royal Clarence    Plymouth: Royal William

### 4.8.3 – Armament Depots and Factories and Associated installations

Woolwich	Portsmouth: Priddy's Hard, Marchwood
Plymouth: Bull Point, Gun Wharf	Chatham: Upnor, Lodge Hill, Gunwharf
Rosyth: Crombie, Bandeath	

#### 4.8.3.A Factories

RN Cordite Factory: Holton Heath	RN Torpedo Factory, Greenock
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#### 4.8.3.B Torpedo Depots

Chatham	Devonport	Portsmouth	Weymouth (Portland)
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#### 4.8.3.C Mine depots

Frater (Portsmouth)	Rosyth	Wrabness (Harwich)
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### 4.8.4 – Miscellaneous and Training

HMS <i>Vernon</i> , Signal Establishment	HMS <i>Osprey</i>
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### 4.8.5 – Royal Naval Colleges

Greenwich	RN Engineering College Keyham
Imperial Defence College	Naval Medical School
RN College Dartmouth	

## 4.9 – Naval Shore establishments in June 1944

### 4.9.1 – HM Dockyards

Chatham	Devonport	Dover	Orkney
Pembroke Dock	Portland	Portsmouth	Rosyth
Sheerness			

Repair Bases: Corpach, near Fort William and Dunstaffnage, near Oban

### 4.9.2 – Aircraft Repair Yards

Donibristle	Fleetlands
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### 4.9.3 – RN Stores Depots and HQ

Aberdeen: Regent Hotel	Belfast: Queens Road
Clyde: Street Enoch Hotel, Glasgow	Copenacre: Corsham
Park Royal: Elveden Place NW10	Hull: 722 Anlaby Road
Llangennech Carmarthenshire	Londonderry: 8 Foyle Street
Port of London: PLA Buildings, Trinity Sq. EC2	Haslemere: Aldworth House
Newcastle: Central Exchange Hotel, Grey Street	Mersey: Royal Liver Buildings
Midland: Rising Brook School, Stafford	Perth: Almond Bank
Severn: Stanley Mills, Stroud	
West Riding: Sandhurst House, Regent Street, Leeds	
Woolston and Southampton: Archery Road, Woolston	

### 4.9.4 – Victualling Yards

Deptford: Royal Victoria Yard SE8	Southern: Thatcham, Berkshire
South Western: Launceston, Cornwall	Midland: Leicester
Lancashire: Accrington	Yorkshire: Prudential Buildings, Halifax
Northern Ireland: Belfast	Jamestown: Dumbartonshire
Glasgow: Fordneuk Street	Greenock: Clarence Street
Rosyth	Grangemouth
Lyness (Orkney)	Dover
Immingham	Milford Haven
Newtown: Montgomeryshire	

### 4.9.5 – Armament Depots and Factories and Associated installations

Woolwich	
Portsmouth: Priddy's Hard, also Bedenham, Frater Mine Depot, Marchwood, Dean Hill	
Plymouth: Bull Point, Ernesettle, Gun Wharf	
Chatham: Upnor, Lodge Hill Gunwharf	
Rosyth: Crombie, Bandeath, Throsk, Stirling	
Aberdeen: Station Hotel, Guild Street	Barrow: Ramsden Shed LMS Yard
Beer: Seaton, Devon	Beith: Ayrshire
Belfast: Harland & Wolff North Yard	Broughton Moor: Maryport
Cardiff: Imperial Bdgs, Mt Stewart Sq.	Colwall Tunnel: Malvern
Ditton Priors: Bridgnorth, Shropshire	Dover Dockyard

Dundee: 20 Whitehall Street	Falmouth: Imperial Hotel
Fort William Inverness-shire	Glasgow: St Enoch's Hotel
Great Yarmouth: RN Base, Norfolk	Greenock: Campbell St
Hawthorn Tunnel: Drybrook, Glos.	Hull: 24 Hamlyn Avenue, Anlaby Road
Immingham: Dockmaster's Offices	Kingswinford: Greenfield, Stream Road
Leith: 13 Commercial Street	Lincoln: Sheaf Ironworks
Liverpool: Royal Liver Buildings	London: Royal Albert Docks
Londonderry: 7 Clarendon Street	Longtown: Cumberland
Lyness Orkney	Middlesbrough: 23 Albert Road
Newcastle: Central Exchange Hotel	Pickwick: Corsham, Wiltshire
Trecwn: Letterston, Pembrokeshire	

#### **4.9.5.A Central Naval Armament Supply Depots**

Wolverhampton: Finchfield House, Compton

#### **4.9.5.B Sub Depots:**

Chepstow: Finch's Yard  
 Ketley: Wrekin Foundry, Ketley, Wellington  
 Kidderminster: Lowland Works, Green Street  
 Sandiacre: Excelsior Foundry, Sandiacre, Nottinghamshire  
 South Shields: No.2 Warehouse, Tyne Dock  
 Stoke on Trent: Minton's Works, London Road  
 Tipton  
 Warrington: Palatine Works

#### **4.9.5.C Factories**

RN Cordite Factory: Holton Heath  
 RN Propellant Factory: Caerwent  
 RN Torpedo Factory: Greenock  
 Plus sub-sites at Alexandria, Rockbank and Arrochar (range) Loch Long<sup>20</sup>

#### **4.9.5.D Production of Naval Armament Stores**

Birmingham: CML Building, Great Charles Street  
 also Wolseley Motors, Ware End  
 Dagenham: Briggs Motor Bodies  
 Glasgow: 14 Crown Terrace, Dowanhill  
 Lincoln: Sheaf Ironworks  
 London: 5–8 Arcade Chambers, High Street, Eltham  
 also Siemens Factory, Hook Rise, Tolworth, Surbiton  
 Manchester: Beech Lawn, Dunham Road, Altrincham  
 Newcastle: Central Exchange Hotel, Grainger Street  
 Oxford: Pressed Steel Company, Cowley  
 Sheffield: Grand Hotel

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<sup>20</sup> There was also a RN Torpedo factory at Alexandria in Egypt.

**4.9.5.E Royal Naval Torpedo Factory**

Greenock

sub-sites at: Alexandria (Dumbartonshire), Rockbank, Arrochar

**4.9.5.F Torpedo Depots**

Chatham

Devonport

Lyness

Northern Ireland

Portsmouth

Rosyth

Weymouth (Portland)

**4.9.5.G Mine depots**

Frater (Portsmouth)

Milford Haven

Wrabness (Harwich)

**4.9.5.H Boom Defence Depots**

Clyde

Dover

Falmouth

Grimsby

Harwich

Lymington

Lyness

Middlesbrough

Milford Haven

Newcastle and Sunderland

Portland

Portsmouth

Plymouth

Rosyth

Southampton

Thames

Warsash

**4.9.6 – Research Establishments**HMS *Vernon*, Signal Establishment

Mine Design Department

Torpedo Instructional School

Havant

Purbrook

West Leigh

Stokes Bay

Roedean School, Hove

Dartmouth/Brixham

Helensburgh

Edinburgh and Port Edgar.

HMS *Osprey* Asdic Experimental Research Establishment – Fairlie AyrshireHMS *Excellent* Torpedo Experimental Establishment –Whale Island.**4.9.7 – Medical Establishments****4.9.7.A Hospitals – Royal Hospitals**

Haslar, Plymouth

Chatham

Portland

Port Edgar (Butlaw), Edinburgh

**4.9.7.B RN Auxiliary Hospital**

Barrow Gurney, Bristol

Cholmondeley Castle, Cheshire

Rainhill, Prescott, Lancashire

Southport

Dartmouth

Durdham Down, Bristol

Idsworth, Horndean

Invergordon

Kilmacolm, Renfrewshire

Kingseat, Newmachar

Knowle, Fareham

Lancaster

Minterne Magna

Newton Abbot

Seaforth Cavalry Barracks, Liverpool

Sherborne

Woolton, Liverpool

**4.9.7.C Royal Marine Infirmaries:**

Chatham	Deal
Lympstone	Portsmouth
Plymouth	Shotley
Alsager (RN Training Establishment)	

**4.9.7.D RN Sick Quarters**

HMS <i>Ariel</i>	HMS <i>Collingwood</i>	HMS <i>Ferret</i>
HMS <i>Gosling</i>	HMS <i>Lizard</i>	HMS <i>Lochailort</i>
HMS <i>Lochinvar</i>	HMS <i>Medina</i>	HMS <i>Northney</i>
HMS <i>Scotia</i>		
Alsager Training Est.	Ardrossan	Cardiff
Creag Dhu, Onich	Cullercoats	Dartmouth
Duncraig Castle, Plockton	Gairloch	Great Yarmouth
Isleworth	Lamlash	Le Court (Empshott)
Lerwick	Liverpool	London, Vincent Square
Lyness	Malvern	Marlborough
Milford Haven	Newhaven	North Ness
Pwllheli	St George	Skegness
Southend (Essex)	Southend / Kiel (Kintyre)	Stornoway
Swansea	Swansborough Manor, Lewes	
Shotley	Yeovilton	

**4.9.7.E RN Medical Depots**

Barnoldswick (Transport)	Bournemouth	Coventry
Deptford	Dunfermline	Huddersfield
Huthwaite	Leicester	Liverpool
Londonderry	Wellingborough	

**4.9.7.F Naval Air Stations**

Arbroath	Crail	Donibristle
Eastleigh	Hatston	Henstridge
Stretton		

Goodings, Woodland St Mary, Newbury (establishment)

Medical Board and Sick Bay – Queen Anne's Mansions London

**4.9.7.G WRNS Sick Quarters:**

HMS <i>Cabbala</i>	HMS <i>Cabot</i>	HMS <i>Hornet</i>
HMS <i>Kilele</i>	HMS <i>Raleigh</i>	HMS <i>St Vincent</i>
HMS <i>Varbel</i>	HMS <i>Vectis</i>	HMS <i>Waxwing</i>
HMS <i>Woolverstone</i>		
Aberdeen	Alverstoke	Ardrossan
Aultbea, Ross-shire	Bath	Blyth
Blundellsands, Liverpool	Bodmin	Brightlingsea
Bristol	Campbeltown	Deal



Dover	Droxford	Dundee
Dunoon	Eton	Evanton
Falmouth	Fareham	Felixstowe
Flowerdown, Winchester	Fort William	Roseneath
Gairloch	Gillingham	Glasgow
Granton	Greenock	Greenwich
Great Yarmouth	Harwich	Haslemere
Helensburgh	Immingham	Inveraray
Kirkwall	Largs	Lee on Solent
Leigham Manor, Plymouth	Lerwick	Leydene, Hambledon
Lowestoft	Lyness	Machrihanish
Milford Haven	Millmeece	Newcastle-u-Lyme
Oban	Oxford	Pantiles, Southsea
Port Edgar	Portsmouth, Ormand Lodge	Richmond
Rochester	Roedean	Rosyth
St Merryn	Scarborough	Sheerness
Southampton	Southend	Thurlestone
Troon	Warsash	Weymouth

#### 4.9.7.H WRNS London establishments:

Westfield College, London (Training)	Bowden Court W11
Englands Lane NW3	Mill Hill
Barkston Gardens, Earls Court	

#### 4.9.8 – Royal Naval College

RN College: Greenwich	RN Engineering College: Keyham, Devonport
Eaton Hall: Eccleston, Chester <sup>21</sup>	Royal Hospital School: Holbrook, Suffolk
RN War College: Portsmouth	RN Staff College: Greenwich
Naval Medical School: Haslar	

<sup>21</sup> This was Britannia Royal Naval College's temporary site following the bombing of the former in September 1942

## 4.10 – Naval Shore bases circa 1979

### 4.10.1 – Main Bases

Culdrose: HMS *Seahawk*, principally rotary-wing

Faslane: HMS *Neptune*, Submarine Base

Yeovilton: HMS *Heron*, Flag Officer Naval Air Command (principally fixed-wing)

Prestwick: HMS *Gannett*, Sea King Helicopters on anti-sub. duty for Faslane and Holy Loch

Rosyth: HMS *Cochrane*, Flag Officer Scotland and Northern Ireland

Plymouth (Devonport): HMS *Drake*, Flag Officer Plymouth, HQ at Mount Wise – HMS *Vivid*

includes:

RN Barracks	Submarine Refit Complex
Signal Training Centre	RN Diving Centre
Naval Provost Marshal	RN School of Hydrographic Surveying
Leadership School	Seamanship School
Fire-fighting School	Liaison Officers Provider
Merchant Navy.	

Portland: HMS *Osprey*, Flag Officer Sea Training

includes:

RNAS Portland	RN Anti Submarine School
RN Air Search and Rescue School.	

Portsmouth: HMS *Nelson*, Flag Officer Portsmouth and Flag Officer Third Flotilla / NATO  
Anti Submarine Group Two

HMS *Victory*:

RN Dental Training School	RN Detention Quarters
RN School of Education and Training Technology	

HMS *Vernon*:

RN Seamanship School	Mine-warfare School
RN Torpedo and Mine Establishment	HQ Fleet Clearance
HQ Mine Counter-Measures Vessels Support	RN Diving School

HMS *Temeraire*: RN School of Physical Training

HMS *Dolphin*: Submarine School, 1st Submarine Squadron

HMS *Excellent*: Whale Island RN Gunnery Training School

Haslar Admiralty Experimental Works

### 4.10.2 – Depots / Storage sites

Almondbank – Perth Aircraft Workshops

Eaglescliffe, Durham

Exeter, Devon

Llangennech, Carmarthenshire

Wroughton

Fleetlands – RN Aircraft Yard Helicopter Maintenance  
 Kirkliston West Lothian – Royal Elizabeth Victualling Yard  
 Plymouth Stonehouse / Cremyll – Royal William Victualling Yard  
 Portsmouth, Gosport – Royal Clarence Victualling Yard  
 Plymouth – HMS *Defiance* Fleet Maintenance Base  
 Portsmouth, Priddy's Hard

#### 4.10.3 – Oil Fuel

##### 4.10.3.A Naval Depots

Old Kilpatrick, Clyde	Pembroke Dock
Invergordon, Cromarty Firth	Finnart (Loch Long)

##### 4.10.3.B NATO POL Sites

Gairlochhead / Finnart / Loch Long (Clyde Naval Base)  
 Campbeltown, Argyll and Bute  
 Loch Striven, Dunoon, Argyll and Bute  
 Loch Ewe, Wester Ross

(These were constructed in the 1960s and held up to 702 million litres of fuel and lubricants for visiting NATO ships)

#### 4.10.4 – Weapons Storage

Beith, Ayrshire	Broughton Moor, Cumbria
Coulport, Argyll and Bute	Crombie, (Rosyth)
Trecwn, Pembrokeshire	Bull Point RNAD
Ernesettle RNAD	Gosport RNAD
Stonehouse RNAD	Milford Haven, Pembrokeshire
Glen Douglas / Inverbeg, Lanarkshire (NATO)	

#### Research Facilities

Holton Heath, Poole – Admiralty Materials Laboratory  
 Loch Long / Arrochar, Argyll and Bute – Torpedo Range  
 Loch Goil, Argyll and Bute – Admiralty Research outstation  
 Helensburgh, Glen Fruin – Admiralty Research outstation  
 St Leonards Hill, Dunfermline, – RN Construction Research Establishment  
 Dounreay, (HMS *Vulcan*) – Nuclear Propulsion Test and Training  
 Weston /Portland – Admiralty Underwater Weapons Establishment  
 Teddington – Admiralty Research Laboratory  
 West Drayton – Admiralty Engineering Laboratory  
 Cobham – Admiralty Oil Laboratory  
 Slough – Admiralty Compass Laboratory

#### 4.10.5 – Communications:

Forest Moor, near Harrogate, Yorkshire  
 Inskip, Lancashire

#### 4.10.6 – Training Facilities

Britannia Royal Naval College, Dartmouth  
 Burghfield Common, HMS *Dauntless* – WRNS Training School  
 Corsham, HMS *Royal Arthur* – Petty Officers Training School  
 Rosyth, HMS *Caledonia* – RM Engineering School  
 Manadon Plymouth, HMS *Thunderer* – Royal Naval Engineering College  
 Shotley, HMS *Ganges* closed 1976  
 Torpoint Plymouth, HMS *Fisgard* – RN Apprentices Training  
 Trevel, HMS *Raleigh* – RN New Entry Training Establishment  
 Turnhouse – Joint Maritime Operational Training  
 Wembury. HMS *Cambridge* – Plymouth Gunnery Range

### 4.11 – Supply and Transport Depots in 1986

Code	Site	Address
BD	RNSD Bedenham	Gosport, Hants.
CO	RNSD Colerne	Site 'A' Colerne, near Chippenham, Wilts SN13
CT	RNAD Coulport,	RNAD Coulport, Cove, Dumbartonshire, Scotland
DA	S & T Royal William Yard,	Stonehouse, Plymouth, Devon
DB	HM Victualling Depot	Wrangaton, Plymouth, Devon
DE	Weapon Control Store, 5411	HM Naval Base, Devonport, Plymouth, Devon PL1
DF	RNSD Deptford,	London SE8
EA	RNSPDC Eaglescliffe,	MOD(N), Eaglescliffe, Stockton-on-Tees, Cleveland TS16
EX	RNSD Exeter	Topsham Road, Countess Wear, Exeter
HM	RNSD Hartham	Copenacre (for Hartham) Hawthorn, Wilts SN13
KI	S&T Royal Elizabeth Yard	Kirkliston, West Lothian
LA	S&T (N) Lathalmond	Gask Sidings, Lathalmond, Dunfermline, Fife
LE	MOD(N) Leafield Works	Leafield Trading Estate, Neston near Corsham, Wilts SN13
LL	RNSD Llangennech	Mwrwg Road, Llangennech, Llanelli, Dyfed SA14
MA	RNSD Multi Activity	Copenacre, Hawthorn, Wilts SN13
MP	RNSD Monks Park	Copenacre, Hawthorn, Wilts SN13
NA	S&T (N) Royal Elizabeth Yard	Kirkliston, West Lothian
PL	S&T (N) Portland	HM Naval Base, Portland, Dorset DT5
PO	S&T (N) Naval Store No 50	HM Naval Base, Portsmouth, Hants PO1
RO/ RS / RY	S&T (N) Rosyth	HM Naval Base, Rosyth, Fife KY11
SA	S&T (N) Royal Clarence Yard	Gosport, Hants PO12
SG	S&T (N)	Admiralty Compass Observatory, Ditton Park, Slough, Berkshire SL3
SQ	RNSD Spring Quarry	Copenacre, (for Spring Quarry), Hawthorn, Wilts SN13
TI	RNSD Thorney Island	Thorney Island, Emsworth, Hants
WO/ WT	RNSD Woolston	Archery Road, Woolston, Southampton, Hants

S&T(N) = Supply and Transport (Naval) RNSD = Royal Naval Stores Depot

## Part 5 – The Fleet Air Arm

### 5.1 – Administrative History

#### 5.1.1 – Royal Naval Air Service

The Royal Naval Air Service was in operation from 1914–18, operating alongside the Royal Flying Corps which was administered by the army. Towards the end of the Great War, on 1 April 1918 both organisations were merged into the new Royal Air Force, and the naval element became known as the ‘Fleet Air Arm of the Royal Air Force’. For the next 20 years the Navy would make repeated efforts to regain control of its flying facility.

#### 5.1.2 – Air Ministry Control

- a) Between August 1919 and March 1922 the Admiralty and the War Office made a number of proposals to split the Royal Air Force. The former wished to obtain a reconstructed Royal Naval Air Service, whilst the latter hoped for an abolition of the Air Ministry, that portion of the RAF remaining being absorbed into the Army. The Navy pressed for a system of, ‘...personnel for air work afloat being naval officers trained by the RAF’.

- b) In 1921 the Chief of the Imperial General Staff, Sir Henry Wilson, viewed with dismay the increasing tendency to separatism which had inspired the Air Ministry since its creation, quoted with approval the opinion of Marshal Foch that ‘.. *the principle of the absolute independence of the air is inadmissible*’, and advanced the following conclusions of the General Staff:

*‘Any system involving dual control of fighting forces must lead to disaster in war and to friction and extravagance in peace. Aircraft at present, and for many years to come, must act as an auxiliary arm to the naval and military services, and as such should be organised, trained, and employed as integral parts of these services’.*

- c) Later that year the subject came under consideration in the Balfour-Weir Enquiry. It reported that: *‘The general system is that the Air Ministry raises, trains and maintains the Fleet Air Arm. At sea the FAA comes under the operation and disciplinary control of the Admiralty, which designs and build the carriers. The functions of the FAA comprise serial reconnaissance, naval gunnery, spotting, bombing, and fighting. In addition, in times of war capital ships and cruisers will embark aeroplanes, but at present the risk to personnel and material is too great to justify this in time of peace.’*
- d) It was pointed out that the statement was inaccurate in that catapults were now carried in 24 capital ships and cruisers, and all future similar vessels would continue to install this equipment.
- e) This report was followed a year later by the Trenchard-Keyes Agreement, which stated amongst other items, *‘Officers and men of the FAA, whether of naval or air force origin, when borne on the books of one of HM ships in commission are governed by naval discipline. When disembarked, units of the FAA come under air force discipline’.*
- f) Six years later there was another concerted effort to effect change by the Salisbury Committee. Once again there were no significant changes.
- g) In May 1935 Lord Monsell, the First Lord of the Admiralty sent a memo to the Prime Minister again expressing deep dissatisfaction with what was effectively dual control of the FAA. There

was much discussion, but nothing happened. Monsell then requested that Sir Thomas Inskip, the Minister for Co-ordination of Defence, examined the problem. In November 1936 his report was forwarded to the Prime Minister, but despite a plea from the First Sea Lord expressing a matter of urgency as the Navy's efficiency was being seriously and increasingly impaired, the cogs of government continued to rotate very slowly. A series of meetings followed and on 21 July 1937 Inskip then tendered a recommendation that all ship-borne aircraft should come under full control of the Admiralty, but shore-based units would remain with the RAF (as Coastal Command). This proposal was reluctantly accepted by both the Admiralty and the Air Ministry; the Navy had wanted more, and the RAF felt that they should have had more say in the matter. On 30 July 1937 the Prime Minister announced the Cabinet decision to the House.

### 5.1.3 – Admiralty Control

- a) The name was then changed from *'The Fleet Air Arm of the Royal Air Force'* to the *'Air Branch'*. The transfer took two years to accomplish, the RAF retaining certain functions of the service such as research and development, and, until the formation of the Ministry of Aircraft Production, they were responsible for the supply of naval aircraft.
- b) Theoretically the FAA ceased to exist on 24 May 1939 when the Admiralty assumed full control. The question of the new name was raised by the Department of Naval Air Divisions in September 1940, regarding the fact that the term *'Fleet Air Arm'* is well known to the public and no explanation was given as to why it had changed. The new expression *'Naval Aircraft'*, was considered easier than *'Fleet Air Arm Aircraft'*, but both terms continued throughout WWII, together with *'Royal Naval Air Service'*, and *'Naval Air Service'* with the majority generally using the term *'Fleet Air Arm'*.
- c) In 1941 the Admiralty took over operational control of RAF Coastal Command.
- d) In July 1946 it was decided that the terms *'Fleet Air Arm'* and *'Naval Air Arm'* should be dropped, with the proviso that the former term should be retained if pertaining to the unit's activities between April 1918 and May 1939. Furthermore the terms: aircraft, pilots, aircrew etc should be used on their own unless a distinction from the RAF was required, in which case the term *'Naval'* should precede.
- e) Subsequently Admiralty Fleet Order 5631/46 was issued on 6 September 1946 which formally abolished the use of the terms *'Fleet Air Arm'*, and *'Naval Air Arm'*, with the exception that the former could be used in a historical context. Finally the term *'Naval Aviation'* would be used to describe the organisation as a whole. This order caused even more confusion and some months later the term *'Fleet Air Arm'* was reintroduced by the Sea Lords with the statement:
 

*'Their Lordships have decided to reintroduce the title 'Fleet Air Arm' to describe that part of the Royal Navy which is engaged on flying activities. The term 'Naval Aviation' has the merit of emphasising that those specially concerned with flying in the Royal Navy are an integral part of it. Whilst adhering to this concept however, their Lordships have been greatly influenced by the strong appeal which the title 'Fleet Air Arm' with its glorious wartime associations, makes to many of the naval aviators of today, and to members of the public'.<sup>22</sup>*
- f) The term *'Fleet Air Arm'* remains to this day.

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<sup>22</sup> ADM1/24535

## 5.2 – The Development of Naval Flying

### 5.2.1 – Pre World War I

- a) In June 1914 the Royal Flying Corps was split in two units, when the Admiralty announced the formation of the Royal Naval Air Service (RNAS). The new maritime service consisted of the Air Department (Admiralty), the Central Air Office, the Royal Naval Flying School and a number of Royal Naval Air Stations.
- b) The Admiralty had asked for volunteers from officers of the fleet to undergo a course of flying instruction at Eastchurch. Four officers were selected and the first course began on 2 March 1911. In October 1911 one of the new pilots, Lieutenant Samson persuaded the Admiralty to purchase two aeroplanes and also send 12 naval ratings to Eastchurch, as the basis of a naval flying school. On 25 December 1911 an agreement was reached to rent the aerodrome at £150 per year. Until the outbreak of WWI, Eastchurch was a major centre for aircraft production and pilot training, with a total of 50 Aviator's Certificates being awarded during this period.
- c) The following October, the Admiralty had decided to establish a chain of seaplane and airship stations on the east-coast of Britain. The first to be completed was the seaplane station on the Isle of Grain, commissioned in December 1912, with Lieutenant J W Seddon as officer in command. Four more establishments followed, in the next six months, with seaplane stations at Calshot, Cromarty, Felixstowe and Yarmouth. HMS *Hermes* replaced HMS *Actaeon* on 7 May 1913, as headquarters of the Naval Wing and her commanding officer was Captain G W Vivian, RN who was also given charge of all coastal air stations. An airship station was then constructed at Kingsnorth, completed in April 1914, by which time all airships had been handed over to the Admiralty.
- d) In the naval manoeuvres of July 1913, the *Hermes* was equipped with launching platforms and two seaplanes and operated with the fleet. On 26 October 1913, Winston Churchill, the First Lord of the Admiralty, outlined his future policy for the RNAS. He recommended three new types of aircraft:
  - An overseas fighting seaplane, to operate from a ship
  - A scouting seaplane to work with the fleet at sea
  - A home-defence fighting aeroplane, to repel enemy aircraft and to patrol the British coast.
- e) At the request of the Secretary of War (Lord Kitchener), the First Lord of the Admiralty was invited in September 1914, to become responsible for home defence against enemy aircraft.
- f) At the end of 1913, HMS *Hermes* was paid off, and the headquarters of the Naval Wing transferred to the Central Air Office, Sheerness. Captain Scarlett, RN (second-in-command on *Hermes*), was placed in charge with the title of Inspecting Captain of Aircraft.
- g) On 1 July 1914, the separate existence of the Royal Naval Air Service (with its own constitution) was officially recognised, with administration coming under the Air Department of the Admiralty and the Central Air Office. The first real opportunity to demonstrate its use in connection with naval operations came during the review of the fleet by the King, at Spithead, from 18 to 22 July 1914. On 20 July an organised flight of 17 seaplanes, and two flights of aeroplanes in formation, headed by Commander Samson, flew over the fleet. Three airships from Farnborough and Kingsnorth also took part.



### 5.2.2 – World War 1

- a) By 4 August 1914, the day Britain declared war with Germany, the Royal Naval Air Service comprised an airship section with stations at Kingsnorth and Farnborough, and nine aeroplane and seaplane stations:
  - Calshot – seaplanes
  - Dundee – seaplanes
  - Eastchurch (training) – established in December 1911 as the Naval School of Flying
  - Felixstowe – seaplanes
  - Fort Grange – landplanes
  - Isle of Grain
  - Great Yarmouth – seaplanes and landplanes
  - Killingholme and Skegness – seaplanes and landplanes.
- b) At the beginning of the war, the RNAS possessed 52 seaplanes, 39 aeroplanes, and 7 airships. Only two aircraft were fitted with machine-guns, and one airship with a Hotchkiss gun, all other aircraft being equipped with rifles. The Isle of Grain had four Hales grenades and both Hendon (the station for the defence of London) and Felixstowe had twelve each. In contrast, Eastchurch had a 150 hand-grenades, 42 rifle grenades, 26 twenty-pound bombs, and a Maxim gun.
- c) A few days before the declaration of war, instructions were issued, such that the duties of scouting and patrol were to be secondary to the protection of the country against hostile aircraft; all aeroplanes were to be kept at readiness. It was not until 21 December 1914, that the first air-raid took place on Britain, when a single aircraft dropped bombs close to the Admiralty Pier at Dover. A month later on the night of 19/20 January, the first airship raid on Britain took place.
- d) On the 24 August 1914, the Government approved the formation of two RNAS squadrons, one to be based at Fort Grange.
- e) The Naval Wing had conducted experiments with the mounting of machine-guns to aircraft before the outbreak of WW1. The RNAS therefore, was more experienced in using aircraft as a fighting machine than the RFC, and accordingly, became responsible for the defence of Britain while the RFC, had the task of scouting for the British Expeditionary Force.
- f) On the outbreak of war however, the role of the RNAS was to support the BEF during its passage across the Channel, and regular patrols were flown between Westgate and Ostend. The earliest measure of defence for the UK, ordered by the Admiralty, was the institution of a coastal patrol of the East Coast, from Kinnaird's Head in Aberdeenshire, to Dungeness in Kent. Incomplete RFC squadrons, undertook the northern and southern extremes, while the RNAS patrolled the most vulnerable part.
- g) These arrangements were altered slightly after the Germans had established themselves in Belgium, as it was believed that they would use Belgium to attack the vulnerable points along the Thames Estuary. For home defence the RNAS were therefore, concentrated in a line between the Humber and the Thames estuaries.

- h) For anti-submarine patrol duties, there were three main types of operational RNAS stations:
  - Marine Operations (Aeroplane) Station – aerodrome for landplanes
  - Marine Operations (Seaplane) Station – seaplane station for seaplanes
  - Marine Operations (Balloon) Stations – aerodrome for balloons used in conjunction with Naval craft on convoy or patrol duties.
- i) There were also Airship Patrol Stations, dedicated to either rigid or non-rigid airships.
- j) Each station came under the command of the local Naval C-in-C or Senior Naval Officer at the nearest Naval base; for example, the Marine Operations (Aeroplane) Station at Seahouses, Northumberland, came under the Senior Naval Officer, Tyne for operations.
- k) An airship patrol of the Channel was established from 10 August 1915 and undertaken by airships numbers 3 and 4, a typical patrol lasted twelve hours, whilst an average time for a seaplane was just three.
- l) In May 1915, the first RNAS kite balloon sections were despatched to France. Wing Commander Maitland, RNAS had, during January 1915, inspected a Belgian kite balloon which had been flying at a time when British balloons were grounded due to the poor weather. He therefore came to the conclusion that captive spherical balloons were handicapped by the weather and recommended the formation of kite balloon sections using sausage-like streamlined captive balloons. The first British wartime dirigible became known as the SS type or, Submarine Scout. This particular balloon consisted of a modified BE2c fuselage fitted with a 70hp Renault engine suspended beneath a simple envelope of rubberised fabric. They were designed for searching narrow channels such as the Dover Straits or Irish Narrows.
- m) The assembly and testing of a new and larger type of non-rigid airship began in September 1915, known as the Coastal Class. This was essentially an Astra-Torres envelope with a car made from two Avro fuselages joined together with their tails removed. They could cruise at 45 mph and had an 11 hour endurance. In January 1916, the first Coastal Class airship station was commissioned at Pembroke, manned by personnel from the airship station at Marquise. On 15 March, Howden and Longside opened, and also in March, the first airship shed at Cranwell had been completed. Eventually all free balloons were transferred from Wormwood Scrubs when Cranwell took over the training of airship officers and men from Kingsnorth.
- n) The Mullion airship patrol station, near the Lizard opened in June 1916. Situated on the flank of the western approaches, it became one of the most active anti-submarine patrol centres.
- o) A reorganisation of the RNAS by the Admiralty Air Department was undertaken on 1 August 1915. The air stations were now grouped together for operations under the senior naval officer of the nearest naval base. This had the immediate effect of generating a closer liaison between air and surface craft. Admiral Bacon for example now became responsible for the aeroplane and seaplane bases at Dover and Dunkirk, together with the SS airship stations at Capel and Polegate. To advise him on air matters, Wing Commander C L Lambe was appointed to the Admiral's staff.
- p) Meanwhile, back in January 1915, all stations except those west of Farnborough had been instructed to keep two aircraft ready for action on receipt of a warning of an impending night air-raid. During February, landing grounds had been prepared at Blackheath, Enfield, Eynsford, Romford and Wimbledon. All were located close to a military unit to help with the laying out

for aerodrome lights. When night flying was in progress, both Hounslow and Northolt would be illuminated. By May, the aerodromes at Brooklands, Dover, Joyce Green, Shoreham and Sutton's Farm each had at least one aircraft at readiness for home defence night flying.

- q) Lord Kitchener intervened and ordered General Henderson to help the Admiralty deal with Zeppelin raids. A plan was drawn up by the Admiralty and the War Office during October 1915 for an air defence scheme which formed the embryo of what became known as LADA (London Air Defence Area). The idea was that, an observer reporting screen was to be set up from the coast to within a few miles of London, behind these were to be three night-landing grounds each manned by two pilots of the RFC, and lastly, a screen of mobile guns and searchlights was located on the outskirts of north-east London.
- r) The first serious British attempt to operate aircraft from ships took place in mid 1917 when the small battlecruiser HMS *Furious* was converted into a primitive aircraft carrier by removing her forward turret to produce a 76 yard strip from which an aeroplane could be launched. Initial experiments provided a complement of five Sopwith Pup aeroplanes, and three Short seaplanes.
- s) After a number of successful trials in the early days it was then anticipated that it should be possible to land back on the ship, though it would not be a forgone conclusion. After some serious setbacks, Britain – in September 1918 – produced the world's first aircraft carrier as we know it today in the form of HMS *Argus* which featured a full-length landing deck.
- t) On 1 April 1918 the Royal Naval Air Service of over 2,000 aircraft and 55,000 men merged into the newly created Royal Air Force. All related material was transferred from the Admiralty to the recently formed Air Ministry. After the Armistice the entire service was run down, in particular the naval elements. Four ships were retained, the *Argus* and *Furious*, together with *Ark Royal* and *Pegasus*, both of which were seaplane carriers.

### 5.3 – Expansion, 1930 to 1945

- a) In the mid 1930s the immediate needs of the FAA were summarised as requiring:
  - Disembarkation airfields and seaplane stations
  - Training airfields and establishments
  - Additional units which would be provided to meet war requirements.
- b) Several airfields were suggested as meeting some of these requirements – Andover, Worthy Down, Donibristle, Eastleigh, and possibly Lee-on-Solent and Ford. All but the last were in the hands of the Navy when the service was transferred from the RAF. Additionally Evanton, Netheravon and Upavon were loaned to the FAA on a short term basis for use by disembarked squadrons.
- c) Six new 'fleet' aircraft carriers were planned in the Illustrious Class, four being built between 1937 and 1940, i.e. HMS *Illustrious*, *Victorious*, *Formidable* and *Indomitable*. The latter then became the model for a new class Implacable which produced two ships, HMS *Implacable* and *Indefatigable*, these being built between 1939 and 1942. The first three would have a complement of three squadrons, each of twelve aircraft. This was somewhat lower than expected, and was due to the large amount of defensive armour carried. However the *Indomitable* was modified during the construction, and extra hangarage allowed a significant increase in the number of aircraft accommodated. This was adopted for the new Implacable class.

- d) Three types of aircraft would be used on the ships: Fighters (F), Fighter-Bombers (FB), and Torpedo bomber reconnaissance (TBR). The intended complements were:

Class	HMS	Avenger TBR	Corsair FB	Hellcat F	Firefly F	Seafire F	Total
Illustrious	<i>Illustrious</i>	12	24				36
	<i>Victorious</i>	12	24				36
	<i>Formidable</i>	12	24				36
	<i>Indomitable</i>	15		24	12		51
Implacable	<i>Implacable</i>	15			15	24	54
	<i>Indefatigable</i>	15			15	24	54

Table 7 – Planned Carrier Aircraft Complements, 1939

### 5.3.1 – Shore-based Requirements

- a) A total of twenty-one new squadrons would be required by this new fleet, and hence training facilities were required on the mainland.
- b) One priority of the Admiralty was to provide a number of airfields within easy reach of the principal ports at Rosyth, Portsmouth and Plymouth. These would be used for disembarked aircraft as one of the chief requirements would be to provide comprehensive maintenance facilities which would be more efficiently performed on the land rather than on the carriers themselves.
- c) Rosyth was already equipped with an airfield; Donibristle had been a naval aerodrome since 1917 and was used for a variety of tasks throughout the inter war period. In May 1939 it was handed over from RAF Coastal Command to the Fleet Air Arm as HMS *Merlin*, and within 18 months all RAF personnel had left the base. A second airfield was required in the area and Crail opened in October 1940 as HMS *Jackdaw*.
- d) Portsmouth's principal station became HMS *Daedalus* at Lee-on-Solent, which was transferred from the RAF on 24 May 1939. One month later, Rear Admiral R B Davies VC moved into the new HQ at Wykeham Hall, as Flag Officer (Air) Home. The Navy then expressed a desire for another airfield in the immediate area, and Thorney Island was proposed, but quickly rejected by the Air Ministry.
- e) None of the immediate bases were available to Plymouth, which was felt would become the main port in the south for the Navy, despite a 300 year association with Portsmouth, which by the late 1930s had become very overcrowded. A torpedo training / embarkation site was urgently needed in this area and after the obvious choice Roborough was refused by the Air Ministry, the Navy decided to construct their own at nearby Aldingborough Flats. This proposal was soon dropped, and a second site to the south of Bovey Tracey called Heathfield was eventually chosen, but again on the recommendation of the Air Ministry's Aerodromes' Board this too was abandoned as it would involve the demolition of the Great Plantation, a huge forested area. A base was also planned at Torpoint, just across the border in Cornwall at a site which subsequently became HMS *Raleigh*. The intention was to construct an adjacent airfield with six hangars on St John's Lake; once again it never materialised.
- f) Efforts were then made to secure Exeter and Weston Zoyland, even though the latter was over 70 miles from Plymouth. After some time these two choices were also rejected, and eventually

St Merryn, one of the original proposals, became the principal base in the South West until Yeovilton was available. It was far from ideal being almost 40 miles from Devonport.

- g) Having made some erroneous decisions regarding the construction of new airfields, the Admiralty realised at this point that they would have to rely totally on the decade of experience within the RAF Aerodromes' Board, and they couldn't do it themselves.
- h) Prior to WWII, the FAA planned to use its air stations, initially for 400 aircraft, increasing to over 760 by March 1940. Three new airfields, Arbroath, Crail and Yeovilton would be available from July 1940.
- i) It was expected that other stations would also be transferred from the RAF before the spring of 1940 and the planned expansion is shown below.

Aircraft based at:	April 1939	March 1940	Increase
Lee on Solent	104	140	36
Ford	80	84	4
Worthy Down	74	78	4
Donibristle	50	89	39
Eastleigh	80	63	- 17
Lympne	0	60	60
Andover	0	42	42
Mount Batten	0	18	18
Old Sarum	0	24	24
Thorney Island	0	42	42
Eastchurch	0	60	60
Gosport	18	68	50
Evanton	0	0	0
Totals	406	768	362

Table 8 – FAA Airfield Expansion, 1940

### 5.3.2 – World War II Airfields

- a) Naval Organisation was generally more structured than that of the RAF, unfortunately there were a very large number of variations. For example Fleet Air Arm airfields were named after birds – with one of the earliest choices HMS *Daedalus* being an exception. Satellite (or tender ) airfields usually bore the same name as the parent, with the addition of a numerical suffix, e.g. Yeovilton–HMS *Heron*, Haldon–HMS *Heron II*. Again there were exceptions, Hatston's tender at Grimsetter was not *Sparrowhawk II* but HMS *Robin*. Ronaldsway became HMS *Urley*, the name being Manx Gaelic for Eagle.
- b) A significant number of RAF stations were part loaned to the FAA on a lodger basis. Units attached to these bases would frequently assist RAF Coastal Command in maritime patrol and attack duties.
- c) The Navy built a number of airfields during WWII, beginning with Hatston which was operational by October 1939. Yeovilton, Arbroath, St Merryn, and Crail followed during the next twelve months.

- d) Naval airfields constructed during the war tended to have four or even five runways in comparison with the RAF's three. The principal reason for this was that naval aircraft were designed for always landing 'into the wind'. Many of them had a narrow undercarriage, which would cause problems when attempting to land with a cross-wind. Since many of the stations were built near the coast the likelihood of experiencing adverse wind conditions was high.
- e) A few stations were fitted with a 'dummy-deck', for Aerodrome Dummy Deck Landing training, (ADDL). This was either a section of a runway, or a separate entity and had markings similar to those found on ships. It was used primarily to allow pilots to become accustomed to the problems typically experienced when manoeuvring aircraft in close proximity to each other. Three stations (Arbroath, East Haven, and Henstridge) had complete dummy decks equipped with arrestor wires and similar equipment found on carriers of the period. This allowed short landings to be practised, though the limitation to a 'fixed' runway meant that it was useable only on certain occasions when the wind was favourable.
- f) Runways were narrow – 30 yards as opposed to the RAF's 50, and specialised lighting systems were installed which incorporated 'open-up-and-go-round-again lights' and 'round-down' lights which were the equivalent of those installed on the aircraft carriers. A variety of hangars, different from those used by the RAF, were found on FAA airfields, including Fromsons, Mains, and Pentads; their distribution is described in table 19.
- g) The style of control tower, or 'watch office' used by the FAA was significantly different from the types found on RAF stations. It had three floors, plus an observation 'glasshouse' on the roof, which were used accordingly:
  - Ground floor: Teleprinter room (DTN), GPO Switch-gear and PBX, Meteorological Office and Duty Crew Room
  - First Floor: Administrative offices
  - Second Floor: Aircraft Direction Office, Air Traffic Control Room, Radio Room
  - Top floor: Air Traffic Control position.
- h) A different type of vessel, the Light Fleet Carrier, was also designed and built during WWII. They were lightly armoured and therefore could be built much quicker, and had a capacity of 37 aircraft, of which 30 could be operational. Sixteen were eventually built, needing a large number of aircraft.
- i) By June 1942 it had become clear that a significant number of new stations would be required as the Navy proposed to more than double its aircraft strength to 6,350 by the beginning of 1944. Some 1,200 aircraft would require on-shore accommodation, and a number of airfields were transferred from the RAF over the next year. Burscough, Maydown and Stretton were handed over; most had problems of which the RAF were all too well aware. Applications were made for Andreas and Jurby in the Isle of Man, followed by Banff, Barrow, Kinloss and Lossiemouth, to which the Air Ministry responded with a short sharp memo which stated that the Sea Lords clearly had no insight into the situation as all mentioned were strategic bases, vital to the RAF and could not be released under any circumstances.
- j) At this time the Fifth Sea Lord expressed his concern over the airfields offered by the RAF as he felt they were inferior. Also disembarked crews needed to be in touch with their ships, and not stuck on some station fifty miles away from their comrades. Administration was also difficult, as was the mechanism to provide the rum and tobacco allowance to naval personnel based on RAF stations.

- k) Dunino, Hinstock, and Dallachy were eventually offered and accepted – again all had problems and resulted in a memo, *‘The present situation whereby the Royal Navy has to adapt itself to sites which the RAF with its wider scope of interests has found no value can but lead to naval, and therefore national disaster.’*<sup>23</sup>
- l) Rattray was a site discovered and developed without intervention from the Air Ministry, and eventually Ronaldsway was offered on the Isle of Man, a location which was to cause post-war controversy since the Admiralty were under the impression that they owned the site and spent a large sum of money developing it, only to find that it was only leased and the Tynwald were most grateful for all the work which had been done when it later became IoM Airport.
- m) Whereas the RAF began to slowly reduce its programmes at the beginning of 1945, the Navy did not and more airfields were still being sought as the end of the war in Europe neared. Storage facilities for some 300 aircraft were needed, and, to relieve congestion at the Hinstock Beam Approach School, the adjacent redundant RAF satellite Peplow was added.
- n) In addition it was expected that a considerable number of units would embark to take part in the war in the Far East. Interestingly one major airfield – Culdrose was still under construction at the end of the Japanese war, this would eventually become one of the two major Royal Navy airfields in the UK.

### 5.3.3 – Naval Air Squadrons

#### 5.3.3.A Aircrew

- a) Squadrons consisted of 12 aircraft, though there were a number of exceptions to this rule. Each was under the leadership of a Lieutenant Commander, with a Senior Pilot and Observer. There were also Training, Air Engineering, and Air Warfare Officers attached to each squadron.
- b) Naval aircraft were usually single-engined machines which carried a maximum of three crew members. These were:
  - Pilots – Always an officer and appointed to a squadron
  - Observers – Known as Navigators in the RAF, they were also officers, but were appointed to a ship rather than a squadron
  - Telegraphist Air Gunner (TAG) – These were ratings, who frequently were at a lower rank than their RAF equivalent, the Wireless Operator/ Air Gunner.
- c) Naval pilots were proposed by the Admiralty and concurred by the RAF, the appointment being issued simultaneously by both services. Pilots held the rank of Flying Officer, initially and could be promoted to Flight Lieutenant. He also held no RAF rank and his appointments and promotion were dealt with solely by the Admiralty. He could be promoted to Commander RN, where his employment would continue either in a specialist or general role.
- d) The Navy insisted on officers as pilots and observers as they felt that their roles were more demanding than their equivalents in the RAF. Crews in the latter organisation would, as a rule undertake a sortie in order to perform a specific pre-ordained task. Naval crews however would often be sent on a patrol and may suddenly come across an enemy vessel; the decision whether to report or attack would have to be made instantly requiring a well trained, high calibre individual.

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<sup>23</sup> ADM1/13590

### 5.3.3.B Squadron Numbering Systems

- a) There were two principal differences in the way in which the RAF and the FAA numbered their squadrons:
- The RAF did not distinguish between their different commands, i.e. No.1 Squadron was a Fighter Squadron, No.2 was Army Co-operation, No.3 was Bomber. There was some method applied to the 21 Auxiliary Airforce squadrons which were grouped 500–504, and 600–616, less 606. 617 then became ‘*The Dambusters*’ and the haphazard numbering continued, to the extent of having a single squadron (1435) using numbers above 699
  - All RAF squadrons were operational units and replacement crews were supplied from Operational Training Units. The Fleet Air Arm trained their crew in a numbered squadron. This produced two distinct types of squadron:
    - First-Line Units were operational or combat units using number 800 and above
    - Second-Line Squadrons were described as non-operational, ancillary, or non-combat units, and were allocated numbers 700–799.

Sqn Nos.	Pre 1936	1936 – 1940	1940 – 1945	
1 – 400	RAF – All functions			
401 – 439	FAA Fleet	RAF – All functions		
440 – 459	FAA Fleet			
460 – 499	FAA Fleet			
500 – 504	RAF Auxiliary Air Force			
510 – 599	RAF – All functions			
600 – 615	RAF Auxiliary Air Force			
616 – 695	RAF – All functions			
700		FAA Catapult Flights		
701 – 711		FAA Catapult Flights	FAA Amphibian and Floatplane	
711 – 749				
750 – 799		FAA Training		
800 – 809		FAA Fighter		
810 – 819		FAA, TB, TSR, TBR		
820 – 859			FAA Spotter Recce.	FAA TSR,
860 – 869				FAA Dutch
870 – 879			FAA Single Seat Fighter	FAA
880 – 899			FAA Single Seat Fighter	
1435			RAF (Middle	
1700 1749			FAA RNVR TBR	
1770 – 1799			FAA RNVR 2 seat Fighter	
1800 – 1829			FAA RNVR Dive Bomber	
1830 – 1839			FAA RNVR Single Seat Fighters	

Fig. 28: Squadron Numbering Systems



- b) The Navy then adopted a scheme similar to the RAF's Auxiliaries by creating a new block for their RNVr units, which used the numbers 1700– 1999. The chart on the previous page shows how RAF and FAA squadrons were allocated prior to, and during WWII.

### 5.3.4 – Support Facilities

- a) The task of equipment supply, distribution, and maintenance was the function of the Department of Naval Air Material (DAM). Later in the war as the service expanded, it became unmanageable and split into the Department of Air Equipment (DAE), and the Department of Airfield and Carrier Requirements (DACR).

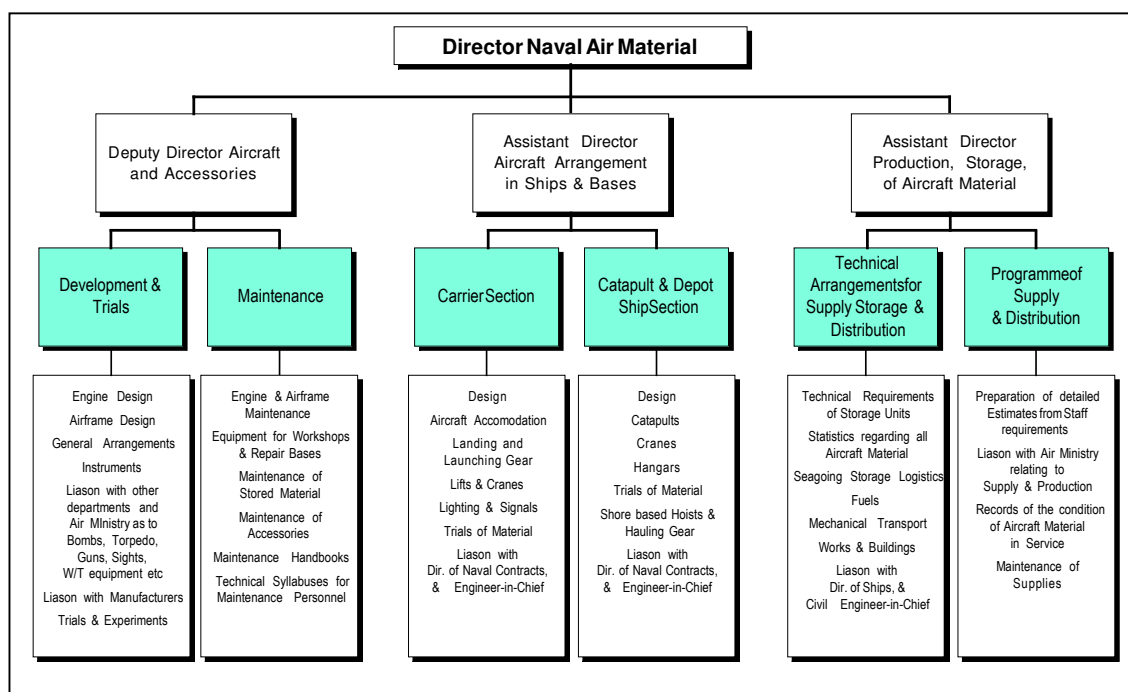


Fig. 29: Organisation of the Department of Naval Air Material

- b) In May 1940 the Supply and Storage of materiel to the FAA was managed through three sites:
- Woolston (Archery Road, Southampton) would be responsible for supplying all FAA stations in England, including Fleetlands Repair Depot and RAF Gosport
  - All other supplies would be sourced through Coventry
  - Donibristle would be responsible for Scottish and Northern Ireland requirements.
- c) Storage of naval aircraft would be undertaken by and RAF Aircraft Supply Unit (ASU) as these were already operational in dispersed areas. The FAA needed only a relatively small number of aircraft which could have been easily stored in a unit of their own but for security reasons were best dispersed.
- d) Maintenance had been performed at RAF units, but with increasing numbers the Navy soon required facilities of their own, and in September 1943 Abbotsinch became their first Aircraft Maintenance Yard. This was followed by Belfast (Sydenham), Donibristle, Evanton, and Stretton, plus two non-aircraft units at Fleetlands in Hampshire, and Almondbank near Perth.
- e) Two Aircraft Receipt and Despatch Units were also created, on the Scottish border at Anthorn and in the south at Culham in Oxfordshire.

- f) Two of the RAF's ASUs, Lichfield and Wroughton were initially provided as joint FAA / RAF suppliers, however High Erroll became an almost exclusive base for the supply of naval aircraft. Bush Barn near Pusey in Oxfordshire was later transferred from the RAF as the Navy's sole Satellite Landing Ground.
- g) The chart below shows the number of operational aircraft available to the RAF and FAA between 1925 and 1945. It displays the percentage of RAF aircraft which were allocated to maritime duties, and the percentage of aircraft employed by the FAA, referenced to all operational British aircraft.

Period	RAF total	RAF maritime duties	Fleet Air Arm
<b>Oct 1925</b>	436	12 (3 %)	105 (19 %)
<b>Jan 1934</b>	816	40 (5 %)	159 (16 %)
<b>Sept 1939</b>	1,911	284 (15%)	232 (11 %)
<b>May 1945</b>	7,214*	1261 (18 %)	1290 (15 %)
	RAF totals include overseas aircraft * not including Transport Command		

Table 9 – Operational aircraft availability 1926–45

### 5.3.5 – Training Facilities

#### 5.3.5.A Pilot Training

- a) Would-be pilots and observers were selected and later trained at HMS *Vincent* in Gosport. The initial seven-week course involved training in seamanship and would include an initial attachment to HMS *Daedalus* at Lee on Solent. This course was followed by an Elementary Flying Training School, administered by the RAF on airfields at Elmdon and Luton. RAF Sealand took over from the latter in February 1942, but by then a number of schools had been set up in North America.
- b) Admiral J H Towers, Chief of the Bureau of Aeronautics, United States Navy made an offer to the British Government in June 1941 to train 30 naval pilots, and 70 RAF seaplane pilots per month. It became known as the Towers Scheme, and was a bold move considering that America was neutral at that time. Initially it accounted for 30 per cent of naval pilots, but increased to almost 45% by late 1944. A total of 21,000 students were involved by the end of the war, though the pass rate was substantially less than this.<sup>24</sup>
- c) Mid war the numbers of pilots being sent to Canada had increased to such a level that a transit camp was needed in the UK as a half-way house for pilots going to, and returning from North America. A few miles north of Millom in Cumberland was the Ministry of Supply workers' camp at Wellbank, originally used by to house construction staff for the new ROF shell filling establishment at Bootle. The site was requisitioned by the Navy and, from November 1943 became HMS *Macaw*, often known as Bootle Station.
- d) Successful 'elementary' pilots would then transfer to the RAF's No.1 Service Flying Training School at Netheravon, when entrants would quickly diverge into either bomber or fighter disciplines. A minimum of 88 hours solo flying was the requirement of the SFTS, though every effort was made to give each trainee over a hundred hours. Just over 50% of pilots would

qualify, and following seven days leave, the newly commissioned pilots would return to a naval training establishment in a second-line squadron, where further necessary skills including deck-landing or catapult launches would be taught. HMS *Argus* was stationed in the Clyde for several years providing much needed additional deck-landing instruction.

- e) Operational Fighter Training was at Yeovilton, with satellites at Haldon, Charlton Horethorne, and Henstridge. Crail and Dunino were used for torpedo instruction, and instrument training was undertaken at Hinstock.
- f) Donibristle, Dundee and Twatt were used initially as catapult launch training stations, later becoming the principal bases for amphibian seaplanes.

#### **5.3.5.B Observer Training**

In May 1939 RNAS Ford was developed as the principal observer school, but just one year later the strong likelihood of enemy action necessitated a move to the part-built airfield at Yeovilton, until permanent facilities were available the following month at Arbroath. A school was also established in Trinidad.

#### **5.3.5.C Telegraph Air Gunners**

HMS *Royal Arthur* at Skegness was the starting point for potential TAGs, followed by a period at *St Vincents*. Worthy Down provided the flying training for the recruits, with an optional advanced course at St Merryn.

#### **5.3.5.D Other facilities**

- a) A number of other specialised facilities were set up, chiefly in connection with operational flying, these included:
  - Deck Landing Control Officers School at East Haven
  - Torpedo Attack School at Crail
  - Night Flying training at Drem
  - School of Air Combat at Yeovilton.
- b) Non-Flying training establishments were often located on RAF stations; there were Naval Air Mechanics Schools at Henlow and Locking, Airframes and Electrical Schools at Henlow and St Athan, and the Naval Ordnance facility at Eastchurch.
- c) The Air Apprentice Training School was located at Lympne airfield until May 1940 when the immediate danger from air attack, coupled with an urgent need for the base to assist with the Dunkirk evacuation prompted a move. The site chosen was Newcastle-under-Lyme, with a number of buildings being very quickly requisitioned in the area. These included:
  - Station HQ in the Old Bank House, Penkhull Street
  - The Town Hall – used as emergency (overcrowded) billets in the early days
  - Clayton Hall – a large two-storied house in its own grounds with out-houses which offered living quarters for 150 apprentices
  - Castle Hotel – accommodation
  - A disused nursing home five minutes walk away for officers' quarters
  - The parish hall, used for ordnance instruction

- Westland Girls' Finishing School, a modern building school for 400 girls in its own grounds with 14 classrooms and laboratory facilities
  - The Craft House – a large three-storied building incorporating an old tannery used for technical instruction rooms
  - A local modern clinic for school children in its own grounds became the station sick quarters.
- d) A total of 560 trainees and staff moved from the Kent airfield within three days to the new establishment. It would eventually accommodate a ship's company of 1,000, half being FAA apprentices, the rest comprising other classes of FAA trainees including WRNS. Huttet accommodation was built for 350 of the latter. Initially the course length was two years, but a further 18 months was added during 1943. The establishment was named HMS *Daedalus II*.

### 5.3.6 – Flying Units

#### 5.3.6.A The Naval Wings

From October 1943 all squadrons about to embark to a particular carrier would become part of a wing. Nineteen were eventually formed and were of two types – fighter, and torpedo-bomber-reconnaissance. This formation applied only to embarked squadrons, and the number of units comprising a wing varied considerably. The term 'Naval' was mandatory to avoid possible confusion with RAF units. These wings eventually became known as Carrier Air Groups (CAGs). In many cases the squadrons allocated to a particular wing might spend only a few days, and in a few cases no time at the HQ base. Some 19 wings were formed during WWII:

2nd Naval TBR Wing – formed at Lee-on-Solent early 1944, and allocated to HMS *Implacable*.

3rd Naval Fighter Wing – formed at Burscough in October 1943, moving to Lee-on-Solent in February 1944. The unit initially was conceived to support the Allied landings in Europe using Seafires and Spitfires. In August the wing moved to Ballyherbert.

4th Naval Fighter Wing – formed on 25 October 1943, operating Seafires intended for use on Escort Carriers.

5th Naval Fighter Wing – using Hellcats, formed late 1943 at Eglinton. The two squadrons eventually joined HMS *Indomitable* in July 1944.

6th Naval Fighter Wing – had a single squadron of Corsairs which were attached to HMS *Illustrious*. It formed at Burscough on 28 February 1944.

7th Naval Fighter Wing – two Hellcat and four Wildcat squadrons assembled at Eglinton in October 1934. They were attached to HMS *Emperor*, *Pursuer* and *Searcher*.

8th Naval TBR Wing – had its HQ at Hatston from October 1943. Barracudas were attached to HMS *Furious* and took part in attacks on the Tirpitz.

9th Naval TBR Wing – HQ at Lee-on-Solent in February 1944, attached to HMS *Indefatigable*.

10th Naval Fighter Wing – two Corsair Squadrons were attached to HMS *Arbiter* and *Slinger*. The HQ was formed at Eglinton in October 1944.

11th Naval Fighter Wing – overseas unit.

12th Naval Fighter Wing – this possibly formed at Tain in early 1944, using Belfast as a transit base before joining HMS *Begum* within a few days.

15th Naval Fighter Wing – this consisted initially of three Corsair squadrons, 1830, 1831

& 1832, until 1831 was absorbed into the other two before joining HMS *Illustrious*. The HQ was formed at Stretton on 8 November 1943.

21st Naval TBR Wing – was formed at Machrihanish in October 1943, and consisted of two Barracuda squadrons intended for HMS *Illustrious*.

24th Naval Fighter Wing – consisted of two Seafire squadrons, based at Henstridge from 25 October 1943 until joining HMS *Indefatigable*.

30th Naval Fighter Wing – two Seafire squadrons joined HMS *Implacable* from Machrihanish in November 1944.

31st Naval Fighter Wing – formed at Hatston in October 1943, but then cancelled.

45th Naval Fighter Wing – formed in October 1943. The HQ was believed to be Burscough though its two squadrons were based at other locations until February 1944, when they were transferred via that airfield and the transit station Renfrew to HMS *Atheling*.

47th Naval Fighter Wing – consisted of two Corsair Squadrons based at Stretton, from 17 January 1944 until they joined HMS *Illustrious* six weeks later.

52nd Naval TBS Wing – consisted of 815 & 817 Squadrons. The HQ was possibly Lee-on-Solent or Tain, and two squadrons of Barracudas originally intended for HMS *Victorious* instead joined HMS *Begum* in February 1944. Two Machrihanish squadrons then formed the wing which transferred to HMS *Victorious* in March 1944.

#### 5.3.6.B Carrier Air Groups.

Twenty-three CAGs were initially planned, and seven never materialised. Most of the remainder has their HQ either overseas or ship based. The exceptions were:

17th CAG – formed at Eglinton in October 1947 with Sea Furys and Fireflies for HMS *Theseus*. It later disbanded and reformed on two occasions at St Merryn (October 1949) and Arbroath (May 1951).

18th CAG – formed at Dartmouth in May 1947 with Seafires and Fireflies for Royal Canadian Navy operations on HMS *Warrior*.

19th CAG – was also formed at Dartmouth in May 1947 for operations as above.

20th CAG – operated from March 1946 to 2 July 1948 at Lee on Solent. It provided Fireflies and Seafires for HMS *Ocean*. On 28 August 1948 the unit moved to Eglinton working with Sea Furies and Fireflies for HMS *Sydney* until September 1953.

21st CAG – was based at St Merryn from 19 March 1950 – 30 June 1951. Its function was to provide Sea Furies and Fireflies for HMS *Sydney*.

#### 5.3.6.C Training Air Groups.

TAGs were formed from the spring of 1946 onward, and operated in a similar manner to the CAGs, except that they used second-line squadrons:

50th TAG – Yeovilton, May 1948 – January 1952

51st TAG – Eglinton, May 1946 – November 1946, then Lee on Solent July 1948 – 1950

52nd TAG – Eglinton, August 1946 – March 1947, then Culdrose February 1950 – August 1951

53rd TAG – Eglinton, June 1950 – January 1952

### 5.3.6.D Mobile Naval Air Bases

- a) In 1942 the idea of producing mobile shore stations (airfields) which could support disembarked aircraft from the fleet when operating overseas was conceived by the DNAD. It took two years to become a reality. The original title, Mobile Naval Airfield Units was later changed to Mobile Operational Naval Air Bases (MONABs), and the HQ for the scheme was at RAF Ludham in Norfolk, becoming HMS *Flycatcher* on 4 September 1944. It moved to Middle Wallop in February 1945.
- b) Ten MONABs were eventually formed, the last five from Middle Wallop when the HQ moved from Ludham. The names given to these units all began with 'Nab', e.g. HMS *Nabbington*, *Nabthorpe*, *Nabstock*, *Nabcatcher* etc. Many of these were despatched to Australia. HMS *Nabsford* was a Transportable Aircraft Yard, commissioned at Ludham, assembled at Riseley before moving to Australia in early 1945.
- c) In practise the units operated in a very restricted capacity and all had been struck off by August 1946 with the exception of No.10 HMS *Nabhurst*. This was created too late to see action in WWII, but reformed in March 1951 at Henstridge. Responsible for maintaining crated equipment which included transport, and living and workshop accommodation, it was paid off in July 1955.

## 5.4 – Post War, 1945 to 1950

- a) In April 1945 the Fleet Air Arm possessed 72 front-line squadrons; a year later half had been disbanded. It also had 45 airfields, compared with just 5 in 1939.
- b) On 1 May 1945 the title of Fifth Sea Lord and Chief of Naval Air Equipment was changed to the Fifth Sea Lord (Air). He was responsible for the general direction and co-ordination of all naval air policy. Equipment and naval air material administration was transferred to a controller. On 30 October the posts of Flag Officer Carrier Training, and Commodore Flying Training were abolished.
- c) The Admiral (Air) then became responsible for first-line squadrons, training squadrons, and disembarked units. Additional responsibility included the administration of the appropriate naval air stations, and post-graduate air training schools. These included:

Ayr	Burscough	Dale and Kete	Dounreay
Eastleigh	Fearn	Ford	Gosport
Hatston	Lee-on-Solent	Machrihanish	Middle Wallop
St Merryn	Townhill <sup>25</sup>	Twatt	Woodvale.

- d) A new post of Flag Officer Flying Training was then established with HQ at Donibristle. He was responsible for carrier training and carrier flying-training functions, which included individual aircrew and deck-landing training facilities. Reporting to the Admiral (Air) he controlled the following stations:

Arbroath	Ballyhalbert and Kirkistown	Bootle
Crail	Drem and Macmerry	East Haven
Eglinton and Maydown	Halesworth	Henstridge
Hinstock and Peplow	Inskip	Ratray
Ronaldsway	Yeovilton	Zeals

<sup>25</sup> HMS *Waxwing* – transit camp near Dunfermline for personnel awaiting draft.

- e) Other changes included the renaming of 'First-Line' squadrons to 'Front-Line' squadrons, and 'Training and Miscellaneous Aircraft' to 'Training and Ancillary Aircraft'. The term 'Naval Air Arm' would be replaced by 'Flying Branch'.<sup>26</sup>
- f) At the end of WWII the requirements were estimated at a front-line strength of 500 combat aircraft, plus 300 RNVR aircraft based on reserve carriers, for use in war or during an emergency. This was based on three fleet carriers of 60 aircraft each, plus nine light aircraft carriers of 36 aircraft each. New aircraft would replace many of the obsolete WWII models, and by the end of 1945 a jet, the de Havilland Vampire had landed on the deck of HMS *Ocean*.
- g) In addition a further 900 plus aircraft would be eventually required for ancillary squadrons, calculated on the basis of:
- |                          |                              |
|--------------------------|------------------------------|
| 200 elementary trainers  | 100 advanced training        |
| 350 operational trainers | 150 FRU                      |
| 30 target towing         | 100 communications aircraft. |
- h) Manpower requirements were estimated at 49,000 Naval air arm, plus 3,600 general service personnel. The FA would continue to use RAF storage facilities for probably the next ten years, as they were still considered to be the experts in this area.
- i) The need to have bases close to the ports was reduced somewhat as aircraft speeds and ranges had increased considerably. In 1946 Bramcote was transferred to the Navy and remained in use for thirteen years – it was further from the sea almost any other airfield in the UK. In August the Reserve Aircraft and Technical Training Command administered the following stations:

FAA Installations:

<b>Abbotsinch</b>	<b>Anthorn</b>	Arbroath	Ayr
<i>Belfast</i>	<i>Burscough</i>	Crail	Culham
Donibristle	<i>Dounreay</i>	<i>Dunino</i>	<b>Evanton</b>
Fleetlands	<i>Inskip</i>	<i>Machrihanish</i>	<i>Ronaldsway</i>
<b>Stretton</b>	<i>Twatt</i>	Worthy Down	Yeovilton.

RAF Installations:

Defford	Hednesford	Kirkham	Locking	Melksham.
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- j) Italicised units were already on 'care and maintenance', those in bold became Reserve Aircraft Stations on 25 April 1947, others became Reserve Aircraft Sections. However the Navy then took control of four airfields in Scotland and Northern Ireland:

Banff	Cluntoe	Skeabrae	Toome.
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- k) By now the structure of the Navy had changed considerably from its wartime peak of 72 operational squadrons to less than half that number. Aircraft carriers were reduced in number from 34 to just 3.
- l) 1947 marked the beginning of a significant change in the way the FAA would operate in the future. The formation of 705 Squadron with Sikorsky helicopters resulted from successful experiments undertaken at the very end of WWII with a number of American R-4 Hoverflies, assigned to 771 Squadron at Portland. The Navy believed that rotary-wing machines would

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<sup>26</sup> ADM1/24535

play a very important part in the anti-submarine role, and within a few years the first variant of the Sikorsky S-55, built under license in the UK by Westlands as the Whirlwind, was being delivered to 705 Squadron.

## 5.5 – 1950 to 1960

- a) Operation Solitaire involved changes in the tasks of a number of RN training facilities in the UK. Between September and December 1953, the following moves were implemented:
  - The Observer School moved from St Merryn to Culdrose
  - The Naval Air Fighter School moved from Culdrose to Lossiemouth
  - The Operational Flying School (Anti-Submarine) moved from Lossiemouth to Culdrose
  - The Operational Flying School (Fighter) moved from Lossiemouth to Yeovilton
  - Technical Training HQ moved from Yeovilton to St Merryn.
- b) Ten years after the end of WWII the Navy had just 16 airfields:
  - Squadron Bases: Brawdy, Ford, Lee-on-Solent, Yeovilton
  - Training Bases: Arbroath, Bramcote, St Merryn (ground)
  - Schools: Culdrose (observer), Eglinton (anti-submarine), Lossiemouth (fighter), Stretton (LSO), Helicopters – Gosport (ATDU)
  - Aircraft Holding Units and Yards: Abbotsinch, Anthorn, Belfast, Donibristle, Fleetlands, Stretton.
- c) Pilot training was provided by the RAF with initial training using the Percival Provost T1 at Syerston (1FTS). Then followed an advanced training course at Valley (7FTS) with the de Havilland Vampire T11. Successful pilots would then transfer to either the fighter pilot training school at Lossiemouth, or to Eglinton for anti-submarine duties.
- d) No.700 Squadron reformed in 1955 as the Trials Requirement Unit, a specialised entity to undertake tactical and technical trials on all types of aircraft, weapon systems and aircraft instrumentation and radio systems. In addition it would liaise closely with HMS *Aerial*, *Excellent*, *Dryad* and the Admiralty on all relevant matters.
- e) Aircraft carriers were modernised, incorporating three British inventions which would revolutionise the efficiency and safety of existing and future ships. These were:
  - The Angle Flight Deck – allowing the use of faster heavier aircraft
  - The Steam Catapult, which aided the above on take-off
  - The Mirror Landing Sight which obviated human error from the Deck Landing Control Officer.
- f) By 1956 the FAA command chain had been restructured and consisted initially of the Second and Fifth Sea Lords, the former being responsible only for personnel. The latter controlled the Director of Naval Air Warfare, and the Director, Naval Air Organisation and Training.
- g) There were also two senior positions, reporting to the C-in-C Home Fleet, these being the Flag Officer Air Home – FOA(H) and the Flag Officer Aircraft Carriers – FOAC. Subsequent to the ending of WWII, but prior to 1952 there had been a Flag Officer Third Aircraft Squadron. This position then became The Flag Officer Heavy Aircraft Squadron, until it was became the FOAC in 1954.



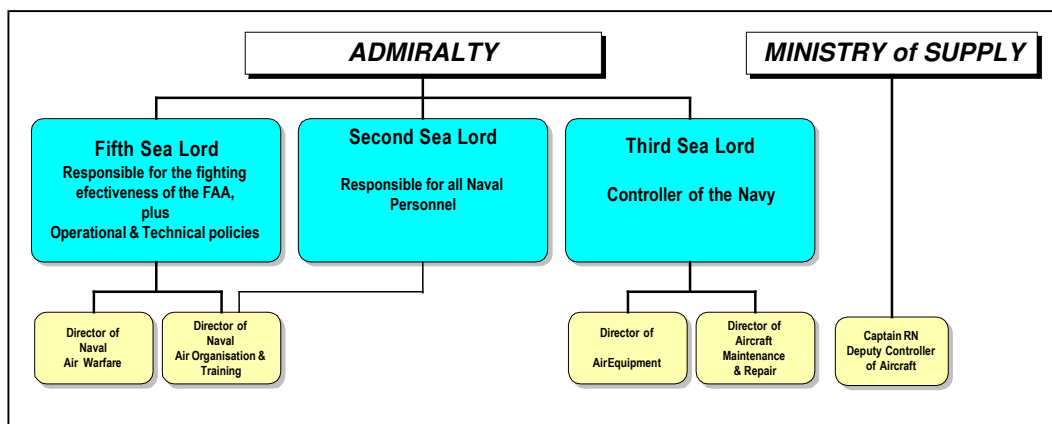


Fig. 30: Fleet Air Arm – Senior Administration, 1956

- h) The position of Fifth Sea Lord was abolished in 1959, the senior administrator then becoming the Assistant Chief of Naval Staff (Operations).
- i) Two training roles were also created in the mid fifties, the Flag Officer Flying Training, and the Flag Officer Reserve Aircraft. Ground Training came under the command of a separate staff officer, (Captain RN) reporting to the FOA(H).

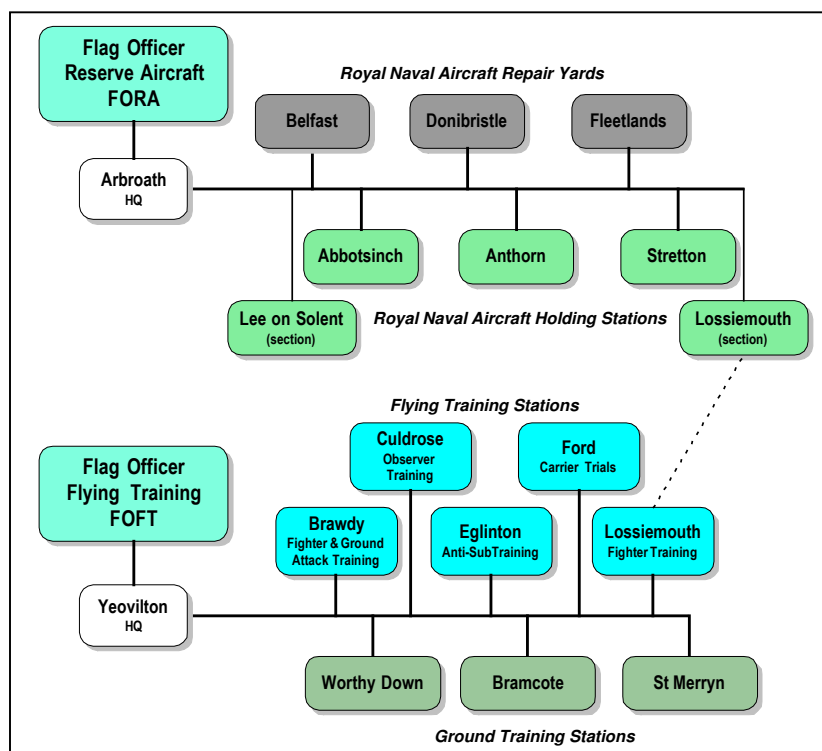


Fig. 31: Fleet Air Arm, Training and Support, 1957

- j) In 1957 the FAA were in control of the 18 stations shown above. The function of the three ground establishments was:
- Bramcote – Technical training for Naval Airmen Aircraft Mechanics
  - St Merryn – School of Aircraft Maintenance and Naval Ordnance
  - Worthy Down – Training Establishment for maintenance ratings employed in the servicing of all radio and electrical equipment for the Fleet Air Arm.

## 5.6 – 1960 to 1980

- a) By 1960 more than half of the above stations had closed, and just eight remained:

Abbotsinch	Arbroath	Belfast	Culdrose
Fleetlands	Lee-on-Solent	Lossiemouth	Yeovilton.

- b) Pilot training was then undertaken initially by the RAF's No.1 FTS at Linton-on-Ouse, and subsequently Lossiemouth – the Naval Air Fighter and Strike School, or Yeovilton – the Naval All-Weather Fighter school. In the meantime Culdrose had become the Navy's principal helicopter base, which also provided observer training for fixed-wing aircraft.
- c) The RNVR squadrons were disbanded on the grounds of economy and nine airfields closed over the next few years. In the late sixties, there were still eight stations, in use however some changes had been made:

Arbroath – technical training	Lossiemouth – return to RAF imminent
Brawdy – pending return to the RAF	Portland – helicopters only
Culdrose – helicopter training	Belfast – repair and storage
Lee-on-Solent – technical training	Yeovilton – fixed-wing training.

- d) In addition Fleetlands remained as the helicopter repair station, and Merrifield was taken on as a satellite to Yeovilton to relieve congestion in the area.
- e) By 1974 the RAF had assumed responsibility for flying training at Yeovilton (both fixed-wing and helicopters). Two squadrons of the latter were based at Prestwick.

## 5.7 – Post 1980

- a) In 1982 there were seventeen front-line squadrons, plus seven second-line squadrons and a small number of additional support flights. Shore based units were under the control of the Flag Officer Naval Air Command, FONAC, who had responsibility for five airfields and the maintenance establishment, Naval Aircraft Repair Organisation. The latter consisted of two units, Fleetlands – the Royal Naval Aircraft Yard, and the Royal Naval Aircraft Workshops at Almondbank. Additional maintenance support was available at RAF Kemble for fixed-wing aircraft, and the RNAY at RAF Wroughton for helicopters.
- b) Disembarked aircraft became the responsibility of a Flag Officer Flying, principally FOF3, though FOF1 and FOF2 had control over some small flights.

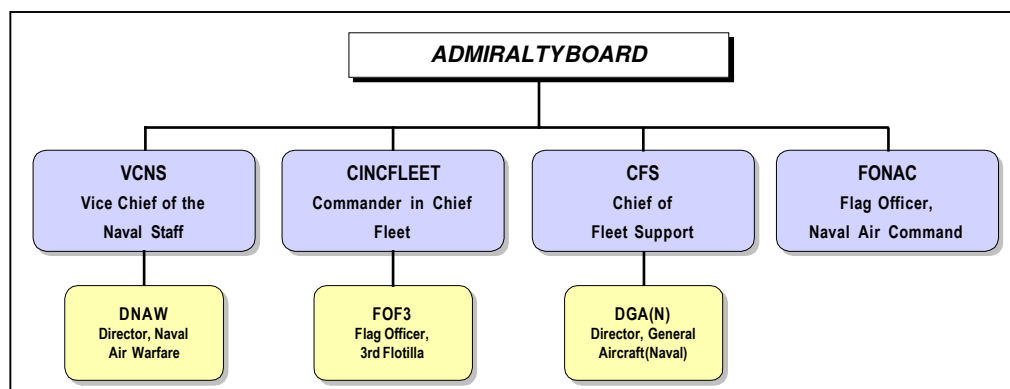


Fig. 32: Fleet Air Arm – Senior Administration, 1982

- c) By 1985 only two squadrons of fixed-wing aircraft remained, these being 800 and 801, using Sea Harriers on Invincible class anti-submarine carriers. Seven other squadrons were equipped with rotary-wing aircraft (Lynx, Sea King and Wasp). Two of these were allocated to Royal Fleet Auxiliary ships.

## 5.8 – Appendices

Table 10 – Senior Rank Comparison

Royal Navy	Royal Air Force	Army
Admiral of the Fleet	Marshal of the RAF	Field Marshal
Admiral	Air Chief Marshal	General
Vice Admiral	Air Marshal	Lieutenant General
Rear Admiral	Air Vice Marshal	Major General
Commodore	Air Commodore	Brigadier
Captain	Group Captain	Colonel
Commander	Wing Commander	Lieutenant Colonel
Lieutenant Commander	Squadron Leader	Major
Lieutenant	Flight Lieutenant	Captain
Sub Lieutenant	Flying Officer	Lieutenant
Commissioned Warrant Officer	Pilot Officer	Second Lieutenant

- b) At the end of the document are a number of appendices showing:

- Marine (Aeroplane) Operations Stations, August 1918
- Marine (Seaplane) Operations Stations, August 1918
- Training and Repair Marine Operations Stations, August 1918
- Marine Operations (Balloon) Bases and Stations, August 1918
- Parent Airship Stations, Nov 1918
- RNAS Stations – Hangars, 1938–1945
- Royal Naval Air Stations and Lodger Airfields, WWII.

Table 11 – Admiralty Divisions and Staff Pertinent to the Fleet Air Arm, c.1930–65  
(Overleaf)

The table overleaf shows how many of these titles changed several times between the early 1930s to the mid 1960s, due to the very rapid expansion of the service.

Dir = Director

D-of = Director of

Source: Friedman, *British Carrier Aviation*

	Pre WWII	WW II	Post WWII
ACA	Admiral Commanding Aircraft		
ACNS(*)	Assistant Chief of the Naval Staff	ACNS (Weapons)	
		ACNS (Aircraft)	
		ACNS (Foreign)	Merged into ACNS(A) & ACNS(W)
		ACNS (Home)	
		ACNS (Trade)	
AOCA	Air Officer (Commanding) Coastal Area		
CAOR	Chief Advisor, Operational Research	DIR Naval Operational Research	DIR Operational Research
CNR	Chief Naval Representative (to Ministry of Aircraft Production, or Ministry of Supply)		
CNS	Chief of the Naval Staff (1st Sea Lord)		
DACR		D-of Airfield and Carrier Requirements	
DAD	D-of Air Division		
DAE		D-of Air Equipment	
DAM	D-of Air Material	Became DAE, and DACR	
DAOT		Was DNAO	D-of Air Organisation and
DAW		D-of Naval (Air) Warfare	DNAD
DAWT		D-of Naval Air Warfare	DNAD
DCNS	D-of Chief of Naval Staff		Also 5th Sea Lord
DCR	D-of Carrier and Airfield Requirements		
DEE	D-of Electrical Engineering		
DGD	D-of Gunnery Division	D-of Gunnery and Anti Aircraft Warfare	D-of Surface Warfare Division
DMT	D-of Mine and Torpedo	To DTASW	
DNAD	D-of Naval Air Division	DAW DNAO	D-of Naval Air Division
DNAO		D-of Naval Air Organisation Division	To DAOT
DNAS	D-of Naval Air Service		
DNC	D-of Naval Construction		
DND	D-of Navigation and Direction		To DNTC
DNE	D-of Naval Equipment		
DNI	D-of Naval Intelligence		
DNO	D-of Naval Ordnance		
DNOR	was CAOR	D-of Naval Operational Research	To DOR
DNTC		(was DND)	D-of Navigation and Tactical Control
DOD	D-of Operations Division	DOD(Fighter), DOD(Home)	D-of Operations Division
D of D	D-of Dockyards		
D of N	D-of Navigations	To DND, date ?	
D of P	D-of Plans		
DNOT		Was DTD, DOD	D-of Naval Operations and Trade
DNR	D-of Naval Recruiting		
DOR		Was DNOR	D-of Operational Research
DSR	D-of Scientific Research		
DTASW	D-of Mine Torpedo and Anti Submarine Warfare		To DUSW
DTD	D-of Trade Division		
DTSD	DIR Tactical and Staff Duties Division		To DTWP
DTWP		Was DTWP	DIR Naval Tactics and Weapons Policy Div.
DUSW		Was DTASW	DIR Undersea Warfare Division
E-in-C	Engineer in Chief		
NAS	Naval Air Section		
RAA	Rear Admiral, Aircraft	To VAA	
SAC	Superintendent of Aircraft Construction		
SDPC	Ship Design Policy Committee		
VAA	Was RAA	Vice Admiral (Aircraft)	
VCNS	Was VCNS(Air)	Vice Chief of the Naval Staff, 5th Sea Lord	

## Part 6 – The Royal Marines and Ancillary Naval Services

### 6.1 – The Royal Marines

#### 6.1.1 – Early History

- a) The Marines were created in 1664 as a regiment of soldiers intended to operate with the Royal Navy. On 28 October 1664, following an Order-in-Council instruction, 1,200 soldiers were recruited and became the Duke of York and Albany's Maritime Regiment of Foot, since the Duke was Lord High Admiral. The following year they were renamed the Princess Regiment after Prince George of Denmark. Within 17 years six regiments had been created, but were then disbanded at the end of the War of Spanish Succession in 1713.
- b) In 1755 fifty new companies of maritime soldiers were formed, grouped into three divisions, Chatham, Portsmouth, and Plymouth under the control of the Admiralty. The number of companies continued to increase over the years, until King George III designated the corps the Royal Marines in 1802 as a result of their distinguished service during the recent war with France. Woolwich formed the base of a new division which was created three years later.
- c) By 1914 Royal Marines detachments were available for all ships above destroyer size, and operated as part of the normal crew in gun-turret operation, and secondary armament. During the war they took part in offensives at Gallipoli and Zeebrugge.
- d) Two principal companies were formed at Eastney between 1804 and 1859. They were the Royal Marine Artillery (RMA), known as the Blue Marines, owing to their uniform, and the Royal Marine Light Infantry (RMLI) – the Red Marines. In 1923 these companies were merged into the Corps of Royal Marines.

#### 6.1.2 – WWII

- a) Churchill announced in 1940, the desire to mount offensive raids on enemy installations in Europe, from Norway to the south of France. This would need the creation of specialised forces operating within the Combined Operations strategy, and their experience would be vital if, and when an invasion of Europe became possible.
- b) The first of these units was established in July 1940 and soon ten others were available for operations. They were named 'commando' units after similar organisations encountered during the Boer War which had caused severe problems with the British Army. The new organisations had been formed in specific areas of the UK from 'local' army volunteers:
 

1:        Regimentation of Nos.1–9 Coys	2:        Commando South West
3 & 4:    Southern Command	5 & 6:    Western Command
7:        Eastern Command	8:        London and Somerset
9 & 11:   Scottish Division.	10:      was to be Northern, but did not form
12:      Irish and Welsh.	
- c) Training took place at Inveraray, Largs and on the island of Arran. These were relatively small units and over the next twelve months were responsible for a series of 'nuisance', and other somewhat ineffective raids on France and the Channel Islands.

- d) In October 1941 Lord Louis Mountbatten became Director of Combined Operations, and the following year the operations would stepped up considerably; the geographical constraints described above were completely restructured:

1:	Dartmouth	2:	Weymouth	3:	Largs
4:	Troon	5:	Falmouth	6:	Inveraray
7/8/11:	England ?	9:	Criccieth	10:	Various.

- e) In 1942 the Royal Marines were requested to form their own units. At the end of WWII all army commando units were disbanded, leaving only those of the Royal Marines.

### 6.1.3 – The Units

- a) Nine Marine Units were formed during WWII:

- 40 RM Commando: Formed February 1942 at Deal as ‘The’ RM Commando. In October its official title then became ‘A’ RM Commando for a few days, before being designated 40 RM Commando. The unit served in France and Italy during WWII, before disbanding in October 1945. It then reformed in March 1947, from 44 Commando, and subsequently served in Brunei and Borneo, Cyprus, Malaya, Northern Ireland, Palestine, and Suez.
- 41 RM Commando: Formed at Pembroke Dock, October 1942, from 8th Battalion Royal Marines, and took part in operations in France, Holland, and Italy before disbanding in February 1946 at Llwyngwrl in North Wales. It then reformed at Bickley in August 1950 as an independent unit serving in Korea until disbanding in February 1952 at Plymouth. In March 1960 the unit reformed again at Bickleigh to serve in Kenya, Norway, and the West Indies. There was a brief period in 1977 during which the unit was temporarily disbanded, before reforming to operate in Cyprus and Northern Ireland. It finally disbanded at Deal in April 1981; its personnel were merged with other Commando units.
- 42 RM Commando: Formed at Sway, Sussex in August 1943, and operated in Burma and India during WWII, and subsequently Borneo, Brunei, Malaya, Northern Ireland, and Suez.
- 43 RM Commando: Formed in August 1943 at Hursley near Winchester, it operated in Italy and the Adriatic. Along with 40 Commando it took part in the raid on Comacchio, the name of which was much later used for specialised units within the Marines. It disbanded in September 1945, but later reformed in September 1961 partaking in NATO exercises until finally disbanding in November 1968 at Melville Camp in Portsmouth.
- 44 RM Commando: Formed at Ashurst, Hampshire in August 1943, and was then redesignated 40 Commando RM in March 1947. World War II operations included Burma, and Ceylon.
- 45 RM Commando: This unit was formed in August 1943 at Burley, Hampshire and served in France, including Normandy, and Germany during WWII. Subsequently operations included Aden, Cyprus, Malaya and Northern Ireland. In 1967 the unit moved to Stonehouse, and finally to HMS *Condor* at Arbroath.
- 46 RM Commando: Formed August 1943, at Dorchester, and served in Norway, Belgium and France, including Normandy. It was disbanded in January 1946 at Tunbridge Wells.
- 47 RM Commando: Formed at Dorchester in August 1943, and served in Norway, Holland, and France, including Normandy. It was disbanded at Haywards Heath, Sussex in January 1946.
- 48 RM Commando: Formed at Deal in March 1944, becoming operational principally in Normandy, then Holland and Germany before disbanding at Beeding, near Horsham, in January 1946.

- b) In August 1945 all units had the format of their titles changed, thus:

‘40 RM Commando’ became ‘40 Commando RM’.

#### **6.1.4 – Special Service Units**

- a) These were formed in late 1943 and consisted of a mixture of Army and Marine personnel. The Marine Division HQ at Milford-on-Sea became the organisation’s HQ. The term ‘SS’ was only in use until November 1944 when the title changed from SS Units to Commando Units, possibly to avoid the confusion with the German Waffen-SS.
- SS Commando Group – formed September 1943 with HQ at Milford-on-Sea near Lymington to control four new SS Brigades. It was also responsible for a number of support units including, the Commando Basic Training Centre at Achnacarry, and the Commando Mountain Warfare Training Centre at St Ives. Throughout its four-year existence the HQ moved frequently to a number of locations in London, e.g. Hatch End, and at some point to Petworth. In March 1946 the HQ merged with HQ Training Group Wales to form a new Commando Group HQ at Towyn, Gwynedd, before disbanding in August 1947.
  - 1st SS/Commando brigade – formed November 1943 using personnel from 45 RM Commando and participated in the Normandy Landings, but withdrew after 83 days to the UK. It also took part in operations to penetrate the Siegfried Line and crossing of the Aller, Elbe, Rhine and Weser Rivers. It disbanded in the early part of 1946.
  - 2 SS/Commando brigade – formed in Italy in October 1943 using personnel from 40 and 43 RM Commando. The unit served principally in Italy, but also took part in a number of operations in Albania, the Dalmatian Islands, and Greece, before finally disbanding in September 1945.
  - 3 SS/Commando brigade – formed September 1943 at Dorchester, from 102 Royal Marines Brigade. Served in Ceylon, Hong Kong and also undertook internal security duties. It was still active at the end of the century.
  - 4 SS/Commando brigade – formed September 1943, initially with 41, 46, and 47 RM Commando, 48 being added later. It served in NW Europe following the Normandy landings. After making preparations for Far East operations before the war ended, it returned to UK and disbanded in December 1945.
  - HQ Commando Forces – this was formed in October 1969 at Mount Wise, Plymouth.

#### **6.1.5 – Special Boat Section / Service**

- a) The Special Boat Section was created in 1941 from the Folbot Troop of the Special Air Service which had been formed a little earlier in North Africa. It was then known as the Special Boat Section, comprising voluntary, but experienced canoeists and divers; in 1946 it became part of the Royal Marines School of Combined Operations, with its base at Fremington in Devon.
- b) Throughout the latter half of the 20th century the unit featured in many high profile activities including Korea, Indonesia, Vietnam, Kuwait, and the Falklands. It was also active during the 1980 storming of the Iranian Embassy in London. In 1987 the term ‘Service’ replaced the existing term ‘Section’. It is a much smaller organisation than the better known SAS; its HQ has always been at Hamworthy Barracks, Poole in Dorset.

### 6.1.6 – Comacchio Company / Group RM

- a) Comacchio Company Royal Marines was a specialised organisation formed on 1 May 1980 with its HQ at Condor Barracks, Arbroath, as a maritime counter-terrorist (MCT) organisation. The principal duties were the protection of nuclear and off-shore installations, including oil rigs. It consisted of eight rifle troops, which were split into two companies; 'O' for OILSAFE operations, and 'P', a significantly larger unit which would protect nuclear installations.
- b) In 1983 it was renamed Comacchio Group RM, as a result of an increase in the manpower, particularly in 'O' Company which now had added responsibility with MCT activities world-wide. Four years later the MCT component ended, and certain sections became part of the SBS and moved to Poole. On 1 September 1992 another significant reorganisation took place and both existing companies were doubled in size to four troops, each with its own commander. A third company, 'R' was also formed.
- c) In 2001 it was renamed again as the Fleet Protection Group RM, an HQ Squadron was added and relocated to Faslane.
- d) For many years the operational structure was 3 Commando Brigade Royal Marines. Though controlled by the Commandant General Royal Marines (CGRM), based at Whale Island in Portsmouth, the organisation had its HQ in Plymouth. The 'front-line' of the Commandos consisted of three units, 40, 42, and 45; these being lightly armoured forces of some 600 men each, and always available for immediate combat:
  - 40 Commando – Norton Manor Camp, Taunton, since May 1983
  - 42 Commando – Bickleigh Barracks, Plymouth, since September 1971
  - 45 Commando – RM Condor, Arbroath.
- e) A Commando Unit comprised six companies:
 

A Command Company	A Logistics Company
Two Stand Off Combat Companies	Two Close Combat Companies.
- f) These units were supported by a number of other formations:
  - 29 Commando Regiment, Royal Artillery – based at the Royal Citadel where it formed in 1961 with detached batteries at Arbroath and Poole.
  - 59 Independent Command Squadron, Royal Engineers – this was based for many years at Seaton, Crownhill, Plymouth, and moved to RMB Chivenor in Devon at the end of the century. The Squadron consisted of a headquarters and five field troops, three being field units plus support and reconnaissance troops, and a workshop.
  - 20 Commando Air Defence Battery – originally 20 Battery Royal Artillery in WWII a number of name changes took place during the last half century. It reformed in 1990 at Kirton-in-Lindsey as a result of the Falklands War, when 3 Commando Brigade RM had experienced difficulties due to the lack of air defence. The unit was equipped with the Rapier missile system.
  - 539 Assault Squadron RM – located at Turnchapel, Barton Road in Plymouth The unit was formed in April 1984 as a result of lessons learned in the Falklands conflict Today the Squadron consists of over 100 personnel and is equipped with a variety of landing craft including hovercraft (LCAC), Rigid Raiding craft (RRC), Inflatable Raiding craft (IRC) and Landing Craft Vehicle/Personnel.
  - 845, 846 & 847 Naval Air Squadrons – these were based at Yeovilton and flew Sea Kings or Lynx helicopters.



g) Additional support units available at HQ were:

Brigade Patrol Troop	Electronic Warfare Troop	Tactical Air Control Parties
Police Troop	Air Defence (Javelin) Troop.	

h) The HQ was also responsible for:

- Comacchio Group RM Condor, Arbroath
- Commando Logistics Regiment, Chivenor, Barnstaple, this comprises four specialist squadrons offering logistic support, medical and workshop facilities
- Commando Brigade Air Squadron, Yeovilton
- 1st Royal Netherlands Marine Corps.

### **6.1.7 – Bases**

- a) Until the turn of the century Coypool and Seaton (Tavistock Road) Barracks in Plymouth were home to commando units, whilst North, East and South Barracks in Deal, Kent were used by the Marines School of Music. The latter relocated to Plymouth in 1996.
- b) At the beginning of WWII a training establishment for marines was set up home of the 7th and 8th Royal Marine battalions at Exton in Devon.
- c) The camp was renamed Depot Royal Marines Lymington on 5 September 1941, and was responsible for training some 800 marines a month throughout WWII. Another camp opened at nearby Dalditch to the north of Budleigh Salterton; it was home to the Royal Marines Infantry Training Centre (RMITC). Later, a Commando School was formed in Scotland at Achnacarry 30 miles to the west of Fort William.
- d) In 1946 Lymington was renamed, the Infantry Training Centre, and its satellite at Dalditch closed. The Commando School at Achnacarry eventually moved to Tywyn in Wales.

#### **6.1.7.B Coypool**

- a) This site was opened in May 1941 as a depot for the Royal Electrical and Mechanical Engineers; it had both river and rail access. Its closure was announced in 1961, and was subsequently run down. Due to a substantial increase in home bases for the marines however the site was reopened, and by the late sixties Coypool had become a depot again for the storage of vehicles and equipment.
- b) In 1973 the Sioux and Scout helicopter units from Roborough moved in, but due to economical reasons the base later transferred most of its functions to Chivenor, with the helicopters moving to Yeovilton. The base closed in the mid nineties.

#### **6.1.7.C The Commando Training Centre Royal Marines**

Lymington became the CTCRM in 1970, following a major rebuilding programme. By then the extensive training facilities at Bickleigh Camp had been transferred, together with the Junior Royal Marine Course from Deal. Commandos trained here would then move to one of the three operational units.

#### **6.1.7.D Amphibious Trials and Training Unit Royal Marines**

ATTURM was located on the north coast of Devon at Instow, and was established there since 1979. Its purpose was to develop and trial landing craft, small boats and waterproofing kits for vehicles and equipment, and to train individuals in vehicle waterproofing and deep fording techniques.

**6.1.7.E Operational and Training Establishments c.2000**

Norton Manor Camp, Taunton	Royal Citadel, Plymouth
Turnchapel, Plymouth	Bickleigh Barracks, Plymouth
Chivenor, Barnstaple	Stonehouse, Plymouth
Poole	RM Condor, Arbroath
RNAS Culdrose, Helston	RNAS Yeovilton
HMNB Portsmouth, Portsmouth	HMNB Devonport, Plymouth
HMNB Clyde, Faslane	HMS <i>Caledonia</i> , Rosyth
Forward Ops Base Prestwick	CTCRM Lympstone, Portsmouth
Hazebrouck Barracks, Arborfield	Prince Philip Barracks, Bordon

Notes:

Chivenor was the Commando Logistic Regiment

Stonehouse Barracks – HQ 3 Commando Brigade Royal Marines and Signal Squadron

Turnchapel – 539 Assault Squadron

Poole – Special Boat Service, Landing Craft and Amphibious Training Wing

## 6.2 – The RM Band Service

- a) The roots of the Royal Marines Band Service can be traced back to 16th century when drummers would signal the 'change of watch', or summon the men for action. At that time the Duke of York and Albany's Regiment of Foot consisted of six companies, each of which had a number of drummers who would provide a rallying point in close battle.
- b) Prior to the twentieth century there were four divisional bands based at the three Royal Marine Light Infantry Divisions (Chatham, Portsmouth–Forton and Plymouth), plus the RM Artillery Division unit at Eastney. The professionalism of these bands was so superior to that of other bands which existed throughout the Navy, such that in 1903, on approval by the King, the Royal Naval School of Music was created at Eastney. Successful students of this establishment would transfer from the Navy to the Marines. Naval bands continued to exist and their members generally regarded the musical component of their profession as secondary to the military aspect, whereas marine musicians were regarded primarily as professional musicians with military training.
- c) During the Great War some 53 Marine Bands were in existence, involving around 1,400 musicians. Subsequent post war reorganisation resulted in the loss of many of these units, and the RN School of Music moved to Deal in 1930, where it remained for ten years until its close proximity to enemy occupied Europe instigated a move to Plymouth, followed by Lympstone, then Malvern. Another relocation quickly followed as the Navy needed Malvern for other training purposes, and the school's location then became either Scarborough for senior members, or Howstrake Camp, north of Douglas, Isle of Man for junior ranks.
- d) On a large warship the co-ordination during battle conditions, between the Control Tower with its precision range-finders, and the gun turrets, was achieved via the Transmitting Station (TS). This room contained mechanical computers which predicted the elevation and direction of the guns, taking into account a number of variables which included the earth's rotation; a necessary factor for a shell which could take up to a minute to travel 20 miles.

- e) Musical skills and mathematical ability are often reputed to go hand in hand, and this fact was recognised by the Navy. Band members suffered relatively high losses throughout the wars, as their military function was to work in the Transmitting Stations on the warships. These quarters were buried deep in the ships' bowels from which escape was frequently impossible if the vessel was seriously damaged by enemy action.
- f) A year after the end of WWII, the two schools reunited at Burford in Oxfordshire, then moved in 1950 to Deal in Kent, where The Royal Marines Band Service was formed. It was an amalgamation of all named factions which were in existence.
- g) At that time there were 1,150 members involved in 36 bands, 9 of which were shore based:

HMS <i>Excellent</i> – C-in-C Portsmouth	HMS <i>Ganges</i>
HMS <i>Pembroke</i> – C-in-C Home Fleet	HMS <i>Raleigh</i>
HMS <i>Daedalus</i> – Flag Officer Air (Home)	HMS <i>St Vincent</i>
HMS <i>Condor</i> – Flag Officer Scotland	C-in-C Plymouth
Britannia Royal Naval College, Dartmouth.	

- h) Though the Chatham band had been disbanded in 1950, it later reformed and by the 1980s the structure was as follows:

Chatham – FO Medway	Deal – RM Band School
Portsmouth – CINCNVHOME, and FOF3	Yeovilton – FONAC
Lympstone – CTCRM	Dartmouth – BRNC
Plymouth – CFRM	Rosyth – FOSNI.

- i) These bands were available for formal and other occasions in connection with the Navy. Musicians were weapon trained, but not to the level of Commando, though buglers were unique in that they could become Commandos. In the event of war, band members would undertake the task of security at naval establishments.
- j) Since 1995 the RM Band Service had its HQ at the RM School of Music, HMS *Nelson* in Portsmouth Dockyard. Its own band – HM Royal Marines Band, Portsmouth, was formed from the unit based at HMS *Excellent*, which disbanded in 1972. The HQ controlled four other bands:
- Band of HM Royal Marines, Plymouth. This was an amalgamation of the Royal Naval School of Music, the Band of Flag Officer Plymouth, and the Band of HMS *Raleigh*
  - Band of HM Royal Marines, Britannia Royal Naval College Dartmouth BRNC, this was originally the Band of HMS *Triumph* (officer cadet training)
  - Lympstone CTCRM
  - FO Scotland and Northern Ireland at RM Condor, was originally the Band of Flag Officer Scotland (HMS *Condor*) until 1969.
- k) With the exception of CTCRM all bands have a distinct Royal Navy, as well as Royal Marine connection.

### 6.3 – Royal Marines Reserve

- a) The Royal Marines Act of 1947 led later to the formation of two volunteer reserve units (Royal Marines Force Volunteer Reserve), based at London and Glasgow. It was to consist of a reserve of 200 officers and 1,300 other ranks. In 1966 following the abolition of National Service, there was a name change from Royal Marines Force Volunteer Reserve (RMFVR) to Royal Marines Reserve (RMR).
- b) By 1980 the organisation had expanded to five principal units, plus ten detachments, though the overall strength had diminished to just 1,300:
  - City of London – formed 1948 at Islington, with later detachments at Chatham and Portsmouth
  - City of Glasgow – this was formed in 1948 formed aboard HMS *Graham*, RNVR Clyde. It eventually supported three detachments at Arbroath, Dundee and Greenock
  - Bristol: – began in 1949, formed aboard HMS *Flying Fox*, RNVR, in Bristol's floating harbour, with four later detachments at Cardiff, Lympstone, Poole and Plymouth
  - Merseyside (Birkenhead) – formed in 1949 at HMS *Irwell*, RNVR, Morpeth Dock, with a detachment at Manchester
  - Newcastle-upon-Tyne – formed 1954 at HMS *Satellite*. It had no detachments
  - Between 1954 and 1969 there was apparently a detachment at St Ives (county?).
- c) By the end of the century there were fifteen detachments:
  - RMR Merseyside – (South Atlantic Building, Victoria Dock, Birkenhead): Manchester, Birmingham
  - RMR Bristol – (Dorset House, Litfield Place, Clifton): Cardiff, Lympstone, Poole, Plymouth
  - RMR Scotland – (37-51 Birkmyre Road, Govan, Glasgow): Belfast, Dundee, Edinburgh (was Grangemouth), Greenock, (Aberdeen and Inverness post 2000)
  - RMR City of London – (2 Old Jamaica Road, Bermondsey): Chatham, Henley, Portsmouth
  - RMR Tyne (Anzio House, Quayside, Newcastle-upon-Tyne): (Leeds from 2006)
- d) RMR units typically share accommodation with RNR units.

### 6.4 – Ancillary Services

#### 6.4.1 – Royal Naval Reserves

- a) Royal Naval Reserve (RNR) was first founded under the Naval Reserve Act in 1859 as a reserve of professional seamen from fishing fleets and the merchant service. Three years later it was extended to include recruitment and officer training.
- b) As a result of a known expansion of the Imperial German Navy, the Naval Forces Act was passed by Parliament on 30th June 1903, and resulted in the creation of the Royal Naval Volunteer Reserve (RNVR) which would consist of a reserve of civilian volunteers. By the end of the year the first division had been formed in London, with a temporary HQ at Fishmongers' Hall, and some time later 'maritime' training took place on board HMS *Buzzard* – a sloop

moored on the Thames. HMS *President*, a Flower class corvette, became available in 1911, and a second vessel, HMS *Chrysanthemum*, was added at the Embankment in the 1930s.

- c) Divisions at Liverpool and Tyne followed very quickly. At the end of WWII the RNVR was reformed with Divisions at:

London	Cardiff	Clyde	Humber
Mersey	Severn	Solent	Sussex
Ulster	Tay and Forth	Tyne.	

#### 6.4.2 – Organisation

- a) For many years the RNR has been a uniformed organisation of civilian and ex-service volunteers who undertook part-time paid training in order to provide defined seagoing and shore headquarters support. It was formed in 1958 from the existing RNR, plus the RNVR, RNV(P)R, and called collectively the Royal Naval Reserve. The WRNVR was transferred to the organisation in 1977.
- b) Officers and ratings were placed in ‘Lists’ according to their branch and /or training commitment:
- List 1 consisted of Merchant Naval officers of the seaman, engineering, and supply branches who are serving at sea, or on the shore staffs of various shipping companies. They had their own commodore. Their prime task in war was liaison with the Royal Navy
  - List 2, the old Patrol Service, was abolished in 1971
  - List 3 contained the bulk of the active RNR. All were civilian active officers or ratings attached to the divisions, in the Communications Training Centres, and in the HQ Units
  - List 4 consisted mainly of professional medical, dental officers and chaplains, who were attached to the various training centres, but were not on List 3. This also included students and other officers and ratings of all categories who could not meet the full training commitment of List 3
  - List 5 was personnel having no commitment for drills, but undertook two periods of 14 days continuous training every 3 years. On that list were Naval Control of Shipping Officers, the Postal Branch, and officers and ratings who for individual reasons could not undertake more in the way of training, plus certain officers and ratings who were fully trained and needed only refresher training
  - List 6 included junior officers who were temporarily unable to complete their training due to commitments exceeding one year

## 6.4.3 – RNR Division Headquarters

Table 12 – RNR Division Headquarters			
HMS	HQ Location	Satellites	Notes
<i>Calliope</i>	Gateshead – South Shore Road NE8	Hull, Northumbria	Current
<i>Cambria</i>	Barry / Sully, – Hayes Point, (was 254 East Dock CF1)	Tawe – Swansea	Current
<i>Camperdown</i>	Dundee – Marine Parade DD1		1994 merged into <i>Scotia</i>
<i>Caroline</i>	Belfast – Alexandra Dock		Current
<i>Ceres</i>	Leeds – Yeadon, then Carlton Barracks		1994 merged into <i>Sherwood</i>
<i>Claverhouse</i>	Edinburgh – Granton Square EH5		Closed
<i>Dalriada</i>	Greenock – Inverkip		Current
<i>Dragon</i>	Swansea – Cambrian Place		1994 merged into <i>Cambria</i>
<i>Eaglet</i>	Liverpool – Princes Dock, L3		Current
<i>Essex</i>	Shoeburyness – 135 Ness Road		Closed 1992
<i>Ferret</i>	Ashford – Templar Barracks, 1997 to Chicksands, Shefford		Current
<i>Flying Fox</i>	Bristol		Current
<i>Forward</i>	Birmingham, Garrison Lane	Cheltenham	Current
<i>Graham</i>	Glasgow – 130 Whitefield Road G51		1992 merged into <i>Dalriada</i>
<i>Hallam</i>	Sheffield – Claremont Crescent		Closed 1992
<i>King Alfred</i>	Portsmouth – Whale Island		Current
<i>Mercia</i>	Coventry		1994 merged into <i>Forward</i>
<i>Northwood</i>	Northwood – HMS <i>Warrior</i> , then Brackenhill House		Became <i>Wildfire</i> in 2000
<i>Palatine</i>	Preston – Hartington Road		Closed 1992
<i>Paragon</i>	Stockton – Finkle Street, then Middlesbrough – Linthorpe Road		Closed 1992
<i>Pellew</i>	Exeter – Dryden Road		Closed / moved ? 1990
<i>President</i>	London – St Katharine’s Way E1, was Kings Reach EC4	Chatham	Current
<i>Salford</i>	Manchester – Blackfriars Street, and Bexley Square		Closed 1994
<i>Scotia</i>	Rosyth – HMS <i>Caledonia</i> , (was Pitreavie)	Tay – Dundee Forth – Edinburgh	Current HQ was Pitreavie until 1996
<i>Sherwood</i>	Nottingham – Chalfont Drive		Current
<i>Southwick</i>	Fareham – Fort Southwick		1994 merged into <i>King Alfred</i>
<i>Sussex</i>	Hove – Battery, then Shoreham – Maxwell Wharf		Closed 1994
<i>Vivid</i>	Plymouth – Granby Gate		Current
<i>Wessex</i>	Southampton – Old Royal Southern Yacht Club was No.50 Berth Eastern Docks SO9		1994 merged into <i>King Alfred</i>
<i>Wildfire</i>	Chatham – Khyber / Medway Road until 1992, Northwood from 2000		Current – see Northwood

- b) In 1968 the Ministry of Defence decided that Tay Division should move ashore and in 1969 the Division transferred to a purpose built Sea Training Centre, named HMS *Camperdown*. The naming of *Camperdown* was carried out by Her Majesty Queen Elizabeth The Queen Mother on 21 October 1970.
- c) At the end of the last century there were 11 divisions in the United Kingdom, each commanded by an RNR Captain or Commander, with an RN Lieutenant-Commander as his Staff Officer, and a Special Duties Supply Officer on the Active, or Retired List as his Supply Staff Officer.
- d) The divisions were situated at:

Glasgow	Edinburgh	London	Liverpool
Bristol	Southampton	Cardiff	Brighton
Dundee	Newcastle	Belfast.	

- e) Exceptionally, London Division had a Commander as the Staff Officer, a Lieutenant-Commander as Staff Officer Tenders, and a Retired Officer as Captain's Secretary. Each division also had a civilian clerical officer and a 'permanent staff' of RN senior ratings to help with administration, training and maintenance. The divisions had full-time civilian ship-keepers who looked after the headquarters and the tenders. All were equipped with a coastal minesweeper as a tender. The personnel trained for a seagoing role and manned their sea tenders (10th MCM Squadron) and auxiliary minesweeping vessels in an emergency.

#### **6.4.3.A Headquarters Units, Royal Naval Reserve**

- a) The Headquarters Reserve was formed in 1956 to provide trained officers and ratings living locally to complement the Maritime Headquarters at Plymouth, Northwood, Southwick and Pitreavie. By 1975 the structure had been extended to include Chatham and Inverkip.
- b) Each Headquarters Unit was under the command of an RNR Commander and also a retired officer who assisted with administration requirements. Liaison with the HQ Unit was undertaken through another officer on the staff of the local Flag Officer. The Commanding Officer was responsible to his Flag Officer for routine administration, plus training and operational matters. He was ultimately responsible to the Admiral Commanding Reserves for overall discipline and unit administration.

#### **6.4.4 – Communications Reserve**

The RN Wireless Auxiliary Service, formed in 1932, was subsequently modified on several occasions to produce the Communications Reserve. The head of the Communications Branch was a Captain RNR, who was in control of 19 separate Communications Training Centres throughout Britain. Each CTC had a communications senior rating as its instructor, in addition to the communications staff of the Sea Training Centres. All CTCs were closely associated with RNR Divisions. The HQ of the Communications Reserve was at HMS *Wildfire*; it had been at Chatham until 1995 when it relocated to Northwood.

## 6.5 – Women's Royal Naval Service

- a) The Women's Royal Naval Service (WRNS) was first established in the First World War, when 3,000 were recruited in 1917 to make up for a serious shortage of naval staff caused by losses. Initially it was felt that 3,000 women recruits would undertake menial tasks such as cooking and cleaning; in the event twice that number had volunteered, and performed a wide spectrum of duties. The HQ was at Crystal Palace in London, and the organisation was disbanded in October 1919 after just nineteen months, with no provision for any continuation of the service.
- b) The decision to reform the WRNS was made in July 1938, quickly calling on many of the senior staff from the earlier organisation, in particular its leader Dame Katherine Furse, to assist in the urgent task, of recruiting and training.
- c) As the possibility of war grew nearer the likelihood of using women within the command organisation was considered. An initial estimate was that 86 would be needed for the C-in-C Nore, 130 for C-in-C Plymouth, and 80 to 100 attached to the C-in-C Portsmouth. Another 62 were required for other duties giving a maximum total of 378. Most of these women would be employed either as cipher officers, or ratings performing office duties. Some 200 job functions were eventually made available to the service, and many were involved in planning and organisation of naval operations, as well as electrical and mechanical maintenance.
- d) Vera Laughton Mathew had been an officer in charge of the Crystal Palace unit during WWI, becoming WRNS Director on 11 April 1939. She set about the organisation of the WRNS along with a small staff, and was directly responsible to the Admiralty for the recruitment, efficiency, discipline, and welfare of the organisation. Recruitment was undertaken via the Ministry of Labour and the first intake was to be 1,500 women.
- e) In September 1944 at peak there were 74,620 WRNS employed throughout the Navy as the table below shows. The numbers quoted are officers and ratings.

Table 13 – WRNS Staffing, 1939–44						
Period	Sept. 1939		Dec. 1942		Sept. 1944	
Command	Off	O/R	Off	O/R	Off	O/R
Nore	22	33	552	7,746	1,081	15,197
Dover			33	338	103	1,041
Plymouth	8	24	150	2,868	316	6,072
Portsmouth	8	92	278	6,080	789	13,946
Rosyth	9	24	184	3,028	338	6,053
Orkneys / Shetland			34	411	104	1,334
Western Approaches			544	6,138	982	14,190
Overseas				-		3,676

- f) The WRNS HQ seemed to exist as 'Station X' in Nore Command for a while, until in 1941 it became HMS *Pembroke V*, finally elevating to command status in February 1945.<sup>27</sup> It had become *Pembroke III* by 1947.

<sup>27</sup> ADM234 / 219



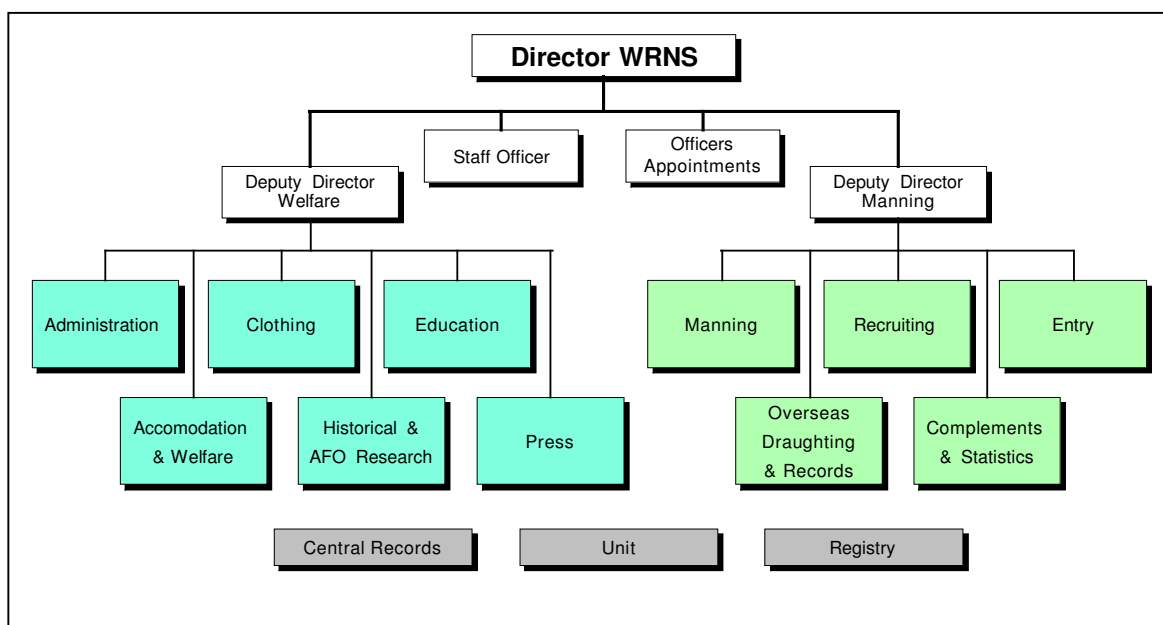


Fig. 33: WRNS Headquarters, June 1944

- g) In 1977 the WRNS was brought under the Naval Discipline Act, which formalised the service as part of the Royal Navy and also opening up far more career opportunities for the women. The service became increasingly indistinguishable from the regular Navy until it disbanded in 1993.

### 6.5.1 – Queen Alexandra's Royal Naval Nursing Service

The QARNNS was formed in 1902 under the patronage of Queen Alexandra, from a nucleus of nursing staff which were found in all naval hospitals since 1901. The nursing service, officially using female staff, had been first introduced at Haslar and Plymouth hospitals in 1883, though it was not until 1977 that they would come under direct control of the Royal Navy, under the Naval Discipline Act. This also allowed men to enlist in the service.

## 6.6 – Civilian Manned Support Services

Throughout the last century a number of largely civilian manned organisations have existed to support the activities of the Royal Navy. They were basically of two types: those which operated world-wide, and those whose activities were confined to in-and-around the home ports and docks. The former is represented foremost by the Royal Fleet Auxiliary, while a significant number of organisations have contributed to the ‘home-based’ requirements.

### 6.6.1 – Royal Fleet Auxiliary

- a) Prior to the nineteenth century the requirements of a fleet were relatively simple and fell into three main categories:
- Victuals – food, water, and rum
  - Ammunition powder and shot
  - Materials – canvas and timber for repair purposes.
- b) These items were generally readily available from a large network of ports around the world which were available to the Navy. Replenishment at sea was an almost impossible task due to

the lack of communications, and therefore the difficulty of finding the fleet at sea. A significant change occurred towards the end of that century, when wooden hulls and sails were replaced by steam driven iron ships. Coal had become a vital commodity, and was unavailable at a significant number of ports, and hence additional fuel or coaling stations had to be set up. In 1887 a means of transferring coal between ships at sea was proposed by two naval officers, however it was not until 1902 that the first successful experiments were carried out by the Navy. The Admiralty then provided a system of supply ships using Merchant Navy vessels which were owned or chartered to provide coal, ammunition, and stores for the new fleets. In 1905 the situation was formalised when the Admiralty announced:

- Auxiliaries which belong to the Admiralty will be styled Royal Fleet Auxiliaries
  - Those on charter will be styled Merchant Fleet Auxiliaries.
- c) This effectively was the beginning of the RFA. At the beginning of the Great War it had just ten coaling ships; by the end of the conflict, oil had become the predominant fuel and the RFA possessed some 90 tankers. Much of the fleet was sold off after the war, only to be reinstated again less than two decades later. A major breakthrough took place in 1942, following the capture of two of the *Bismarck's* replenishment tankers. The German system of fuel oil transfer was found to be superior to that used by the Navy, and a conversion process began.
- d) Post WWII, the RFA assumed a major role in supporting Royal Naval operations in the many conflicts that the service had been involved in. A much diminished British Empire meant that the Navy began to rely heavily on the RFA.
- e) In 2000 the flotilla consisted of 17 ships, comprising 13 tankers and stores ships. The HQ was in the Lancelot Building at Portsmouth, and was under the control of the Commodore RFA, who was directly responsible to the Commander-in-Chief Fleet (C-in-C Fleet) for its routine operations.
- f) The ships were based at:

Devonport	Faslane	Portsmouth
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- g) There were also elements at:

Coulport	Exeter	Greenock
Marchwood, Southampton	Pembroke Dock	Rosyth

### 6.6.2 – Port and Harbour Support Organisations

A number of port and harbour based services have been in use throughout the 20th century. They were responsible to the Admiralty and employed vessels which were not tasked as warships. Staff tended to move from one organisation to another as the work load demanded. Very little information could be found on some of these organisations.

### 6.6.3 – The Fleet Coaling Service

This appears to have been formed around the turn of the century, and transported fuel oil as well as coal to naval ships, who were in the vicinity of ports and docks, i.e. not embarked.

### 6.6.4 – Fleet Fuelling Service

At some time between the beginning of WWI and the mid 1920s, the Fleet Coaling Service was renamed the Fleet Fuelling Service, later merging into the Admiralty Yard Craft Service

### 6.6.5 – Admiralty Dredging Service.

Originally a component of the Admiralty Works Department, it later merged with the Civil Engineer-in-Chief's Department, around the time that the Fleet Coaling Service mentioned above was renamed.

### 6.6.6 – Admiralty Yard Craft Service

Manned by civilians this organisation was responsible for the operation of naval support ships, including ferries, tugs and lighters. It operated in and around the RN Dockyards, and was under the command of the port or harbour captain. It was renamed the Port Auxiliary Service in 1958.

### 6.6.7 – The Port Auxiliary Service

- a) On 1 October 1958, most of the existing services, both vessels and crew, which supported the Navy in home docks and ports were merged into a single organisation – the Port Auxiliary Service (PAS). In the UK it was a function of the major dockyard and ports – Chatham, Devonport, Portsmouth, Rosyth, plus elements based at establishments on the Clyde. Its function was:
  - To serve vessels of the sea-going fleet of the Royal Navy
  - The day to day running of the dockyard from a marine aspect
  - Providing vessels in connection with trials and development of new weapons and equipment.
- b) Effectively it was a branch of the navy in which the staff would not be called upon to leave their home port. The head of each unit PAS would be the Commander-in-Chief reporting through the Captain of the Dockyard.
- c) It later became part of Marine Services.

### 6.6.8 – Royal Maritime Auxiliary Service

- a) The RMAS was formed around the early 1970s as a branch of the MoD (Naval). It is frequently incorrectly referred to as the Royal **Marine** Auxiliary Service. It became the principal component in the Marine Services organisation, whose function was to support the Royal Navy.
- b) Absorbing the Port Auxiliary Service, it also assumed responsibility for a number of activities which had previously been managed by victualling, armament, and stores departments within the dockyard.
- c) It would use purpose designed vessels for a number of tasks, typically:
  - Delivering fuel, water and victuals to ships in harbour
  - Transportation of ammunition
  - Ferrying personnel to and from off-shore ships at anchor or moored to buoys
  - Underwater research and development
  - Degaussing
  - Salvage, including torpedo recovery.

- d) In 1975 the RMAS assumed control of three other independent components of Naval support, these being:
 

Admiralty Cable Ships	Ocean-going Tugs	Trials vessels.
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- e) The types of vessels then included: armament carriers, boom defence ships, coastal tankers, diving tenders, fleet tenders, target ships, torpedo recovery vessels, and water carriers / tractors.

#### **6.6.9 – Marine Services**

The Port Auxiliary Service and the Royal Maritime Auxiliary Service merged in 1976 to become Marine Services. It was essentially the principal support organisation for the Royal Navy, and in order to fulfil that function it incorporated the Royal Fleet Auxiliary. The organisation became part of Naval Support Command for a while, but then transferred to the auspices of the Warship Support Agency, who was responsible for meeting the needs by raising contracts with commercial companies outside the Navy.

#### **6.6.10 – Naval Support Command**

In the early 1990s Naval Support Command was formed, initially with HQ at Ensleigh, Bath. It did not last very long, soon becoming the Ship Support Agency (SSA), which was formed on 11 December 1996, and the Naval Bases and Supply Agency (NBSA). Within a few years these two were merged back into a new structure – the Warship Support Agency, formed in April 2001. Its Headquarters were at Foxhill in Bath, and Abbey Wood Bristol. The WSA then became part of the Defence Logistics Organisation.

#### **6.6.11 – Royal Navy Minewatching Service**

An organisation was required shortly after WWII which could support the Navy in the task of mine clearance. This resulted in the formation of the RNMWS in January 1953. It was civilian manned and would work from observation posts established on-shore and afloat in time of war. Its principal task would be to report the presence of mines, in particular those dropped by enemy aircraft. Dockyards, ports, harbours and navigable waterways would be under their scrutiny and reporting would local naval HQ. After nine years it merged into the RNXS.

#### **6.6.12 – Royal Navy Auxiliary Service**

- a) The RNXS was formed from the Royal Naval Mine-watching Service in 1962 in response to the nuclear threat to UK ports. (RNXS was used as RNAS referred to Royal Naval Air Station). It was a uniformed civilian volunteer organisation which was trained and controlled by the Royal Navy. It comprised men and women who were recruited locally by units, to man the Port Headquarters and assist in Naval Control of Shipping Organisation.
- b) Their tasks were connected with port and harbour management in time of war. This involved evacuation of ships, equipment, and personnel to dispersed anchorages; also the organisation of assembly anchorages for despatching vessels overseas. Vessels used were typically former inshore minesweepers.
- c) The members had no formal commitment in peace, though the majority would train regularly and take part in national and NATO exercises. During an emergency situation the members were required to serve full or part-time on mobilisation. At its peak there were 75 units at ports and anchorages throughout UK. It was disbanded due to Government defence cuts in March 1994.

### 6.6.13 – Marine Volunteer Service

The closure of the RNXS left a gap which was filled by a charitable organisation, the MVS, responsible for maritime emergencies and routine surveillance, both ashore and afloat. It was based around the UK and its members included many ex Royal Naval personnel.

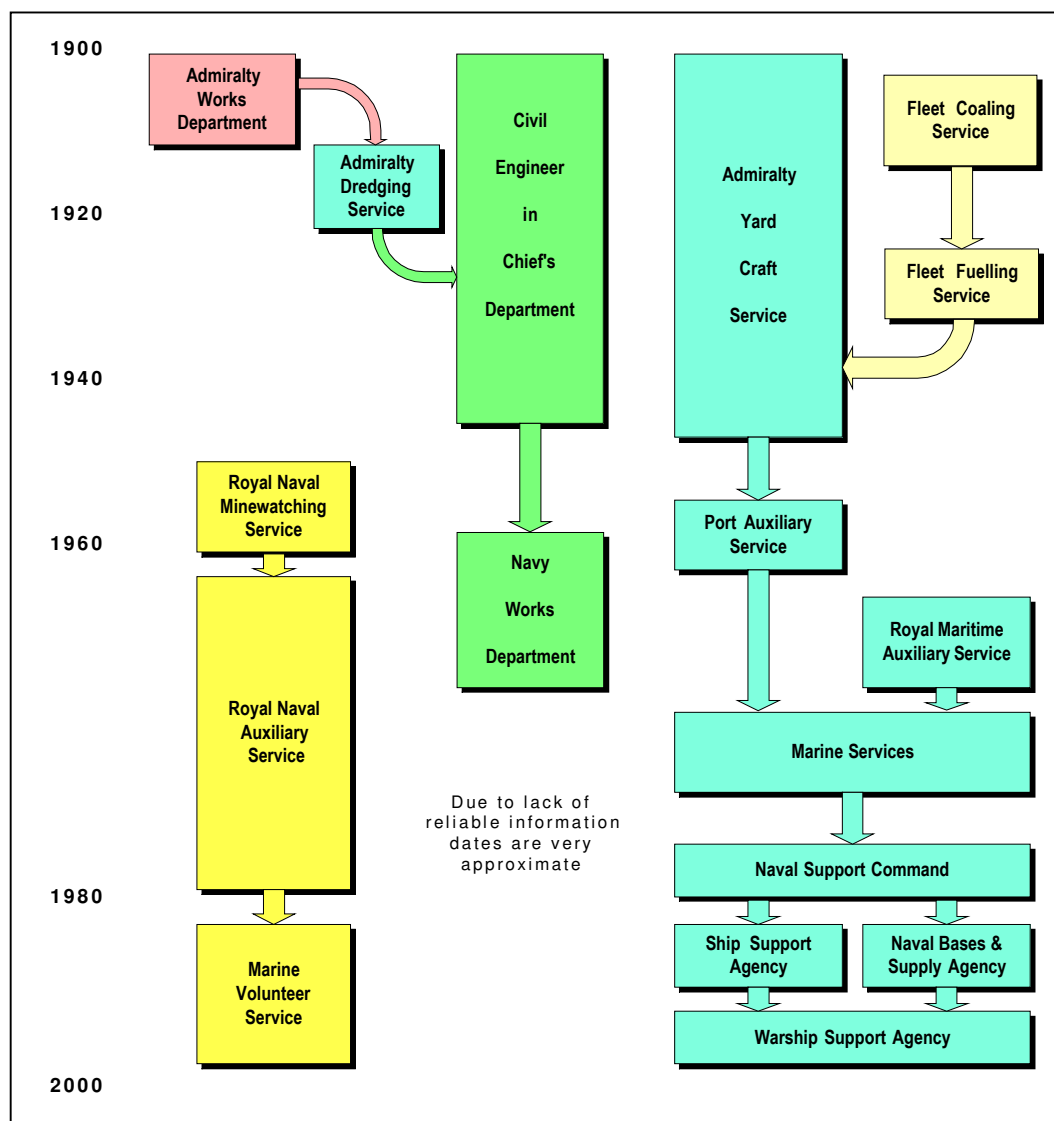


Fig. 34: Development of Port and Dockyard Support Services

**PART 7 APPENDICES**

Table 14 – Marine (Aeroplane) Operations Stations, August 1918

Anti-Submarine Patrol Stations							
Aerodrome	Command	Area	Group	Squadron HQ	Wing	Sqn.	Flights
Ashington	Tyne	NE	18 Operations	Seahouses	68th	256	525
Atwick	East Coast of England	NE	18 Operations	Hornsea	79th	251	504
Bangor	Holyhead	Midland	14 Operations	Bangor		244	521, 522 & 530
Chickerell	Portsmouth	SW	10 Operations	Portland	75th	241	513
Dover (Guston Road)	Dover Patrol		5 Operations Air Ministry	Guston Road		233	491
East Fortune		NW	22 Operations			201 Training Sqn	Special training for torpedo aircraft pilots who had graduated B'
Foreland (Isle of Wight)	Portsmouth	SW	10 Operations	Bembridge	75th	253	511 & 512
Greenland Top	East Coast of England	NE	18 Operations	Hornsea	79th	251	505
Luce Bay	Larne	NW	25 Operations	Luce Bay		258	523, 524 & 529
Machrihanish	Larne	NW	25 Operations	Machrihanish		272	531, 532 & 533
Manston	Nore	SE	4 Operations	Westgate		219	470, 555 & 556
Mullion	Devonport	SW	9 Operations	Mullion	71st	236	493, 515 & 516
New Haggerston	Tyne	NE	18 Operations	Seahouses	68th	256	526
North Coates Fitties	East Coast of England	NE	18 Operations	Hornsea	79th	248	404
Owthorne	East Coast of England	NE	18 Operations	Hornsea	79th	251	506
Padstow	Devonport	SW	9 Operations	Padstow	71st	250	494, 500 & 501

Anti-Submarine Patrol Stations (contd)							
Aerodrome	Command	Area	Group	Squadron HQ	Wing	Sqn.	Flights
Pembroke	Milford	Midland	14 Operations	Pembroke		255	519 & 520
Prawle Point	Devonport	SW	9 Operations	Prawle Point	72nd	254	492, 517 & 518
Redcar	Tyne	NE	18 Operations	Tynemouth	68th	252	510
Seahouses	Tyne	NE	18 Operations	Seahouses	68th	256	527 & 528
Seaton Carew	Tyne	NE	18 Operations	Seaton Carew (246 Squadron) and Tynemouth (252 Squadron)	68th	246 & 252	495 (246 Squadron & 509 (252 Squadron)
Telscombe Cliffs	Portsmouth	SW	10 Operations	Newhaven	75th	242	514
Tresco (Scilly Isles)	Devonport	SW	9 Operations	Tresco	71st	234	350, 351, 352 & 353
Turnhouse	Firth of Forth	NE	N/A				Fleet Practice Station
Tynemouth	Tyne	NE	18 Operations	Tynemouth	68th	252	507 & 508
Walmer	Dover	SE	5 Operations Air Ministry			233	471
West Ayton	East Coast of England	NE	18 Operations	Hornsea		251	505 & 510
Westwood Ho	Devonport	SW	9 Operations	Tresco?	71st	260	502 & 503
Yarmouth	Lowestoft	SE	4 Operations	Yarmouth	73rd	212, 228, 229	490, 557 & 558 (212 Squadron) 324, 325 & 326 (228 Squadron. 428 & 429 (229 Squadron) & 485 Flight

**Table 15 – Marine (Seaplane) Operations Stations, August 1918**

<b>Anti-Submarine Patrol Stations</b>							
Aerodrome	Command	Area	Group	Squadron HQ	Wing	Sqn.	Flights
Bembridge	Portsmouth	SW	10 Operations		75th	253	412 & 413
Calshot	Portsmouth	SW	10 Operations	Calshot	74th	240	410 & 411
Catfirth	Orkneys and Shetlands		28 Operations	Became a Repair Base			300
Cattewater	Devonport	SW	9 Operations	Cattewater. Used also as a Store Base and Repair depot	72nd	237 & 238	420, 421, 422 & 423 (237 squadron). 347, 348 & 349 (238 Squadron)
Dover Marine Parade	Dover Patrol		5 Operations Air Ministry	Dover Marine Parade		233	407
Dundee	Rosyth	NW	22 Operations	Dundee	78th	249 & 257	401 (249 Squadron). 318 & 319 (257 Sqn.)
Felixstowe	Harwich	SE	4 Operations	Felixstowe	70th & 76th	230 & 231 (70th Wing). 232, 247, 259 & 261 (76th Wing)	Unknown. The flying boat squadrons were employed in anti-submarine patrols, long overseas reconnaissance and convoy duties carried out in co-operation with the Navy (Harwich Force)
Fishguard	Milford	Midland	14 Operations	Fishguard		245	426 & 427
Hickling Broad	Lowestoft	SE	4 Operations	Yarmouth		228	Used as a land-locked base for seaplanes by 228 Squadron at Yarmouth from which aircraft could operate when the sea at Yarmouth was too rough to permit the aircraft from taking off.
Hornsea Mere	East Coast of England	NE	18 Operations	Hornsea Mere	79th	248	404 & 405
Houton Bay	Orkney and Shetland		28 Operations	Houton Bay			306, 307 & 430
Killingholme	East Coast of England	NE	18 Operations	Killingholme	N/A		United States Navy Seaplane Station for long distance reconnaissance and anti-submarine patrol duties



<b>Marine (Seaplane) Operations Stations, August 1918. Anti-Submarine Patrol Stations (contd)</b>							
Aerodrome	Command	Area	Group	Squadron HQ	Wing	Sqn.	Flights
Lough Foyle	US Navy	N/A	N/A	Lough Foyle	N/A		United States Navy Seaplane Station for reconnaissance and anti-submarine patrol duties carried out in co-operation with the US Navy Squadron in the locality.
Newhaven	Portsmouth	SW	10 Operations	Newhaven	75th	242	408 & 409
Newlyn	Devonport	SW	9 Operations	Newlyn	71st	235	424 & 425
Portland	Portsmouth	SE	10 Operations	Portland	75th	241	416 & 417
Queenstown	US Navy	N/A	N/A	N/A	N/A	N/A	United States Navy Seaplane Station, for reconnaissance and anti-submarine patrol duties carried out in co-operation with the US Naval Squadron at this port.
Rosyth	Temporary Fleet seaplane Base Air Force Group Offices, Firth of Forth	N/A	N/A	N/A	N/A	N/A	Also used as a Sub-Store of 9 (Edinburgh) Stores Distributing Park, for the purpose of supplying technical stores to Fleet aircraft units. Due to be relinquished soon after October 1918.
Seaton Carew II	Tyne	NE	18 Operations	Seaton Carew (68th Wing)	68th	246	402 & 403
Stenness	Orkney and & Shetlands		28 Operations			?	309, 310 & 311
Strathbeg	Rosyth	NW	22 Operations	Dundee	78th	249	400
Torquay	Devonport	SW	9 Operations	Torquay	72nd	239	418 & 419
Westgate	The Nore	SE	4 Operations	Westgate		219 & 230	406 (219 Squadron). 442 (230 Squadron)
Wexford	US Navy	N/A	N/A	N/A	N/A	N/A	United States Navy Seaplane Station for reconnaissance and anti-submarine patrol duties carried out in co-operation with the US Navy Squadron at Queenstown.
Whiddy Island	US Navy	N/A	N/A	N/A	N/A	N/A	As above

**Table 16 – Training and Repair Marine Operations Stations, August 1918**

Aerodrome	Naval Cmd.	Area	Group	Details
Aldeburgh		SE	Marine Observers' School	Formed 00-10-18 from School for Anti-Submarine Inshore Patrol Observers. School functioned for the training of inshore Anti-Submarine Patrol Observers in wireless telegraphy, navigation, visual signalling, gunnery, bomb gear and bomb dropping, ship recognition, instruction on anti-submarine patrols and seamanship. Became 1 Marine Observers School on 01-01-19 before disbanding during 00-09-19.
Calshot		SW	Two unit TDS 10 Group HQ at Warsash  74th Training Wing HQ	<p>Float Seaplane Aerial Gunnery and Bomb-Dropping School (three week course) – this was a finishing school, subjects included firing from the air, bomb dropping, patrol work. Pupils Graduated 'C' and then posted for service.</p> <p>Boat Seaplane School. (three – four weeks course) – for conversion of float seaplane pilots from Patrol Stations to flying boat pilots. Also for training pilots from Lee-on-Solent direct as flying boat pilots.</p> <p>Temporary school for selected pilots from Vendome and Canadian Schools who have not previously flown seaplanes.</p> <p>Marine Operations Station – 240 Squadron with two flights (flying boats and two flights of seaplanes).</p>
Cranwell	N/A	N/A	Boy's Training Wing  Physical Training School  Airship Training	<p>Boys' Training Wing – the training of 1,000 boys as riggers and 1,400 boys as metal workers (9 months). It was proposed to make this unit a Concentration Depot for all boys under training.</p> <p>Physical Training School for training 25 Disciplinary <i>Officers</i> and 150 men, classes included drill, boxing, swimming, bayonet fighting, gymnastics and the rules of sport.</p> <p>Airship Training – for the teaching of piloting of airships, also the training of airmen in airship signalling duties. The teaching of men and boys as riggers (lighter than air) and providing an W/T course for airmen.</p>
Donibristle	Air Force Group Officer Firth of Forth	NW	22 operations	Fleet Aircraft: Fleet Repair Depot (Ship Aeroplanes). This was the principal repair depot for Fleet aircraft. For the repair and supply of aircraft required for the Southern Base at Rosyth for Fleet purposes. Storage of reserve aircraft. New railway under construction from store sheds to Inverkeithing Bay for rapid embarkation of aircraft and stores. Aerodrome used for Fleet aircraft having left their parent ship at sea.
Dover St Margaret		SE	Marine Operational Pilots' School	This school trained pilots who had graduated 'B' at a TDS and in a finishing school for Marine Operational Pilots of Aeroplanes. Work in the air included submarine patrols, convoy escort, bomb dropping, recognition of ships and sea navigation. Also, ground instruction in methods of attacking enemy submarines (4 weeks).

Schedule of Training and Repair Marine Operations Stations for August 1918 (contd)				
Aerodrome	Naval Cmd.	Area	Group	Details
Eastchurch		SE	No.2 Marine Observers' School  Fleet Reconnaissance Ground Armament School  Boy Mechanics' School	No.2 Marine Observers' School. Formed as 1 Observers School, during 07-18, became No.2 Marine Observers School on 28-12-18. Instruction included – signalling, navigation, ship recognition, naval codes, wireless, Lewis Gun, and bomb dropping (12 and 16 weeks). Disbanded – 06-19  Ground Armament School – the school amalgamated with the Observers' School. Fleet Observers were trained here before proceeding to Fleet Reconnaissance Course. Firing practice with Lewis Gun (4 weeks).  Boy Mechanic's School – the training of 600 mechanics in metal worker type trades. (9 months).
Lee-on-Solent			209 Training Depot Station	Two seaplane squadron TDS for training on float type aircraft and small flying boats. Pupils were graduated 'B' with a minimum of 16 hours flying instruction are gazetted 2nd Lieutenant and were then transferred to Calshot.  Formed: 01-04-18 from RNAS Seaplane Training School.
Leuchars		NW	Fleet School of Aerial Fighting and Gunnery	This school originally formed at East Fortune on 19-07-18 from 208 (Temporary) TDS as Grand Fleet School of Aerial Fighting and Gunnery. It received pilots who had graduated 'B' at their TDS. It was the finishing school for pilots of aeroplanes operating with the Grand Fleet. Pupils passed out as service pilots entitled to wear their Wings. The course combined aerial gunnery and aerial fighting instruction. Disbanded at Leuchars on 18-03-20. School organised as a traditional 3-unit TDS.
Peterhead	Rosyth	NW	22 Operations	Seaplane Repair and Store Base used in connection with the seaplane station at Strathbeg.
Pool Harbour (Sandbanks)	Devonport	SW	9 Operations	Marine Training depot – Training of personnel required for manning marine craft belonging to the RAF.
Roehampton		SE	1 Balloon Training Wing	Preliminary training of all balloon observers for service at sea. HQ of No.1 Training Wing
Scapa	Orkney and Shetland	N/A	28 Operations	Fleet Aircraft Repair Base and Stores Depot The repair and provision of stores for Fleet aircraft working with ships of the Fleet at Northern Base.
Sheerness	Chatham	SE	1 Group, 1 Balloon Training Wing	No.1 BTB gave advanced training to all balloon observers for service at sea after the course at 1 Balloon Training Depot, Roehampton.  No aerodrome, an area of 75 acres was occupied on the Isle of Sheppey on the S.W outskirts of the town of Sheerness. This ground should not be confused with Sheerness 6th Brigade Day Landing Ground which was one mile to the east.
South Shields	Tyne	NE	18 Operations	Repair Depot Seaplane and Aeroplane Repair Depot for 18 (Operations) Group. Two seaplane sheds were used by the RAF, while another three were in use by contractors building flying boats.
Smoogroo	Orkney and Shetlands	N/A	28 Operations	Marine (Operations) Landing Ground Station Landing Ground at Northern Base, for fleet aircraft after having left their parent ship, for practice purposes

Table 17 – Marine Operations (Balloon) Bases and Stations, August 1918

Station	Designation	Naval Cmd.	Area	Group	Wing	Notes
Berehaven	17 Balloon Base	US Navy				United States Navy Balloon Station for patrol and convoy duties carried out in co-operation with US Naval Squadron at Queenstown
Caldale	20 Balloon Base	Orkneys and Shetlands				Balloon Base for convoy duties carried out in co-operation with the Navy
Hythe	14 Balloon Base	Dover Patrol		5 Operations		Balloon Base for convoy duties carried out in co-operation with the Navy
Immingham	8 Balloon Base	East Coast of England	NE	18 Operations	79th	Balloon Base for convoy duties carried out in co-operation with the Navy
Lerwick	21 Balloon Base	Orkney and Shetland		28 Operations		Balloon Base for Grand Fleet operations
Lowestoft	7 Balloon Base	Lowestoft		4 Operations	73rd	Balloon Station for patrols carried out in co-operation with the Navy
Merrifield	16 Balloon Base	Devonport		9 Operations	72nd	Balloon station for convoy duties carried out in co-operation with the Navy. There was a Sub-Station at Torquay, with a detachment of personnel from this station.
Milford Haven	9 Balloon Base	Milford	Midl and	14 Operations		Balloon station for convoy duties, carried out in co-operation with the Navy.
North Queensferry		Second Battle Squadron				Balloon base for the Fleet at Southern Base, Rosyth, with eight working balloons, for operations carried out in co-operation with the Grand Fleet
Rathmullan (Lough Swilly)		Buncrana		11 Operations	55th	Balloon station for convoy duties carried out in co-operation with the Navy
Shotley		Harwich	SE	4 Operations	70th	Balloon station for convoy and offensive patrol duties, carried out in co-operation with the Navy (Harwich Force).
Tipner	15 Balloon Base	Portsmouth	SW	10 Operations		Balloon Station for convoy patrol duties carried out in co-operation with the Navy
Torquay	Balloon Station	Devonport	SW			Sub-Station of 16 Balloon Base (Merrifield).

Table 18 – Parent Airship Stations, November 1918

Station	Type	Area	Group	Details	Function
Anglesey	Non-Rigid Airship Patrol Station	Midland	14 Operations	Sub-station to Malahide	Operational Patrol Station for non-rigid airships
Barlow	Airship Constructional Station (Rigids)	NE	N/A	Armstrong Whitworth (under the supervision of the Admiralty).	
Barrow	Airship Constructional Station (Rigids)	Midland		Vickers Sons and Maxim under the supervision of the Admiralty.	
Bedford Cardington	Rigid Airship Factory	Midland		Short Brothers under supervision of the Admiralty	
Capel	Non-Rigid Airship Patrol Station	SE	5 Operations	Parent station to Godmersham Park near Ashford, and Wittersham, near Rye	Operational Patrol Station for non-rigid airships
Cramlington Newcastle	Non-Rigid Patrol Station (under construction)	NE			Operational Patrol Station for non-rigid airships (under construction in October 1918)
Cranwell	Airship Training Wing	See Appendix 3			
East Fortune	Rigid Airship Patrol Station	NW	22 Operations	Parent station to sub-station at Chathill (Northumberland)	Operational Patrol Station for rigid and non-rigid airships.
Howden	Rigid Airship Patrol Station	NE	18 Operations	Parent station to sub-stations at Lowthorpe and Kirkleatham.	Operational Patrol Station for rigid and non-rigid airships.
Inchinnan	Airship Constructional Station (Rigids)	NW		Contractor: Beardmore, under supervision of the Admiralty.	
Killeagh	Rigid Airship Patrol Station		Under construction	When completed, this station was due to be an Operational Patrol Station for rigid and non-rigid airships.	
Kingsnorth	Constructional Station (Non-Rigids)	SE	Technical Group	Admiralty Non-rigid airship factory.	
Longside	Non-Rigid Airship Patrol Station	NW	22 Operations	Parent station to Sub-Station at Auldbar	Operational Patrol Station for non-rigid airships
Luce Bay	Non-Rigid Airship Patrol Station	NW	25 Operations	Parent Station to Ballyliffin (Doagh Island), Larne, Machrihanish and Ramsey (Isle of Man)	Operational Parent Station for non-rigid airships.

Parent Airship Stations, November 1918 (contd)					
Station	Type	Area	Group	Details	Function
Moreton	Non-Rigid Airship Patrol Station	SW	10 Operations	(under construction)	On completion was to be an Operational Patrol Station for non-rigid airships.
Mullion	Non-Rigid Airship Patrol Station	SW	9 Operations	Parent station to Bude, Laira and St Mary's	Operational Patrol Station for non-rigid airships
Pembroke	Airship Patrol Station	Midland	14 Operations	Parent station to Sub-station at Wexford	Operational Patrol station for non-rigid airships.
Polegate	Non-Rigid Airship Patrol Station	SE	10 Operations	Parent station to: Slindon and Upton	Operational Patrol Station for non-rigid airships
Pulham	Airship Experimental Station	Midland		Station used for experimental purposes in connection with airships.	
Wormwood Scrubs	Airship Constructional Station (Non Rigid)	SE	Technical Group	Used for the construction of non-rigid airships by the Admiralty. A repair depot for motor transport adjoined the airship station which was (in August 1918) under consideration as to whether the Admiralty shall take over the repair depot for the airship factory.	

Table 19 – RNAS Stations – Hangars, 1938–45

Bell = Bellman, CH – Callender Hamilton

Aerodrome	HMS	Hangars 1945
Abbotsinch	<i>Sanderling</i>	3 C, 4 Bell / Pentad, 4 CH, 1 T3, 5 Fromson, 1 Mainhill, 1 Blister, 2 Flight Shed – possibly Blackburn, 2 Massillon. Discrepancy
Angle	<i>Corncrake II</i>	1T2
Anthorn	<i>Nuthatch</i>	11 Pentad, 21-22 Fromson, 1-2 Mainhill
Arbroath	<i>Condor</i>	9 Bell, 1 Bain, 1 Mainhill, 1 workshop, 5 dispersed Bell, 1 Blister
Ayr	<i>Wagtail</i>	3-4 Bell, 0-1 Callender, 17 Blister
Ballyhalbert	<i>Corncrake</i>	2 Bell, 12 Blister
Beccles	<i>Hornbill</i>	2 T2
Bramcote	<i>Gamecock</i>	5 C and 1 Blister
Brawdy	<i>Goldcrest</i>	6 T2
Burscough	<i>Ringtail</i>	2 Callender, 32 Mainhill
Campbeltown	<i>Landrail II</i>	1 Teeside Type S ?, 4 Squadron (Fromson?) discrepancy
Charlton Hawthorne	<i>Heron II</i>	4 Blister ?, 2 Mainhill ?
Crail	<i>Jackdaw</i>	7 Bell, 1 Mainhill, 1 ARS, 1 Bain (plus possible others ?)
Culdrose	<i>Seahawk</i>	21 Pentad, 7 Main, 1 Mains (dope)
Culham	<i>Hornbill</i>	18 Pentad, 14 Fromson, 2 Mains
Dale	<i>Goldcrest</i>	1 T2, 6-7 Pentad, 114-16 Mainhill, 1ARS (intended by 1945, hence discrepancy)
Donibristle	<i>Merlin</i>	4 Bell, 3 Bessonneau, plus 9 in Repair Yard (Bell / F?)
Dounreay		2 T2, 1 Pentad, 1 Mainhill
Drem	<i>Nighthawk</i>	3 Bell, 12 Blister
Dundee	<i>Condor II</i>	1 F, 2 unknown types (170' x 90')
Dunino	<i>Jackdaw II</i>	12 Mainhill, 5 Fromson, 1 Mains, 1 ARS (discrepancy)
Easthaven	<i>Peewit</i>	1 Bell, 1ARS, 25 Mains / Mainhill
Eastleigh	<i>Raven</i>	7 GS, 1 Pentad, 10 Bessonneau (9 removed later)

RNAS Stations – Hangars, 1938–45 (contd)		
Aerodrome	HMS	Hangars 1945
Eglington	<i>Gannet/ Sea Eagle</i>	Pre 1945: (1 T1 and 1T2, or 2 Bell), 11-12 Blister, 0-1 Mainhill Post 1945: 10 Fromson 12 Blister (very considerable discrepancy)
Evanton	<i>Fieldfare</i>	8 Bell 3 Pentad, 0-2 VR, 1 Bain, 3 Mains, 0-1 Hinaidi, 0-2 Boulton Paul. (considerable discrepancy)
Fearn	<i>Owl</i>	2 CH, 1 Pentad, 30 Mainhill, 2 P3
Ford	<i>Peregrine</i>	2-3 GS, 5 Bell, 1 Mainhill, 20 Blister, 3 B1
Gosport	<i>Siskin</i>	4 A, 1C, 0-3 Bell
Grimsetter	<i>Robin</i>	2-3 Mainhill / T3, plus possibly (but unlikely) 16 various others.
Haldon	<i>Vulture II</i>	none
Halesworth	<i>Sparrowhawk</i>	2 T2
Hatston	<i>Sparrowhawk</i>	1 ARS, 7 Bell, 1 Bain, 7 Mainhill
Henstridge	<i>Dipper</i>	2 CH, 4 Teeside Type S, 26 Mainhill
Hinstock	<i>Godwit</i>	2 Pentad, 3 Mains, 4 other
Inskip	<i>Nightjar</i>	1 Callender, 1, ARS, 34 Mainhill
Kirkistown	<i>Corncrake II</i>	1 T2 ?, 4 Blister
Lawrenny Ferry	<i>Daedalus II</i>	1 Mains
Lee-on-Solent	<i>Daedalus</i>	2 G, 3 J, 1C, 0-1 Hinaidi, 1A, 5 Bell, 8 Fromson, 11-12 Mains
Lossiemouth	<i>Fulmar</i>	3 C, 2 Bell, 1 J, 4 K, 7 L, plus 14 dispersed Robins / blisters
Ludham	<i>Flycatcher</i>	1 T2, 4 Blister
Lympne	<i>Buzzard</i>	4 Blister, (3 Belfast Truss and 1 ARS destroyed August 1940)
Machrihanish	<i>Landrail</i>	3 CH / Bell, 8 Mains / Mainhill, 17-19 local
Macmerry	<i>Nightjar</i>	1 T2, 1 Civil, 1 Robin, 7 Blister
Maydown	<i>Shrike</i>	2 T2 / T1, 11 Blister
Middle Wallop	<i>Flycatcher</i>	5 C, 16 Blister
Milltown	<i>Fulmar II</i>	1 T2, 1 B1
Nutts Corner	<i>Pintail</i>	2 T2, 2 T1, 2 Blister, 1 Freight Shed



RNAS Stations – Hangars, 1938–45 (contd)		
Aerodrome	HMS	Hangars 1945
Peplow	<i>Godwit</i>	4 T2, 1 B1
Portland	<i>Osprey</i>	2 Frame (128' x 100') in 1960
Prestwick	<i>Gannet</i>	2 Bell, 4 B1
Rattray	<i>Merganser</i>	5-12 Pentad, 14-30 Mainhill /Fromson, 0-1 Mains (very considerable discrepancy)
Ronaldsway	<i>Urley</i>	7 – 8 Pentad, 1 RAF, 8-12 Mainhill (considerable discrepancy)
St Davids	<i>Corncrake II</i>	3 T2
St Merryn	<i>Vulture/Curlew</i>	1 Callendar / CH, 2 Pentad, 13-15 Mains/Mainhill, 13 Mains, 4 Teeside type S, 1 Fromson (discrepancy)
Sandbanks	<i>Daedalus II</i>	1 Local (292' x 87') for 14 Walrus (wings folded)
Skeabrae	<i>n/a</i>	12 Teeside type S, 1 CH
Stornoway	<i>Mentor</i>	4 T2 (modified)
Stretton	<i>Blackcap</i>	4-5 Teeside type S, 1-2 CH, 1-6 Pentad, 0-14 Mainhill, 0-6 Mains, 2 A1/A2 (Fairey), 0-1 Blister, 1-2 Fromson, 1 dope (very considerable discrepancy)
Sydenham	<i>Gadwall</i>	5 Pentad, 2 T2, 4 Fromson, 4-15 Mains, 1 Squadron hangar, 1 Bell, 1-4 Mains, 1 Super Robin, 1 Robin (very considerable discrepancy)
Treligga	<i>Vulture II</i>	none
Twatt	<i>Tern</i>	1 Bell/Pentad, 16-18 Mains/Mainhill, 12 Teeside type S
Weston Park	<i>Godwit II</i>	1 Robin ?
Woodvale	<i>Ringtail II</i>	3 Bell, 9-10 Blister
Worthy Down	<i>Kestrel</i>	6-7 GS, 2 Bell, 1 Fromson, 2 Bessonneau, 1 ARS, 48 Dutch Barn.
Yeovilton	<i>Heron</i>	12 Bell, 7 Mains, 1 ARS (as 1944, 4 Mains removed by 1960)
Zeals	<i>Humming Bird</i>	1 T1, 8 Blister

Much of the above information has been obtained from BR 1807, which shows considerable variation from year to year, far more than could be accounted for by normal means.

Table 20 – Royal Naval Air Stations and Lodger Airfields, WWII

Name	County	HMS	Dates	Purpose	Notes
Abbotsinch	Renfrew	<i>Sanderling</i>	19/6/40 – 11/8/43 20/9/43 – 31/10/63	Lodger – Maintenance Unit RNAMY, RAS, later Scottish Air Division RNVR	to Min of Civil Aviation
Aldergrove	NI, Antrim		1939	Lodger	
Angle	Pembrokeshire	<i>Goldcrest</i>	1/5/43 – 5/9/43	Naval Air Firing Unit	to Dale
Anthorn	Cumberland	<i>Nuthatch</i>	7/9/44 – 28/2/58	No.1 ARDU, Ferry Pool(s)	NATO Radio station
Arbroath (Aberbrothock)	Angus	<i>Condor</i>	19/6/40 – 31/3/71	No.2 Observers School, DLT, Air Signals School	To Royal Marines 1972
Ayr (Heathfield)	Ayrshire	<i>Wagtail</i>	? – 6/9/44 6/9/44 – 10/3/46	Lodger Bombardment Spotting School, Calibration Flight, FRU	later on books of <i>Sanderling</i>
Ballyhalbert	NI Down	<i>Corncrake</i>	Early 1944 – 14/7/45 14/7/45 – 13/11/45	Lodger – ILS No.4 Air Fighter School	
Ballykelly	NI Londonderry	<i>Sea Eagle</i>	14/7/45 – 29/1/71	Joint Anti Submarine School	
Banff	Banffshire		1/4/47 – ?	on loan to HMS <i>Fulmar</i>	
Beccles	Suffolk	<i>Hornbill II</i>	08/44 – 06/45	Lodger, DLT	
Bedhampton	Hants	<i>Daedalus</i>	– ?/46	non airfield	
Belfast / Sydenham	NI Down	<i>Caroline(attached) Gadwall (III)</i>	1942 – 21/6/43 21/6/43 – 2/7/73	ILS RNAMY, Overseas Shipment Unit	later <i>Gannet III</i>
Benbecula	Hebrides		9/44 – ?	Patrols with RAF	
Benson	Oxfordshire		1955 – 1957	Lodger	
Bircham Newton	Norfolk		6/9/44 – 17/10/44	Lodger, Night Anti-Submarine Training	
Bootle – Wellbeck	Cumberland	<i>Macaw</i>		Aircrew Reception / Transit Centre	
Bramcote	Warwickshire	<i>Gamecock</i>	3/12/46 – 10/11/58	Ground Training – Air mechanics, RNVR	to Army
Bratton	Shropshire		1/44 – 6/45 ?	Lodger – attached to Hinstock	
Brawdy	Pembrokeshire	<i>Goldcrest II Goldcrest</i>	1/1/46 – 30/9/47 4/9/52 – 1/4/71	Dale satellite, Night Fighter School ILS, Aircraft Support Unit	Also on books of HMS <i>Harrier</i> and <i>Vulture</i> post WWII
Bungay (Flixton)	Suffolk	<i>Europa (II)</i>	25/9/45 – 31/5/46	Satellite of Halesworth	to Air Ministry

Royal Naval Air Stations and Lodger Airfields, WWII (contd)					
Name	County	HMS	Dates	Purpose	Notes
Burscough	Lancashire	<i>Ringtail</i>	1/9/43 – 15/6/46	Radar Training, FRU	Later on books of HMS <i>Blackcap</i>
Bush Barn	Berkshire	<i>Kestrel</i>	1/8/44 – 7/45 ?	RAS (obsolescent) for St Merryn and Worthy Down	near Pusey
Campbeltown	Argyllshire	<i>Merlin</i> <i>Landrail</i> <i>Landrail II</i>	1/6/40 – 1/4/41 1/4/41 – 15/6/41 15/6/41 – 6/45	Satellite of Donibristle 1LS, 2LS Satellite of Machrihanish	
Charlton Horethorne	Dorset	<i>Heron II</i>	26/5/42 – 1/1/43 21/1/43 – 17/4/45	Lodger Yeovilton satellite, Air Direction School, Travelling Recording Unit	to Air Ministry
Christchurch	Hampshire	<i>Raven</i>	1941 ? – 1946	Naval Air Section, Naval Air Radio Installation	to Middle Wallop
Cluntoe	NI, Tyrone	<i>Gannet</i>	1/4/47 – 1960+	Satellite of Eglinton, little used.	
Cowdray Park	Sussex	<i>Daedalus</i>	6/41 – 30/9/45	RN School of Photography, Dispersed storage of obsolete aircraft	aka Midhurst / South Ambersham
Craill	Fifeshire	<i>Jackdaw</i>	1/10/1940 – ?/52	No.1 Naval OTU Torpedo Training, 4/47 became HMS Bruce (not FAA)	
Crimond	Aberdeenshire	<i>Merganser</i>	3/10/44 – 1/9/46	Torpedo Bomber (TAG) / Reconnaissance Training,	renamed Rattray 1/4/45
Culcheth	Lancashire	<i>Ariel</i>	1/6/42 – 31/3/47	Air Radio Maintenance / Air Electrical School	had a landing strip
Culdrose	Cornwall	<i>Seahawk</i>	17/4/47 – present	Various	initially HMS <i>Chough</i>
Culham	Oxfordshire	<i>Hornbill</i>	1/11/44 – 30/9/53	No.2 ARDU, Photo Development Unit	
Culmhead	Somerset		20/4/44 – ?/45	Lodger	aka Church Stanton
Dale	Pembrokeshire	<i>Goldcrest</i>	9/43 – 31/1/48	Aircraft Direction Centre for Kete	
Defford	Worcestershire	<i>Daedalus</i>	1942+	RN attachment to RAF Telecoms. Research Est.	Naval Air Section from June 1944
Detling	Kent		1940 – 1941	Lodger	
Docking	Norfolk		1942 – 1944	Lodger	
Donibristle	Fifeshire	<i>Merlin</i>	25/5/39 – 23/10/59	RNAMY, RAS. HQ unit.	also WWI
Dounreay	Caithness	<i>Tern II</i>	15/5/44 – 1/10/54	hardly used, later on books of HMS <i>Fulmar</i>	to RAF

Royal Naval Air Stations and Lodger Airfields, WWII (contd)					
Name	County	HMS	Dates	Purpose	Notes
Drem	East Lothian	<i>Merlin</i> <i>Nighthawk</i>	18/10/42 – 1/12/46 21/4/45 – 1/6/45 1/6/45 – 15/3/46	Lodger, then FRU, Night Fighter School FRU satellite of Donibristle Independent Command	to Dale
Dundee	Angus	<i>Condor II</i>	15/7/41 – 15/6/44	Seaplane satellite of Arbroath	aka Stannergate
Dundonald	Ayrshire		1944	Lodger for 3rd Naval Fighter Wing	
Dunino	Fifeshire	<i>Jackdaw II</i> <i>Merlin II</i>	15/12/42 – 1/10/45 1/10/45 – 2/4/46	RAS	
Duxford	Cambridgeshire	<i>Heron</i>	1941 – 1943	Lodger, Air Fighting Development Unit	
East Haven	Angus	<i>Peewit</i>	1/5/43 – 14/8/46	DLT, DLCO Aircraft Handling	Satellite of Arbroath was HMS <i>Dotterel</i> for very short period
Eastleigh	Hampshire	<i>Raven</i>	1/07/39 – 30/4/47	Air Medicine, Safety Equipment Schools, Air Radio Installation	
Eglinton	NI, Londonderry	<i>Gannet</i>	15/5/43 – 31/5/59	ILS, also aircraft storage	
Evanton (Novar)	Ross-shire	<i>Fieldfare</i>	20/9/36 – 9/10/44 9/10/44 – 24/3/48	Lodger – ILS, RAS RAS, RNAMY	Was Novar, pre 1938
Fearn	Ross-shire	<i>Owl</i>	1/7/42 – 2/7/46	TBR, Torpedo and Night Fighter training	Later satellite of Evanton
Fleetlands	Hampshire		5/40 – present	RNAMY	
Ford	Sussex	<i>Peregrine</i>	24/5/39 – 30/9/40 1/8/45 – 30/6/48 1/2/50 – 13/11/58	Immediate RAS, No.1 Observer School Photo School Squadron Formation Channel Air Division, Trials and Requirements Unit	
Fraserburgh	Aberdeenshire		23/10/44 – 8/11/44	Lodger	
Gosport	Hampshire	<i>Siskin</i>	1/8/45 – 31/05/56	See bottom of table	Became HMS <i>Sultan</i>
Grimsetter	Orkney	<i>Robin</i>	15/8/43 – 1/7/45	Satellite to Hatston	aka Kirkwall
Haldon	Devon	<i>Heron II</i>	1939? – 18/8/41 18/8/41 – 5/43	temp satellite of Yeovilton, moved to Charlton Horethorne	
Halesworth	Suffolk	<i>Sparrowhawk /</i> <i>Hornbill II</i>	5/8/45 – 28/2/46	Advanced Flying Training. Conversion Training	

Royal Naval Air Stations and Lodger Airfields, WWII (contd)					
Name	County	HMS	Dates	Purpose	Notes
Harrowbeer	Devon		20/4/44 – ?/6/44	Lodger – Smoke curtain laying training	
Hatston	Orkney	<i>Sparrowhawk Tern</i>	25/8/39 – 1/8/45 15/9/45 – 1/7/47	ILS, also aircraft storage Care and Maintenance	Now Kirkwall Airport
Heathrow	Middlesex		1944 – 1945	Lodger	
Henstridge	Somerset	<i>Dipper</i>	1/4/43 – 11/11/46 4/1/52 – 1957	No.2 Naval Air Fighter School Satellite of Yeovilton	
Heston	Middlesex		04/45 – 1947	Lodger	
Hinstock	Shropshire	<i>Godwit</i>	23/7/42 – 14/6/43 14/6/43 – 28/2/47	Lodger, then RN Flying Control School, Beam Approach School and Naval Advanced Instrument Flying Schools	aka Ollerton
Honington	Suffolk		10/72 – ?/78	Lodger	
Hurn	Hampshire		1/19/52 – 16/10/72	FRU	
Inskip	Lancashire	<i>Nightjar</i>	15/5/43 – 2/7/46	No.1 OTU (ASV) Naval School of Air Combat	HMS <i>Inskip</i> post WWII
Jersey	Channel Isles		11/3/40 – 31/5/40	Lodger, satellite of Worthy Down	
Kirkham	Lancashire		? – 17/4/47	had Royal Naval Air Section	
Kirkistown	NI, Down	<i>Corncrake II</i>	11/4/42 – 14/7/45 17/7/45 – 15/1/46	Satellite of Ballyhalbert, Lodger No.4 Naval Air Fighting School	
Kirkwall	Orkney			see Grimsetter	
Lands End (St Just)	Cornwall		1940	occasional use	
Langham	Norfolk		1942 – 1944	Lodger	
Lawrenny Ferry	Pembrokeshire	<i>Daedalus II</i>	1/2/42 – 7/11/43	Advanced seaplane training base	
Lee-on-Solent	Hampshire	<i>Daedalus</i>	1917 – 1996	See bottom of table	
Leuchars	Fifeshire		1923? – 1978	Lodger and Flying Training	
Limavady	Londonderry		1944	Lodger	
Long Kesh	NI, Down		1944 – 1945	Lodger	
Lossiemouth	Morayshire	<i>Fulmar</i>	2/7/46 – 29/9/72 29/7/72 – 9/2/79	Operational Training Unit, RAS, RNAMY, Naval Air Fighter and Strike School. Lodger from 1972	

Royal Naval Air Stations and Lodger Airfields, WWII (contd)					
Name	County	HMS	Dates	Purpose	Notes
Ludham	Norfolk	<i>Flycatcher</i>	24/8/44 – 16/2/45	Mobile Naval Airfield Organisation	To Middle Wallop
Lympne	Kent	<i>Buzzard,</i> <i>Daedalus II</i>	1/7/39 – 25/9/39 25/9/39 – 23/5/40	Disembarked ILS Air Mechanics School	To Newcastle-under-Lyme
Macmerry	East Lothian	<i>Nighthawk II</i>	30/12/43 – 9/45 6/6/45 – 1/12/45	Lodger(communications), FRU Satellite of Drem	
Machrihanish (Strabane)	Argyllshire	<i>Landrail</i>	15/6/41 – 16/4/46 1/12/51 – 30/9/52	ILS, NTAT, FAA Anti-submarine School Firefly Training	Later on books of HMS <i>Sanderling</i>
Manston	Kent		1933 – 1945, 1974	Lodger	
Maydown	NI, Londonderry	<i>Shrike</i> <i>Gannet II</i>	1/3/43 – 1/3/44 1/5/44 – 30/9/45 1/10/45 – 1/49	Eglinton Satellite Anti U-boat School, Naval OTU, ADDL Eglinton Satellite	Also HQ for Merchant Aircraft Carrier flights
Merryfield (Isle Abbots)	Somerset		1949 – 1951 24/10/56 – present	Satellite for Yeovilton – Wyvern trials All Weather Fighter Pool, ILS, FRU	Rebuilt 1972 as Yeovilton Satellite
Merston	Sussex		1945 – 1946	Surplus Equipment Storage	
Methven	Fifeshire		1942	RAS for Almondbank	
Middle Wallop	Hampshire	<i>Flycatcher</i>	16/2/45 – 10/4/46	Mobile Naval Airfield Organisation, Test Pilots, RAS	To Army
Milltown	Morayshire	<i>Fulmar II</i>	2/7/46 – 9/72	Satellite for Lossiemouth	
Millmeece	Staffordshire	<i>Fledgling</i>	15/4/43 – 1945?	WRNS Air Mechanics School	Not an airfield
Mount Batten	Devon		4/6/35 – 15/11/37	Shore base for Plymouth based ships, Catapult units	aka Cattewater (WWI)
Mullaghmore	NI, Londonderry		1944 – 1945	Lodger	
Netheravon	Wiltshire		1931 – 1934	Lodger	
Newcastle-under-Lyme	Staffordshire	<i>Daedalus II</i>	1941 – 1945	Aircraft Training Establishment	Not an airfield. Penkhull, Clayton Hall
North Coates	Lincolnshire		1940 – 1941	Lodger	
Nutts Corner	NI, Antrim	<i>Pintail</i>	11/7/45 – 31/3/46	ILS (Fighter) – little used	
Pembroke Dock	Pembrokeshire		1940 – 1941	Lodger	
Peplow	Shropshire	<i>Godwit II</i>	28/2/45 – 1949	Satellite of Hinstock	

Royal Naval Air Stations and Lodger Airfields, WWII (contd)					
Name	County	HMS	Dates	Purpose	Notes
Perranporth	Cornwall		1944	Lodger. satellite of St Merryn	
Peterhead	Aberdeenshire		1942 – 1944	Lodger	
Port Ellen	Argyllshire (Islay)		1943	Lodger	
Portland	Dorset	<i>Osprey</i>	24/5/39 – 1999	See bottom of table	
Predannack	Cornwall		15/12/58 – present	Satellite of Culdrose	
Prestwick	Ayrshire	<i>Gannet</i>	21/4/40 – 1941 23/11/70 – present	Lodger Sea King Squadron	
Puckpool	Isle of Wight	<i>Medina</i>	15/11/39 – 31/7/42	Rating School and accommodated overflow from nearby Fleet Air Arm depots.	
Ratray	Aberdeenshire	<i>Merganser</i>	3/10/44 – 1/9/46	Torpedo Bomber (TAG) / Reconnaissance Training,	Was Crimond until 1/4/45
Risley	Lancashire	<i>Gosling</i>	1/6/42 – 31/3/47	Airfield Defence Training	aka Warrington
Roborough	Devon	<i>Drake</i> <i>Drake II</i>	1940 – 1942 Post war – present	Lodger, with facilities always available Various activities	
Rochester	Kent		1950 – 1962	Pilot training, Ferry Flight	
Ronaldsway	Isle of Man	<i>Urley</i>	21/6/44 – 11/7/46	Operational Training, TBR Training	Now IoM Airport
Sandbanks	Dorset	<i>Daedalus II</i>	15/5/40 – 25/10/43	Lee-on-Solent sat., Basic Seaplane Training School	Poole Harbour
Skeabrae	Orkney	<i>Tern II</i>	10/40 – 1947 ? 1/4/47 – 1957	Lodger 1LS Grimsetter / Twatt satellite	Later on books of HMS <i>Fulmar</i>
Skitten	Caithness		1940 – 1941	Lodger	
Speke	Lancashire		22/3/41 – 7/45	Lodger, and RN Air Section	Moved to Woodvale
St Davids	Pembrokeshire	<i>Seahawk</i>	1/4/47 – 1/61	Satellite of Brawdy, later FRU	Later on books of HMS <i>Vulture</i>
St Eval	Cornwall		1940 – 1944	Lodger	
St Mawgan	Cornwall		1954 – 1956	Lodger, later Air Sea Warfare Development Unit	
St Merryn	Cornwall	<i>Vulture</i> <i>Curlew</i>	10/8/40 – 31/12/52 1/11/53 – 10/1/56	School of Naval Air Warfare. 1LS, 2LS Air Maintenance School, Air Ordnance School (both Ground)	

Royal Naval Air Stations and Lodger Airfields, WWII (contd)					
Name	County	HMS	Dates	Purpose	Notes
Stornoway (airfield)	Hebrides	<i>Mentor</i>	3/41 – 6/41 1973 – 1976	Lodger, ILS NATO base – Sea King Helicopters	
Stornoway (harbour)	Hebrides	<i>Mentor II</i>	11/40 – 6/41	Seaplane satellite of <i>Mentor</i> , Anti-Submarine amphibians	
Stretton	Lancashire	<i>Blackcap</i>	1/6/42 – 4/11/58	RNAMY. RAS, Naval Air Radio Installation Unit, ILS, 2LS	
Sullom Voe	Shetlands	<i>Sparrowhawk</i>	1940 – 1941	Lodger and RN Air Section under Hatston	
Sumburgh	Shetlands		1941 – 1942	Lodger	
Sydenham				see Belfast	
Tain	Ross-shire		1942 – 1944	Lodger	
Tangmere	Sussex		1942 – 1950	Lodger. and Air Fighting Development Unit	
Ternhill	Shropshire		? – 3/4/46	Lodger	
Thorney Island	Hampshire		1940 – 1948	Lodger, and Air Sea Warfare Development Unit	
Toome	NI, Antrim		1/4/47 – 1959	Eglinton satellite, repair facility	Later on books of HMS <i>Gannet</i>
Townhill	Fifeshire	<i>Waxwing</i>	1/7/42 – 31/8/46	Naval Air Depot, Personnel assembly	Dunfermline
Treligga	Cornwall	<i>Vulture II</i>	1939 – 1955	Bombing and Gunnery Range for St Merryn	
Turnhouse	Midlothian		1942 – 1944	Lodger	
Twatt	Orkney	<i>Tern</i>	1/4/41 – 30/9/46 1/10/46 – 1/57	FRU and ILS Satellite of Lossiemouth	Later on books of HMS <i>Fulmar</i>
Unst	Shetlands		?	Used by Walrus aircraft	
Upavon	Wiltshire		15/5/34 – 1/9/35	Shore base for FAA	
Warrington	Lancashire			see Culceth and Riseley	
Watford	Hertfordshire	<i>Turnstone</i>	1/1/44 – 18/8/45	Aircraft Training (Fitters)	
Watton	Norfolk		1947 – 1966	Lodger, Radio Warfare Unit	obo <i>Daedalus</i>
West Freugh	Wigtownshire		1940 – 1943	Lodger	
West Raynham	Norfolk		1945 – 1956	Lodger attachments to Central Fighter Establishment	obo HMS <i>Hornbill</i> , then <i>Peregrine</i>
Westhampnett	Sussex		1945	Lodger	



Royal Naval Air Stations and Lodger Airfields, WWII (contd)					
Name	County	HMS	Dates	Purpose	Notes
Weston Park	Shropshire	<i>Godwit II</i>	1944 20/4/45	Occasional use by Beam Approach School Satellite of Hinstock	
Wick	Caithness		1939 – 1940	Lodger	
Wittering	Cambridgeshire		1943 – 1945	Lodger, attachments to Air Fighting Development Unit	
Woodvale	Lancashire	<i>Ringtail II</i>	1942 – 1945 7/4/45 – 28/1/46	Lodger, FRU Burscough satellite, FRU, ILS	
Worthy Down	Hampshire	<i>Kestrel</i> <i>Ariel II</i>	6/38 – 23/5/39 24/5/39 – late 1947 1/7/52 – 1/11/60	Lodger, ILS No.1 Air Gunners School, Aircraft Maintenance School, Engine Handling Unit, RAS Ground Training	To Royal Army Pay Corps
Wroughton	Wiltshire		1972 – 1992	RNAMY, satellite of Fleetlands	
Yatesbury	Wiltshire		? – 31/9/47	Naval presence	
Yeovilton	Somerset	<i>Heron</i>	18/6/40 – present	See below	
Zeals	Wiltshire	<i>Humming Bird</i>	18/5/45 – 1/1/46	FRU, Fighter Conversion	

<b>Royal Naval Air Stations and Lodger Airfields, (contd)</b>		
Gosport	Pre WWII	Torpedo Development Flight (later TD Unit, Airborne TDU), FAA Pool
	WWII	FAA Maintenance Unit, Air Torpedo Development Unit, User Trials Unit, Firebrand Tactical Trials Unit, Aircraft Handling / Safety Equipment, and Fire Fighting School
	Post WWII	FRU, RN School of Photography, Air Medical School, Naval Aircraft Maintenance Development Unit, Naval Air Radio Installation Unit, Pre Flight Training School, Flight Deck Machinery Trials and Training Unit, Safety Equipment and Survival Training School
	As HMS <i>Sultan</i>	RN School of Marine Engineering, RN Air Engineering School (later Air Engineering and Survey School)
Lee-on-Solent:	Pre WWII	School of Naval Co-operation and Air Navigation, (renamed RAF Seaplane School, and then School of Naval Co-operation) HQ, Flag Officer Home, (later Flag Officer Naval Air Stations) Wykeham Hall
	WWII	Central Air Medicine Board First-line Squadrons
	Post WWII	Naval Air Radio Installation Unit, Air Electrical School, Naval Aircrew Advisory Board, Accident Investigation Unit, Flight Deck Machinery Trials and Training Unit, Naval Aircraft Maintenance Development Unit, Management Development Unit, Air Engineering School, Inter Service Hovercraft Trials Unit, Mobile Aircraft Repair Transport and Salvage Unit
Portland:	WWII	FRU
	Post WWII	Helicopter Training and Development Squadron, HQ Sea Training, Admiralty Underwater Weapons Establishment, RN Air Anti-Submarine Weapons School, Anti-Submarine Operational Flying School, Helicopter Trials and Training Squadron, Wasp Training and HQ Squadron, Fleet Target Group, Lynx Training Squadron
Yeovilton	WWII	Naval Air Observer School, Fleet Fighter School, ADDL, Fleet Fighter Development Unit, School of Air Combat
	Post WWII	Maintenance Test Pilots' School, Conversion Refresher courses, Deck Landing Training School, HQ Flying Training, All Weather Fighter Pool, HQ Naval Air Command, Lynx HQ and training squadron, Fleet Requirements and Air Direction Unit

Sources: Sturtivant: “*The Squadrons of the Fleet Air Arm*”, ‘*Action Station*’ series

Table 21 – Royal Naval Shore Establishments (Stone Frigates)

Name	Function	Location	From	To
<i>Abatos</i>	PLUTO Training Establishment. Assembly of pipework & valve gear	Norfolk House, Rex House & Supermarine HQ building Woolston, Southampton	21-09-43	03-46
<i>Achnacarry</i>	RN Commando Training Assessment School	Achnacarry, Inverness-shire	Unknown	Unknown
<i>Aeolus</i>	Kite & Balloon Repair Depot. Repair of weather balloons	High Street, Tring, Herts. Main Depot (now Metcalf & Sons) Premises also at corner of Akeman Street & Albert Street and a Nissen hut at the corner of Mortimer Hill & Brook Street within an existing garage site	01-12-42	01-03-46
<i>Aggressive</i>	Coastal Forces Base	Newhaven, the Paris Hotel & East Quay MTB base	1940	16-04-45
<i>Allenby</i>	Combined Operations Base. Folkestone Base, transferred to War Office	Folkestone	14-03-44	10-04-45
Almondbank	RNAS Aircraft Repair Yard	Almondbank, Perth	1942	Unknown
Amersham	Combined Operations Base (not a ship)	Amersham, Bucks		
Amphibious Supply Base (USN)	United States Navy's main Amphibious Supply Base in Europe (95 acres) during WWII. Construction began by US Navy Construction Battalion (the Sea Bees) on 12-10-43. Handed over to RN 1946 and used as a storage facility until 31-03-97 when it was paid off	Topsham Road, Exeter. Also included sub-depots at Hawkerland Valley (60 acres) and Winslade Park (15 acres)	03-02-44 1946	c.1946 31-03-97
<i>Appledore</i>	Naval Base and Combined Operations Training Establishment. To USN 24-07-43 & became USN Advanced Amphibious Base returned to RN 25-05-44	Appledore Docks, North Devon, also Fremingham Camp, Appledore	01-08-42	23-04-48
<i>Appledore II</i>	Combined Operations Base	Ilfracombe (might have been HMS <i>Excellent II</i> originally) moved to Collingwood Hotel, Ilfracombe during October 1943	17-09-43	30-11-46
<i>Ararat</i>	Combined Operations Training Centre	Castle Toward, Dunoon, Argyll	01-06-42	Unknown
<i>Arbella</i>	Combined Operations LC Training Establishment	RN requisitioned Boston Workhouse, Boston, Lincolnshire	21-01-43	09-08-45
<i>Ariel</i>	RN Air Radio & Air Mechanics Training Establishment	Warrington, Risley. Moved (Equipment & Trials Section) to Worthy Down 01-07-52	08-10-42	01-07-52

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Ariel</i>	RNAS / RN Air Electrical School	Worthy Down, Hampshire	01-07-52	c.1959
<i>Ariel</i>	Air Electrical School. Renamed HMS <i>Ariel</i> when ground-training wing moved there from Worthy Down. Renamed HMS <i>Daedalus</i>	Lee-on-Solent, HMS <i>Daedalus</i>	31-10-59	04-10-65
<i>Ariel II</i>	RNAS	South Camp in use after the AR&AM moved to Worthy Down	01-07-52	12-52
<i>Ariel II</i>	RNAS / RN Air Electrical School	South Camp Worthy Down. Absorbed into new HMS <i>Ariel II</i>	01-07-52	10-59
<i>Ariel II</i>	Air Electrical School	After the main school component moved to Lee-on-Solent, the remaining section became HMS <i>Ariel II</i>	31-10-59	12-60
<i>Armadillo</i>	Combined Operations Camp & RN Beach Commando School for the formation and training of RN Beach Commando units. Site was transferred from War Office control 12-10-42	Ardentinny, Glenfinnart, Loch Long	25-11-42	30-09-45
<i>Attack</i>	Coastal Forces Operational Base & Repair Centre	Portland – used the former premises of HMS <i>Osprey</i>	15-01-41	31-12-45
<i>Attentive</i>	Command Base for Portland	Portland	01-09-39	Unknown
<i>Attentive II</i>	Dover Patrol Shore Base?	Dover Harbour	1914	31-10-19
<i>Bacchante</i>	Aberdeen Base (Rosyth Command)	Station Hotel, Aberdeen	11-09-39	31-12-45
<i>Badger</i>	Minesweeper Base. HQ FO-in-C Harwich underground Operations Block below Hamilton House car park	Hamilton House, Parkstone Quay, Harwich	13-09-39	21-10-46
<i>Beaver</i>	RN Base Grimsby	Grimsby Dock	26-12-39	12-03-46
<i>Beaver II</i>	RN Base Immingham	Immingham Dock	12-39	11-03-46
<i>Beaver III</i>	Coastal Forces Base – ML	Immingham Dock	01-05-41	01-04-42
<i>Bee</i>	Coastal Forces Base (Western Approaches Command) A 'working up' base. On moving to Holyhead, the base became HMS <i>Grasshopper</i> in preparation for Operation Neptune	Weymouth. – used old Contraband Control Base, Edward & Alexandra Gardens Theatre, Pavilion Theatre & various hotels. Moved to Holyhead in October 1943	01-09-42	18-10-43
<i>Bee</i>	Coastal Forces and Minesweeper Base	Holyhead	18-10-43	21-07-45

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Beehive</i>	Coastal Forces Base – MTB & MGB. This is one of the original two WWII CF bases (1st Flotilla, Felixstowe) Felixstowe Dock RN Depot. Air Sea Rescue duties shared with the RAF station	Boomer Hall, Felixstowe. Also used hangar at RAF Felixstowe, the Pier Hotel (now 'Little Ships') functioned as the Wardroom; Cliff Hotel WRNS accommodation	01-07-40	18-10-45
Bickleigh Camp	RM Commando Training Establishment	Bickleigh, Plymouth	1940	c.1946
<i>Birnbeck</i>	Experimental Station (Directorate of Miscellaneous Weapons)	Brean Down Fort, Birnbeck Pier – which links the mainland with an island	02-10-42	31-01-46
Blackbrook Farm	RN Diesel Repair Depot, operated by Vospers	Blackbrook Road, Fareham, Hants	WWII	C 1990
<i>Blackcap</i>	RNAS Stretton, former RAF Station	Stretton, Warrington	01-06-42	04-11-58
<i>Blackcat ?</i>	Combined Forces Base – came under HMS <i>Drake IV</i>	Devonport No.13 Wharf	26-12-43	16-07-45
<i>Blazer</i>	Training Establishment & Gunnery Range	Isle of Wight	04-44	01-04-46
<i>Boscawen</i>	Portland Naval Base formally HMS <i>Victory XI</i>	Portland	01-07-32	31-12-47
<i>Brighton</i>	RN W/T Unit Training School	29 Queen's Road, Brighton	27-04-42	Unknown
<i>Bristol</i>	RN Training Establishment	Muller's Orphanage (ex War Office), Ashley Down Road, Bristol. Now Bristol College	10-42	01-01-43
Bristol	University Royal Naval Unit			
<i>Britannia</i>	College, Dartmouth. Renamed <i>Dartmouth</i> to release this name for Royal Yacht. The title Britannia Royal Naval College used from 1953	Dartmouth. In WWII cadets sent to Eaton Hall, Cheshire, and Howstrake Camp, IoM until 21-09-46	09-05	01-07-53
<i>Britannia II</i>	Dartmouth Trawler Base	Dartmouth, Renamed HMS <i>Dartmouth</i>	06-40	23-12-43
<i>Britannia III</i>	Dartmouth Coastal Forces Base – MTB & MGB	Dartmouth. Renamed HMS <i>Dartmouth II</i>	01-05-41	23-12-42
<i>Brontosaurus</i>	No.2 Combined Operations Base. Initial training of officers & crews of large LC	Toward Point, Castle Toward, Dunoon, Argyll	07-08-42	31-07-46
<i>Bruce</i>	Boy's Training School, formally HMS <i>Jackdaw</i>	RNAS Crail, Fife	29-04-47	25-10-49
<i>Bunting</i>	Auxiliary Patrol Base	Harwich & Ipswich	25-02-40	10-11-44
Burma Camp	RM Commando Seamanship Training Camp	Llwyngwrl, Merionethshire	Unknown	Unknown

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Buzzard</i>	Temporary RNAS Base	Lympne Airport, Closed then reopened as HMS <i>Daedalus II</i> 03-11-39. Handed over to RAF 22-05-40	01-07-39	25-09-39
<i>Cabbala</i>	RN Coding School. Tortworth Camp transferred to War Office 25-09-42. School then transferred to Lowton. Also included Higham Court (ex HMS <i>Ganges</i> ), Gloucestershire	Tortworth Court, Falfield, Gloucestershire. Lowton St Mary's, Leigh, Lancashire Higham Court was vacated 09-11-42 and transferred to Brox Fare ?, Nottingham	01-03-41	25-09-42
<i>Cabbala</i>	RN Educational & Vocational Training School ex <i>Fledgling</i>	Millmeece, Eccleshall, near Stafford	11-46	02-48
<i>Cabot</i>	Training School Site now Wetherby Borstal	Bristol (Muller's Orphanage) then moved 15-09-42 to No.2 Hostel, Thorpe Arch Royal Ordnance Factory	13-07-40	15-07-44
<i>Cabot</i>	Training School (Stewards & Cooks). Renamed HMS <i>Demetrius</i> , then HMS <i>Ceres</i> . Moved to Chatham. c.1958	Wetherby, York Road (opposite the Racecourse). Now a Borstal	15-09-42	c.1958
<i>Cadmus</i>	Port of Avonmouth Base	Name selected not used?	01-09-39	15-10-45
<i>Caledonia</i>	Oban Base	Originally called HMS <i>St Andrews</i>	01-07-43	30-09-45
<i>Caledonia</i>	RN Apprentice Training Establishment – formally Mechanical Training Establishment – moved to HMS Sultan. HMS Caledonia then became the main support base for RN Rosyth (see below)	Rosyth	c.1939 01-12-46	17-12-85
<i>Caledonia</i>	RN Support Establishment. Satellite to HMS <i>Cochrane</i> until it closed then HMS <i>Caledonia</i> became part of the Defence Lands Organisation. HMS <i>Scotia</i> is now a lodger unit	The old <i>Caledonia</i> building, Rosyth	17-12-85	01-04-96
<i>Calliope</i>		Tyne Port	01-09-39	23-02-46
<i>Calliope</i>	RNR Training Establishment	Gateshead, South Shore Road	Jun-67	Unknown
<i>Cambria</i>	RNR HQ Unit	Sully, near Barry, former married quarters and new building c.1980	c.1947	Extant
<i>Cambridge</i>	RN Gunnery Range	Wembury, near Plymouth	09-08-56	1999?
Cambridge	University Royal Naval Unit, Cambridge University Air Squadron	2 Chaucer Road, Cambridge	c.1994	Extant

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Camperdown</i>	RNR Training Establishment. Closed as part of 'Options for Change'. Building demolished	Marine Parade, Dundee	08-69	29-07-94
Caserne Bir Hacheim	Free French Drafting Depot	Emsworth, Hampshire	Unknown	Unknown
Caserne Birot	Free French Naval Establishment	Greenock	08-42	08-03-46
Caserne Surcouf	Free French Naval Establishment	Clapham Common	Unknown	Unknown
<i>Celebrity</i>	RN Trawler Base	Milford Haven	20-11-40	16-07-45
<i>Celtic</i>	Royal Marine Boom Control Detachment	Oban – details unknown	Unknown	Unknown
<i>Centurion</i>	RN Central Drafting Depot	Lythe Hill House, Haslemere. Transferred to Gosport 1970	05-04-57	06-70
<i>Centurion</i>	RN Drafting Depot / Pay & Accounting Centre	Grange Road, Gosport. Formally HMS <i>Haslemere</i> . Moved to HMS <i>Sultan</i>	16-10-70	31-03-94
<i>Ceres</i>	RN Training Establishment	Wetherby, York Road. Formally HMS <i>Demetrius</i> . Moved to Chatham Barracks (HMS <i>Pembroke</i> ) 01-04-58	01-10-46	01-04-58
<i>Ceres</i>	RNR Communications Training Centre. Closed as part of 'Options for Change'	Harrogate Road, Yeadon, Leeds. This is the site of the Leeds ROC Bunker	01-10-84	31-07-94
Ceres Division	RNR Training. Newest & smallest RN shore establishment. Tender to HMS <i>Sherwood</i>	Carlton Lodge, Carlton Barracks, Leeds	c.2000	Extant
<i>Cicala</i>	Coastal Forces Base – MTB & MGB. Formally known as HMS <i>Dartmouth II</i>	Royal Hotel, Dartmouth Often misspelt 'Cicila'	01-08-43	31-12-44
<i>Cicero</i>	RN Training Ship & Rehabilitation Centre	Formally Wallington Camp, Fareham	23-10-47	19-04-48
<i>Claverhouse</i>	Coastal Forces Base ML (Rosyth Command)	Port of Leith	01-09-39	13-08-45
<i>Claverhouse</i>	RN Forth Reserve Division	Granton Square, Edinburgh	01-10-46	03-59?
<i>Claverhouse II</i>	RN Mine Sweeper Base	Granton	08-06-41	1945
<i>Clio</i>	Barrow-in-Furness Port	Barrow-in-Furness	29-08-39	1945
<i>Cochrane</i>	Renamed Rosyth Naval Base 1962 (Rosyth Command)	Rosyth	01-06-38	1962
<i>Cochrane II</i>	RNAS Donibristle	Used as barracks	01-12-62	28-02-63

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Cochrane II</i>	RN Supply & Accounting Base	Rosyth	1940	1945
<i>Cochrane III</i>	RN Educational & Vocational Training School	Rosyth, Primrose Camp	1942	1947?
<i>Cockfosters</i>	RN Port Party Transit Camp, and holding depot for personnel going to and returning from Germany. Replaced by <i>HMS St Clement III</i>	Exact location unknown	12-06-44	12-09-45
<i>Collingwood</i>	RN Ports Training School, RN Special Reservists, Radar & Electrical Ratings, RN Weapons Engineering School	Fareham, Hampshire	10-01-40	Extant
<i>Collingwood II</i>	RN Pay Centre	Southampton, South Western Hotel. Renamed <i>HMS Victory</i>	1941	Unknown
<i>Colonsay</i>	RN Mine Sweeper Base	Grimsby	01-08-40	31-07-45
<i>Condor</i>	RNAS airfield – absorbed Training Wing from <i>Gamecock</i> 11-11-58. Became RM Barracks	Arbroath. Extant as RM Barracks	19-06-40	01-04-71
<i>Condor II</i>	RNAS (WWI) aerodrome (opened 1912) became Marine Craft Base	Stannergate, Dundee	15-07-41	15-06-44
<i>Cook</i>	RNZN Depot	Halifax House, Strand, London. Renamed <i>HMS Maori</i>	Unknown	01-04-45
<i>Copra</i>	Combined Operations Pay & Drafting Office	Commissioned at Chelsea Court, SW7, moved to Southend, then to Largs 05-10-45	30-08-43	15-01-47
<i>Cressy</i>	Rosyth Command			
Crete Camp	RM Commando Practical Handling Camp (LC)	Barmouth	Unknown	Unknown
<i>Cricket</i>	RN / RM LC Base. After the war the base became known as 'Cricket Camp' housing victims of the bombing of Southampton and Portsmouth	Bursledon, Manor Farm, Hampshire (now Manor Farm Country Park)	15-07-43	15-07-46
<i>Curlew</i>	RNAS airfield, formally <i>HMS Vulture</i> , closed for flying 14-12-53	St Merryn, Cornwall	01-01-53	10-01-56



Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Daedalus</i>	RNAS Aerodrome & Airfield. Transferred to RAF 01-04-18, handed back to RNAS 24-05-39. Renamed <i>Ariel</i> 31-10-59 but HMS <i>Daedalus</i> retained for HQ at Wykeham Hall. Renamed HMS <i>Daedalus</i> 05-10-65	Lee-on-Solent, Hampshire	1917	31-07-96
<i>Daedalus II</i>	RNAS – temporary airfield	Lympne, Kent	01-01-40	05-40
<i>Daedalus II</i>	RNAS – seaplane station	Lawrenny Ferry, Pembroke	01-02-42	24-10-43
<i>Daedalus II</i>	RN Aircraft Training Establishment. formally Lympne	Old Bank House, Penkhull Street, Newcastle-under-Lyme	05-40	31-01-46
<i>Daedalus III</i>	Camp Release Centre	Opened as Bedhampton Camp, named HMS <i>Daedalus III</i> 29-09-45	09-43	01-02-47
Dalditch Camp	RM Commando Training Camp	Dalditch, Budleigh Salterton, Devon	Unknown	Unknown
<i>Dalriada</i>	RN Reserve HQ Unit. Reserve Training Centre Formally at HMS <i>Inverkip</i> (1969-1980 located in an underground operations block)	Navy Building, Eldon Street, Greenock	30-04-65	Unknown
<i>Dartmouth</i>	Dartmouth Base. Formally <i>Britannia II</i>	Dartmouth	01-02-43	01-10-45
<i>Dartmouth II</i>	Dartmouth Coastal Forces Base – MTB/ MGB/ ML Formally HMS <i>Britannia III</i> , renamed HMS <i>Cicala</i> 08-43	Dartmouth	23-12-42	08-43
<i>Dartmouth III</i>	Combined Operations Training Establishment. Renamed HMS <i>Effingham</i> 19-07-43	Dartmouth College & Eaton Hall	01-02-43	19-07-43
<i>Dartmouth, Britannia</i>	Formally Britannia RN College	Dartmouth	01-07-53	Extant
<i>Dauntless</i>	WRNS Training Establishment from Westfield College NW3, then called HMTE Dauntless. Training transferred to Raleigh	Burghfield near Reading	11-12-53	14-08-81
<i>Defiance</i>	Devonport Training Establishment	Devonport	1954	20-04-59
<i>Defiance</i>	Formally Fleet Maintenance Base. 12-03-81, became HMS <i>Defiance</i> . Absorbed into Drake	Devonport	21-04-78	31-03-94

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Demetrius</i>	Accountant Branch & Supply & Secretariat Training Establishment. Renamed HMS <i>Ceres</i> 01-10-46	Wetherby, York Road opposite Racecourse. Site now a Borstal	15-07-44	01-10-46
<i>Diligence</i>	Reserve Fleet Base	Hythe	03-03-53	30-04-63
<i>Dinosaur I</i>	HQ for tank and LC training. LC Gunnery School	Troon, Ayrshire		
<i>Dinosaur II</i>	LC Base & Repair Centre (Western Approaches Command)	Irvine, Ayrshire. Renamed <i>Fullarton</i>		31-12-44
<i>Dipper</i>	RNAS Airfield. Became a tender to HMS <i>Heron</i> & then reopened as satellite to HMS <i>Heron</i> . Finally closed on 01-10-51	Henstridge, Dorset	01-04-43	11-11-46
<i>Dolphin</i>	Submarine Depot and School. Site taken over from RE in 1904, becoming a command on 31-08-12. Training only by 12-93	Fort Blockhouse, Gosport Became an accommodation unit for Army Medical College. School transferred to HMS <i>Raleigh</i> 17-09-97	1904	30-09-98
<i>Dolphin II</i>	Accommodation for Dolphin. Became part of HMS <i>Hornet</i>	Gosport	Unknown	Unknown
<i>Dolphin III</i>	Accommodation for Dolphin	Gosport		
<i>Dominion</i>		Gosport		
<i>Dorlin</i>	Combined Operations Base, No.3 Combined Training Centre, site formally used by RN Special Training Establishment / Battle Training for RN Beach Signals & Royal Signals sections	Dorlin House, Acharacle, Argyll House now demolished. Large training area also included the following: Glencripesdale Camp, Glenborrodale & Roshven Camps	23-03-42	28-11-44
<i>Dotterel</i>	RNAS East Haven airfield	Ex <i>Peewit</i>	01-05-43	
<i>Dragon</i>	RN Communications Training Centre	King's Dock, then to Customs House, Cambrian Place, Swansea	01-10-84	30-06-94
<i>Dragonfly</i>	Combined Operations Base. Became Mobile LC Advanced Assembly Depot and Landing Barge Base	Hayling Island	07-06-43	15-01-46

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Drake</i>	Devonport Barracks & Base. Began as HMS <i>Vivid</i> , renamed HMS <i>Drake</i> 01-01-34. Incorporated Defiance from 01-04-94. It is the largest ship repair yard in the UK. There is a modern Submarine Refit Facility which opened 05/80; this has two dry docks & a wet berth	Devonport plus Plymouth Airport from 09-39 to 01-05-42. Overflow camps at Yealmpton, Cornwood and Roborough, plus Signal School at Glenholt	Unknown	Extant
<i>Drake I</i>	Accounting Base	Devonport	c.1943	01-11-61
<i>Drake II</i>	Accounting Base, relocated to Devonport 05-45	Stoke Damerel School, Plymouth	c.1940	c.1958
<i>Drake IV</i>	Accounting Base (Tenders)	Devonport	08-39	31-12-46
<i>Drake V</i>	Royal Australian Navy Accounts	Devonport / Tavistock. Port Library	13-01-41	07-09-41
<i>Drake X</i>	RN Reserve Fleet	Pembroke Dock	02-48	c.1952
<i>Dryad</i>	Originally located at Portsmouth Harbour after the school transferred ashore in 1906. The Navigation & Direction School then moved to Southwick Park, Hampshire. The House became the Forward Planning and Operational HQ of the Supreme Commander of the Allied Expeditionary Force. The plywood map still hangs in the Wardroom. Closed in 2004, the School of Maritime Operations moving to HMS <i>Collingwood</i>	Portsmouth Harbour / Naval Academy Building. Moved to Southwick Park and recommissioned there on 27-09-41. The park is now the Defence Police College	01-01-06	2004
<i>Duke</i>	RN Training Establishment. Became Royal Signals and Radar Establishment	Great Malvern	27-05-41	31-03-46
<i>Dundonald</i>	Combined Operations Training Centre Holding & Training Base for RN Beach Commandos	Gailes Camp, Auchengate, Troon, Ayrshire	01-04-42	16-09-46
<i>Dundonald II</i>	Combined Operations Signals School. School transferred to Fremington House, Barnstaple	Located at Gailes Camp on the Forth of Clyde	01-04-42	30-06-46
<i>Eaglet</i>	Port of Liverpool & RN Training Establishment / Merchant Navy Defence Course, (Western Approaches Command)	Port of Liverpool	04-12-39	28-02-46

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Eaglet</i>	Liverpool RNR HQ	Princess Dock, Liverpool, then moved to new premises?	Unknown	Extant
<i>Eaglet II</i>	Birkenhead Base Formally known as HMS <i>Irwell</i> . Name changed back to HMS <i>Irwell</i> 15-08-42	Port of Birkenhead	20-09-39	15-08-42
<i>Eaglet III</i>	Central Depot and Accommodation Establishment. Renamed HMS <i>Mersey</i> 24-12-40	David Lewis Northern Hospital, Liverpool	20-09-39	24-12-40
<i>Effingham</i>	Combined Operations Base, formally HMS <i>Dartmouth III</i> . Transferred to HMS <i>Westcliff</i> 31-12-43	RN College Dartmouth	19-07-43	31-12-43
<i>Elfin</i>	Submarine Base, amalgamated with Dolphin (Rosyth Command)	Blyth	22-12-39	21-09-45
<i>Elfin II</i>	Coastal Forces Base	Blyth	01-12-41	26-10-42
<i>Essex</i>	Communications Training Centre	Shoeburyness, Ness Road	01-10-84	31-01-92
<i>Europa</i>	Patrol Service Central Depot. Formally known as HMS <i>Pembroke X</i> , this was the main admin. HQ for motor fishing vessels, MLs, & motor minesweeper vessels. Closed 01-06-46 then recommissioned briefly as tender to HMS <i>Pembroke IV</i> until 27-08-46	Sparrow's Nest, Lowestoft Port	25-08-39	01-06-46
<i>Europa II</i>	Overflow Camp to HMS <i>Europa</i>	Bungay	25-09-45	31-05-46
<i>Evolution</i>	London Port Operations Base. Renamed HMS <i>Odyssey</i> 01-11-43	London Chelsea Court	17-09-42	01-11-43
<i>Excalibur</i>	New Entry Seaman Training Establishment (6 week course). Formally HMS <i>Tiger's Whelp</i> . Royal Marine MT Driver's Training	The Brunds?, Alsager, Stoke-on-Trent. Now Excalibur Trading Estate	22-12-42 ?-05-46	31-12-47
<i>Excellent</i>	RN Training Establishment & HMS <i>Fraser</i> Gunnery Range. Established 01-01-1869. Recommissioned 01-05-1891. Oldest RN shore base	Whale Island, Portsmouth	01-04-94	Extant
<i>Excellent II</i>	Accounting Base	Moved to Bournemouth, Westcliffe Gardens 01-05-42. Became <i>Appledore II</i> 17-09-43 and transferred to Ilfracombe	Unknown	17-09-43

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
Exton Camp	Royal Marine Training Establishment. In 1941 became Depot RM Lympstone and in 1970 Commando Training Camp Royal Marines	Lympstone, Devon	c.1939	Extant
<i>Ferret</i>	RNR Training Establishment. Defence Intelligence Staff Branch	Chicksands, Bedfordshire	Unknown	Extant
<i>Fervent</i>	Coastal Forces Base – MTB / MGB / ML & Air-Sea Rescue Launches	Royal Temple Yacht Club, Ramsgate	10-10-39	17-09-45
<i>Fervent II</i>	Details unknown	Ramsgate	04-41	10-45
<i>Fieldfare</i>	RNAS Airfield & RN Aircraft Repair Yard	Evanton, Ross-shire	09-39	01-12-46
<i>Firebrand</i>	Stranraer Base	Stranraer	16-09-39	31-07-45
<i>Firework</i>	Base for 'P' Parties (mine clearance) evacuated from London with V1 attacks. Later to Cherbourg	Barrow-in-Furness	01-04-44	10/44?
<i>Fledgling</i>	Tender to HMS <i>Daedalus II</i> . Training of WRNS's as aircraft mechanics (airframe & engines, electrical & ordnance fitters). After decommissioning it was replaced by Educational & Vocational Training facility, HMS <i>Cabbala</i> was set up training released servicemen for the return to civilian life. This was decommissioned in February 1948	Newcastle-under-Lyme, Millmeece, Eccleshall, Staffs. A Workers Hostel Camp on the west side of the Swynnerton ROF became <i>Fledgling</i>	15-04-43	21-01-46
<i>Flora</i>	Invergordon Port (Rosyth Command)	Invergordon, Aultbea, Loch Ewe Base	01-10-39	16-10-45
<i>Flora II</i>	Coastal Forces Base – ML	Invergordon	01-09-42	04-11-43
<i>Flowerdown</i>	Former RFC school & W/T Station RN from 30-09-29	Flowerdown, near Winchester	c.1916 10-01-43	?
<i>Flycatcher</i>	Former RAF Station	Middle Wallop, Hampshire	16-02-45	10-04-46
<i>Flycatcher I &amp; II</i>	Former RAF Station	Ludham, Norfolk	04-09-44	16-02-45
<i>Flying Fox</i>	RNR HQ Unit	Winterstoke Road, Bristol	1972	Extant
<i>Foliot</i>	Accommodation Camp for personnel on special service. Became HMS <i>Foliot IV</i>	Plymouth, Tamerton Foliot	27-07-42	31-03-46

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Foliot I</i>	Combined Operations LC Accounting Base & Special Service HQ. From HMS <i>Albatross</i> . Hutted camp paid off 15-03-46 which then became an overflow barracks	Plymouth, Tamerton Foliot, and Calstock	c.03-44	31-03-46
<i>Foliot II</i>	Combined Operations LC Repair Base	Efford, Plymouth	c.07-43	c.12-44
<i>Foliot III</i>	Combined Operations LC Base & holding base for personnel	Bickleigh, Plymouth	c.07-43	c.10-46
<i>Foliot IV</i>	LC Accounts	Granby Barracks, Plymouth	02-04-46	12-08-46
<i>Foral</i>	HQ Force L	Southwold. Moved to St Felix School, Southwold	Unknown	c.06-44
<i>Forest Moor</i>	Radio Station, former Army Camp	Darley, Harrogate	03-10-60	c.1996
<i>Forte / Forte I</i>	Falmouth Naval Base / HQ	Falmouth, Tregwynt? / Membly Hall Hotel	24-08-39	31-01-46
<i>Forte II</i>	Coastal Forces Base	Falmouth, Imperial Hotel	10-05-41	Unknown
<i>Forte III</i>	Unknown	Taylor's Garage / Trago Mills Falmouth	10-05-41	Unknown
<i>Forte IV</i>	Coastal Forces Base – ML	Falmouth, Coastlines	07-08-41	06-11-44
<i>Fortitude</i>	Ardrossan Base (Western Approaches Command)	Ardrossan	20-04-40	30-09-45
<i>Fortitude II</i>	Coastal Forces Base	Ardrossan	07-05-41	Unknown
<i>Forward</i>	The 5th HMS <i>Forward</i> was an underground Naval Intelligence Operations Centre built by 172nd Tunnelling Company, RE	On B2109 at South Heighton. Newhaven, East Sussex. Entrance used to be through Denton House (demolished 1996)	c.1941	31-08-45
<i>Forward</i>	RNR Communications Training Centre Regional Training Centre, Small Heath, Birmingham University Royal Naval Unit	Birmingham. At Broad Street, then Sampson Road North, Camp Hill from c.1986 until 1999. New building built at Small Heath (opposite Birmingham City Football Club)	01-10-84	Extant
<i>Forward II</i>	Coastal Forces Base – MTB, renamed HMS <i>Aggressive</i>	London and Paris Hotel	04-03-41	04-11-42
<i>Fox</i>	Lerwick Base	Lerwick	25-08-39	30-09-45
<i>Fox II</i>	Coastal Forces Base – MTB & ML	Lerwick	20-07-42	31-03-44
<i>Fullarton</i>	LC Base, formally HMS <i>Dinosaur I</i>	Irvine, Ayrshire	01-01-45	30-11-46

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Fulmar</i>	Lossiemouth former RAF Station. Returned to RAF 29-09-72	Lossiemouth, Morayshire	02-07-46	29-09-72
<i>Fulmar II</i>	RNAS Twatt airfield	Twatt, Orkney	Unknown	09-46
<i>Galatea</i>	RNR Drill Ship	Earles Road, Hedon, Hull,	21-10-38	31-03-58
<i>Gamecock</i>	Bramcote former RAF Station Naval Air Mechanic Training. Unit transferred to Arbroath 01-11-58. Site transferred to Royal Artillery Gamecock Barracks	Bramcote, Nuneaton, Warwickshire	12-12-46	25-03-59
<i>Ganges I &amp; II</i>	RN Training Establishment. Took name of Ganges in 1927 previously Shotley RN Boys' Training School. In 1940 transferred to HMS <i>St George</i> , IoM, replaced by HO Training. Reopened as Boy's TE, 07-45 until 1976	Shotley, Felixstowe Higham Court Camp near Gloucester used as overflow	04-10-05	10-76
Gibraltar Camp	RM Commando Basic Seamanship Training Camp (not a ship)	Llanegryn	Unknown	Unknown
Glasgow	Glasgow University Royal Naval Unit	Glasgow University Campus	c.1972	Extant
<i>Glendower</i>	Seamanship Training Establishment	Pwllheli / New Butlins Camp	01-10-40	01-09-46
<i>Godwit</i>	RNAS Hinstock, former MAP Satellite Landing Ground	Ollerton / Hinstock, Salop	14-06-43	28-02-47
<i>Godwit II</i>	RNAS Weston Park, former MAP Satellite Landing Ground	Weston Park, Shropshire	c.1944	c.1945
<i>Godwit II</i>	RNAS Peplow, former RAF station	Peplow, Salop	c.1944	c.1945
<i>Goldcrest</i>	RNAS Angle, former RAF station. Name transferred to Dale, Angle then handed back to RAF	Angle, Pembrokeshire	15-05-43	07-09-43
<i>Goldcrest</i>	RNAS Dale, former RAF Station. Transferred from Angle	Dale, Pembrokeshire	05-09-43	31-10-48

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Goldcrest II</i>	RNAS Brawdy, former RAF Station RN used it as satellite to Dale. Became HMS <i>Goldcrest</i> 04-09-52 until 01-04-71, then transferred back to RAF	Brawdy, Pembrokeshire. Also included a relief airfield at St Davids lent by the RAF 1947-1961	01-01-46	01-04-71
<i>Gordon</i>	RNR Nautical Sea Training College for ratings going into Merchant Navy. Formally HMS <i>Gamebird</i> . Renamed HMS <i>Gordon</i> , then HMS <i>General Gordon</i> on 01-12-43. Reverted back to original name before being paid off	Gravesend, Kent	27-01-41	30-11-44
<i>Gosling</i>	New Entry Training Establishment for airframe fitters, radio mechanics, RM trainees & RNAS Defence Force. Became General Service Training Estate 01-03-46	Risley, Warrington, Lancashire	01-07-42	21-10-47
<i>Grasshopper</i>	Combined Operations Base for Operation Neptune, on site vacated by HMS <i>Bee</i>	Weymouth, including Alexandria Gardens Theatre, various hotels & Pavilion Theatre	15-10-43	28-04-44
<i>Great Nore</i>	Thames Fort AA Tower under Army Control	Thames	08-43	Unknown
<i>Haig</i>	Combined Operations Base	Rye, Isle of Wight	20-08-43 22-02-44	15-09-43 01-45
<i>Hallam</i>	RNR Communications Training Centre Closed as part of 'Options for Change'	Claremont Crescent, Sheffield	01-10-84	31-01-92
<i>Headingley</i>	WRNS Training Establishment	Wesley College, Headingley, Leeds	27-01-44	14-01-46
<i>Helder</i>	Combined Operations Base, formally at <i>Nemo</i>	Brightlingsea, using the Martello Tower and a camp at St Osyth		
<i>Helicon</i>	Aultbea Base (Western Approaches Command)	Loch Ewe	14-06-41	06-08-45
<i>Heron</i>	RNAS Yeovilton airfield Included Charlton Horethorne & RAF Merryfield 21-11-56 – 1990	Yeovilton, Somerset	18-06-40	Extant
<i>Heron II</i>	RNAS Haldon, former civil airport	Haldon, near Bishopsteighnton, Devon	c.1941	c.1946
<i>Heron II</i>	RNAS Charlton Horethorne	Charlton Horethorne, Somerset	26-05-42	01-04-45
<i>Heron II</i>	RNAS Henstridge	Henstridge, Dorset	11-11-46	c.1957
<i>Hornbill</i>	RNAS Culham, RN Aircraft Receipt & Despatch Centre	Culham, Oxfordshire	01-11-44	c.1959



Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Hornbill II</i>	Former RAF Halesworth	Halesworth, Beccles, Suffolk. includes Bungay airfield	01-07-45	18-07-53
<i>Hornet</i>	Coastal Forces Depot / MTB / one of the original WWII CF bases and the last one to close. Became Joint Service Adventurous Training Centre which commenced 23-05-64	Gosport, now Hornet Sailing Centre	19-04-21 20-12-39	Unknown 30-09-57
<i>Humming Bird</i>	RNAS Zeals, former RAF Station	Zeals, Somerset	18-05-45	1502-46
<i>Icarus</i>	RNAS Houton Bay & Caldale, Scapa Flow Stations Central Depot for Air Services, Orkney	Orkney	01-10-17	c.1918
<i>Iolaire</i>	Auxiliary Patrol Base		26-09-15	19-05-19
<i>Iron Duke</i>	Coastal Forces Base – ML	Scapa Flow		
<i>Jackdaw</i>	RNAS Crail. After closure reopened as HMS <i>Bruce</i> . University Flying Squadron, Storage Depot & Joint Service Linguistic School	Crail, Fife	01-10-40	28-04-47
<i>Jackdaw II</i>	RNAS Dunino, former RAF station. Became HMS <i>Merlin III</i> on 01-10-45	Dunino, Fife	01-12-42	c.1946
<i>James Cook</i>	Combined Operations Beach Training Establishment. Naval Beach Pilotage Training Establishment	Glen Caladh Castle, near Tighnabruaich, Bute	11-11-42	30-09-45
<i>Kestrel</i>	Telegraphist Air Gunner School, School of Aircraft Maintenance, Educational & Vocational Training. Included airfields at Bush Barn, Thorney Island & Somerford (Christchurch). Became HMS <i>Ariel</i>	Former RAF Worthy Down, Winchester	24-05-39	07-52
<i>King Alfred</i>	Training Establishment for HO Ratings. Various sections (1943): HMS <i>King Alfred</i> (H) – Main Building Kingsway. HMS <i>King Alfred</i> (L) – Lancing College, Shoreham-by-Sea (Admiralty Selection Board). HMS <i>King Alfred</i> (M) – Mowden School, The Droveway, Hove. Transferred to Exbury House 07-01-46. Ex RNR HQ. Drill Hall became HMS <i>Forward</i>	Hove Battery, Hove Marina, Sussex. Also used: South Victoria Terrace, Municipal Swimming Baths, Underground Car Park at Hove Marina, Langfords Hotel (Third Avenue), Lawns Hotel (Kingsway) & a house called 'San Remo' used as WRNS accommodation. Exbury House, Southampton	14-09-39?	08-46

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>King Alfred</i>	Training Establishment for RNVR Officers. Moved from HMS <i>King Alfred</i> , Hove 07-01-46 and closed 05-08-46. Reopened 10-08-46 as HMS <i>Hawke</i>	Exbury House, Southampton	07-01-46	05-08-46
<i>King Alfred</i>	Training Establishment for RNVR Officers. At this time Hove became King Alfred II	Whale Island, Portsmouth	01-06-94	Extant
<i>King Alfred II</i>	Training Establishment for RNVR Officers for Combined Operations. HMS <i>King Alfred</i> (M) by 1943	Mowden School, The Drove way, Hove	c.1940	c.1944
<i>Kingfisher</i>	Auxiliary Patrol Base. Amalgamated with Lowestoft 20-09-19 and then closed	Great Yarmouth	23-08-15	30-11-19
<i>Kredemnon</i>	Degaussing Establishment	Weymouth College, Weymouth	01-06-40	12-07-40
<i>Landrail</i>	RNAS Campbeltown, former airport. Renamed HMS <i>Landrail II</i> when Machrihanish became parent station	Campbeltown	01-04-41	c.1945
<i>Landrail</i>	RNAS Machrihanish, to Air Ministry 27-05-63	Machrihanish, Argyllshire	15-06-41	Extant
<i>Leigh</i>	Southend-on-Sea Base, included WRNS Signals Unit, Hampton, Beehive Lane, Great Badow near Chelmsford, and a Naval Party at Holehaven Creek	Southend-on-Sea, Essex Southend Pier used as an assembly point for convoys. Pier badly damaged by fire in 1976	01-10-41	31-10-45
<i>Leigh II</i>	Combined Operations Training Base	Princess, Haslemere & Kingsway Hotels. Butts Baltic Wharf, Aldrington Basin, Shoreham	07-10-42	31-12-45
<i>Lizard</i>	Combined Operations LC Base LC Maintenance Base. Shoreham Base	Shoreham, Haslemere Hotel, John Brown's Wharf	07-10-42	31-12-45
<i>Lochailort</i>	Combined Operations Training School for Boat Officers. Former Infantry Training School	Inverailort Castle		
<i>Lochinvar</i>	Minesweeper Training Base 21-11-39 (Rosyth Cmd.). Operational Minesweeper Base 01-41 until 03-46. Port Edgar renamed HMS <i>Hopetoun</i> . Fishery Protection Squadron (19-03-63 – 01-09-75) moved to HMS <i>Cochrane</i>	Port Edgar / Granton	09-17	12-75
<i>Lochinvar II</i>	Accounting Base	Granton / Edgar	Unknown	Unknown

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
London	Combined Operations Command HQ (not a ship)	Admiralty House, then 1a Richmond Terrace	06-40 08-40	08-40 ?
<i>Lucifer</i>	Swansea Base (Western Approaches Command) also included Cardiff, Avonmouth, Barry and Newport	Swansea Port	01-11-39	31-03-46
<i>Lynx</i>	Dover Base, included Dover College	Dover Port	17-09-39	30-11-46
<i>Lynx II</i>	Dover LC Base	Dover Port	01-01-45	09-08-45
<i>Macaw</i>	Transit Camp for FAA, to / from Canada	Wellbank Camp, Eskmeals, Bootle, Cumberland	17-11-43	13-09-46
<i>Manatee</i>	LC Base & Combined Operations Base	Yarmouth, Isle of Wight, Norton & Savoy Camps & Malta Cottage - known as the Savoy Holiday Home	15-11-42	09-44
<i>Mantis</i>	Coastal Forces Base – MTB, MGB & ML Formally HMS <i>Minos II</i>	Lowestoft	26-07-42	30-06-45
<i>Maori</i>	RNZN HQ in UK, formally known as HMS <i>Cook</i>	London	Unknown	Unknown
<i>Marryat</i>	Admiralty Signal Establishment Extension. Formally HMS <i>Sherbrooke</i>	Glasgow	18-02-46	30-06-46
<i>Martello</i>	Auxiliary Patrol Base & Minesweeper Base	Lowestoft	31-05-40	22-10-46
<i>Mastodon</i>	Combined Operations Base / A holding base for crews	Beaulieu, Exbury House, Exbury, Hampshire	06-05-42	06-07-45
<i>Medina</i>	FAA overflow Camp (Tender to HMS <i>Daedalus</i> ) & Combined Operations LC Base	Puckpool, near Ryde, Isle of Wight	15-11-39	31-07-42
<i>Menace</i>	RM Ports Mobile Naval Base Defence Organisation	Unknown	03-12-41	c.1943
<i>Menestheus</i>	Combined Operations (Western Approaches Command)			
<i>Mentor</i>	Minesweeper Base (Western Approaches Command)	Stornoway	16-09-39	15-11-44
<i>Mentor II</i>	Coastal Forces Base	Stornoway	24-06-41	09-43
<i>Mercury</i>	HM Signal School. School of Maritime Operations. Communications & Navigation. Included RN W/T School, St Bedes, near Eastbourne and WRNS Training Establishment at Soberton Towers. Closed under 'Options for Change'	Leydene House, East Meon, near Petersfield. There was also an Experimental Section at Lythe Hill House, Haslemere and Production & Development Section at Whitwell Hatch Hotel, Haslemere	16-08-41	08-93

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Mercury II</i>	Experimental Signal Establishment Formally a Signal School set up in 1917 at Eastney. Moved to Lythe Hill House 1941	Lythe Hill House, Haslemere. Also Labs / workshops at King Edward School, Whitley; Valve Section at Waterloooville; aerals at Nutbourne; and Trials at Tantallon, near North Berwick	25-08-41	c.1952
<i>Mercury II</i>	Admiralty Signal & Radar Establishment	Portsmouth	c.1952	Unknown
<i>Merganser</i>	RNAS Rattray. Torpedo Bomber Reconnaissance. Aircrew School, Naval Observer School	Crimond / Rattray, Aberdeenshire. Site sold c.1963, but c.1973, 484 acres bought back for use as a W/T Station	03-10-44	Extant (part)
<i>Merlin</i>	RNAS Donibristle. Former WWI RNAS station, later RAF station. RN Aircraft Repair & Storage Yard	Donibristle, Fife. Also included RN Ancillary Repair Depot Dunfermline, RN Component Recovery Depot, Forthbank, Alloa, RN Aircraft Propeller Works, Dundee & Engine Storage Depot at Alloa	24-05-39	23-10-59
<i>Merlin III</i>	RNAS Dunino, formally Jackdaw	Dunino, Fife	Unknown	Unknown
<i>Midge I, &amp; II</i>	Coastal Forces Base – MTB, MGB & ML	Great Yarmouth	01-01-41	21-07-45
<i>Minerva</i>	Sheerness Reserve Fleet	Sheerness Dockyard	01-07-50	01-04-53
<i>Minos</i>	Naval Base, Harbour Defence Base	Waveney Road, Lowestoft	01-07-40	30-09-45
<i>Minos II</i>	Coastal Forces Base – MTB, MGB & ML Renamed HMS <i>Mantis</i>	Waveney Road, Lowestoft	01-05-40	Unknown
<i>Miranda</i>	Minesweeper Base	Great Yarmouth	16-10-40	21-07-45
<i>Mirtle</i>	Mine Investigation Range	Disused quarry close to <i>Vernon</i>	Unknown	Unknown
<i>Monck I, Monck II</i>	LC Base Largs (Western Approaches Command) HQ Combined Operations Training, Largs LC Base, Port Glasgow for the assembly & repair of troop LC	Largs / Port Glasgow / Greenock. The locations varied from Largs to Port Glasgow	01-04-42?	30-09-46
<i>Mylodon</i>	Combined Operations & LC Tank Base, RM Commando Training Establishment	Lowestoft / Great Yarmouth (sites taken over from <i>Arbella</i> )	19-01-43	28-06-43
<i>Nabhurst</i>	Mobile Naval Air Base X	Middle Wallop	01-09-45	12-10-45
<i>Nelson</i>	RN Barracks, formally HMS <i>Victory</i>	Portsmouth	01-08-74	Extant?
<i>Nemo</i>	Auxiliary Patrol Base	Brightlingsea, Essex	01-07-40	16-05-45

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Neptune</i>	Chatham Reserve Fleet	Chatham	01-07-50	11-05-60
<i>Neptune</i>	Submarine Base	Faslane	10-08-67	Extant
<i>Newt</i>	Combined Operations Training Base	West Quay, Newhaven	15-10-42	22-06-45
<i>Nighthawk</i>	RNAS Drem, former RFC / RAF Station. Initially a tender to HMS <i>Merlin</i> , commissioned 01-06-45 as HMS <i>Nighthawk</i> . Returned to RAF 15-03-46. RAF Macmerry (on loan) was satellite to Drem	Drem, East Lothian	21-04-45	15-03-46
<i>Nightjar</i>	RNAS Inskip, became radio station 1958	Inskip, Lancashire	15-05-43	02-07-46
<i>Nimrod</i>	Training Establishment (Western Approaches Command). Tender to HMS <i>Osprey</i>	Campbeltown	01-03-40	28-02-46
<i>Niobe</i>	Royal Canadian Navy Depot, formally Dominion. Moved to Smithson Asylum, Greenock. Recommissioned 09-02-46 at Haymarket London, paid off 31-08-65	Plymouth, Albert Road	01-03-41	01-04-46
<i>Northney</i>	LC Training Establishment Combined Operations Camp. LC Base & Maintenance Facility	Hayling Island	15-06-40	01-01-46
<i>Northney II</i> , <i>Northney III</i>	LC Base assembly base for LC mobile units. Camp III Holding Base	Hayling Island	06-04-42?	21-01-46
<i>Northney IV</i>	Sunshine Camp, formally Mobile Naval Base Defence Organisation Base	Hayling Island	25-11-42	21-01-46
Northumberland	University Royal Naval Unit			
Northwood	RNR HQ, formally at Warrior. To Brackenhill House 28-03-88	Northwood, Middlesex	06-05-57	Extant
<i>Nuthatch</i>	RNAS Anthorn. RNAS Receipt & Despatch Unit. Became NATO Radio Station 27-11-64	Anthorn, Cumberland	07-09-44	28-02-58 Extant?

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Odyssey</i>	Naval Party Accounting Base, formally HMS <i>Excellent II</i>	Collingwood Hotel, Ilfracombe	01-11-43	31-05-46
<i>Onset</i>	Combined Operations Base. LC Receipt & Despatch and Storage. Transferred to HMS <i>Irwell</i>	Birkenhead	31-05-45	04-03-46
<i>Orlando</i>	Accounts (Western Approaches Command)	Greenock	01-04-40	01-08-45
<i>Osborne</i>	Cowes Base, merged with HMS <i>Tormentor II</i> to form HMS <i>Vectis</i>	Cowes, Isle of Wight	01-42	08-06-42
<i>Osborne</i>	Ryde Base parent base for all establishments on the Island	Ryde, Isle of Wight	01-10-42	15-08-45
<i>Osea</i>	Motor Boat Base	Osea Island, Clacton-on-Sea	19-06-18	19-04-21
<i>Osprey</i>	Combined Operations Base (Western Approaches Command)	Inveraray		
<i>Osprey</i>	Training Establishment, became Portland Base when <i>Boscawen</i> was paid off	Portland Base	01-04-24	31-03-95
<i>Owl</i>	RNAS Fearn, formally RAF Fearn	Fearn, Ross-shire	01-08-42	02-07-46
<i>Oxford</i>	University Royal Naval Unit			
<i>Paragon</i>	Minesweeper Base (Rosyth Command)	Hartlepool	27-10-39	30-11-45
<i>Paragon</i>	RNR Communications Training Centre	Stockton, Finkle Street. Moved to Linthorpe Road, Middlesbrough c.1989	01-10-84	
<i>Pasco</i>	Combined Operations. LC Signals School, formally PoW Camp	Glenbranter Camp, Strachur, (Loch Fyne)	14-12-42	c.10-45
<i>Patrol</i>	Lyness Scapa Flow Base	Lyness, Orkney Islands	c1939	Unknown
<i>Peewit</i>	RNAS Easthaven	East Haven, Angus	01-05-43	15-08-46
<i>Pellew</i>	RNR Communications Training Centre	Sidewell Street? / Dryden Road, Exeter	01-10-84	29-07-94
<i>Pembroke</i>	RN Barracks	Chatham	30-04-03	c.1983
<i>Pembroke I</i>	RN Accounting Base	Chatham	25-02-40	c.1960

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Pembroke II</i>	RNAS Eastchurch. Transferred to RAF	Isle of Sheppey	06-13	01-04-18
<i>Pembroke II</i>	Accounting Base	Chatham	25-02-40	c.1957
<i>Pembroke III</i>	WRNS Accounting Base. Merged with HMS <i>President I</i> (1952). Also at New College (Oxford), Westfield College, (Hampstead), Wesley College (Leeds), & Burghfield	London Mill Hill, including Chelsea Court, Soho, Barkston Gardens, Earls Court, Crosby Hall (Highgate)? & Woodford Green	31-03-42	c.1952
<i>Pembroke IV</i>	Chatham Accounting Base	RN Barracks Chatham & Gordon House, Star Hill Rochester	c.1919	20-03-46
<i>Pembroke V</i>	Station 'X' Bletchley Park	Bletchley Park but also Stanmore, Eastcote, Woburn Abbey, Stockgrove Park, Wavendon House, Wavendon Park Farm, Crawley Grange, RNSQ Crawley, Walton Hall, Walton Rectory, Gayhurst Manor & Steeple Claydon	c.1941	c.1942
<i>Pembroke VI</i>	Chatham Accounting Section	Chatham	28-11-19	Unknown
<i>Pembroke VIII</i>	Naval Humber Base, formally <i>Wallington</i>	Unknown	01-01-20	c.1921
<i>Pembroke X</i>	RN Patrol Service HQ. Became <i>Europa</i>	Lowestoft, Sparrow's Nest	21-120-39	14-03-40
<i>Peregrine</i>	RNAS Ford, formally RAF Ford. Handed back to RAF, then recommissioned post WWII	Ford, Sussex	24-05-39 15-08-45	30-09-40 13-11-58
<i>Phoenix</i>	RN School of Chemical Warfare, formally Damage Control School. Became Naval Atomic Bacteriological, Chemical & Damage Control School. Tender to HMS <i>Excellent</i>	Stamshaw. Also Anti-Gas School, Tipner	c.1946	Unknown
<i>Phoenix</i>	Tipner Ports Training Establishment. Reopened as NBCD School, HMS <i>Phoenix</i> Whale Island on 31-08-93	Stamshaw	01-03-67	23-07-93
Port ZA	Formally known as Port B. Became HMS <i>Trelawney</i> 11-06-40 (Western Approaches Command)	Lochalsh Base	07-40	11-06-40
<i>President</i>	RN Accounting Base	Various addresses in London including Royal Victoria Yard, Deptford, also Furze House	c.1918	Extant?
<i>President</i>	RNR HQ Unit	72 St Katherine's Way, London	Unknown	Extant

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>President I</i>	RN Accounting Base	Various addresses in London including Royal Victoria Yard, Deptford, and 18 Mardol, Shrewsbury & Chelsea Court, London	c.1918	Unknown
<i>President II</i>	RN Accounting Base	RN Barracks Chatham, moved 1940 to Lower Regent Street, then to Queen Anne's Mansions, SW1	c.1916	Unknown
<i>President III</i>	RN Accounting Base	Clark's College, 15 Whiteladies Road Bristol, moved to Dedworth Manor, Windsor, then to Hodgson House, Eton College (1945). Moved to Chelsea Court (1947) & merged into <i>President I</i>	c.1939	c.1946
<i>President IV</i>	RN London Accounting Base	Unknown	c.1918	c.1926
<i>President V</i>	RN Training School for Accounting Branch. Moved to Wetherby & merged into <i>Demetrius</i>	Highgate School, London N6	01-11-41	14-07-44
<i>Proserpine</i>	Minesweeper Base	Scapa Flow	09-09-39	c.1946
<i>Purbeck</i>	Dorset Range Clearance Establishment	Studland Bay	01-02-46	Unknown
<i>Pyramus</i>	Minesweeper Base	Kirkwall, Orkney	06-09-39	31-07-45
<i>Pyramus II</i>	Northern Patrol	Kirkwall, Orkney	29-01-40	06-42
<i>Quebec</i>	Combined Operations. Training (Western Approaches Command). Training in landing operations	Lamlash, Inveraray, Argyllshire Large training area & includes the following camps: Chamois, Kilbride, Avenue, Town, Dukes, Castle, Shire	01-09-40	01-07-46
<i>Quebec</i>	Royal Canadian Navy Summer Camp	Farnham	Unknown	Unknown
<i>Quebec II</i>	Combined Operations HQ Northern Patrol	Hollywood Hotel, Largs	12-09-41	31-03-42
<i>Queen Charlotte</i>	AA Gunnery School / Range for HMS <i>Ringtail</i>	Ainsdale on Sea, Southport, Lancashire	01-03-41	31-01-46
RAF Calshot	Combined Operations Training / gunnery, navigation, signals & aircraft recognition courses for Petty Officers. Roll taken over by HMS <i>St Barbara</i> , Bognor	RAF Calshot, Hampshire	Unknown	09-43



Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Raleigh</i>	Training Establishment for men called up under the Military Training Act of 1938. RN Special Reservists (1940). 1944 embarkation base for forces of the USA. Handed back to RN on 24-07-44. Stoker's TE (1947) when HMS <i>Imperieuse</i> closed. New Entry TE (1958). WRNS Part 1 Training was added following the closure of HMS <i>Dauntless</i> . In September 1983 the RN Supply School from HMS <i>Pembroke</i> came under Raleigh and the New Entry Training Artificer Apprentices transferred from HMS <i>Fisguard</i>	Torpoint, Cornwall	09-01-40	Extant
<i>Rameses</i>	Depot Ship for Minelaying Vessels	Rameses House, Grangemouth	01-01-18	03-03-19
<i>Raven</i>	RN School of Medicine	Eastleigh, Southampton – also a lodger unit at RAF Christchurch	01-07-39	30-04-47
<i>Red Sands</i>	Thames Fort	Thames	1942	Unknown
<i>Rinaldo</i>	RN Base at commercial port	Barry, Glamorgan	08-09-39	01-01-45
<i>Ringtail</i>	RNAS Burscough	Burscough, Ormskirk, Lancashire	01-09-43	15-06-46
<i>Ringtail II</i>	RNAS Woodvale, formally RAF Woodvale	Woodvale, Formby, Lancashire	07-04-45	28-01-46
<i>Robertson</i>	Fleet Mail Office	GPO, Reading	c.1942	Unknown
<i>Robertson</i>	Combined Operations Base, formally a WWII Jewish Refugee Camp but originally it was a WWI Transit Camp	Kitchener Camp, Richborough, Kent	23-06-43	31-08-46
<i>Robin</i>	RNAS Grimsetter, formally RAF Grimsetter	Grimsetter, Kirkwall, Orkneys	15-08-43	31-07-45
<i>Rodent</i>	Special Boat Unit HQ. Controlled RN Boom Commando (RM Boom Patrol Detachment units, Pilotage Parties & Special Boat Sections	Coldhayes, Liss, Hampshire	30-10-43	17-02-44
<i>Romola</i>	Minesweeper Base	Lowestoft	07-11-39	14-03-40
<i>Rooke</i>	Boom Defence Central Depot	Rosyth	09-04-40	30-06-46

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Roseneath</i>	Combined Operations Base, formally HMS <i>Louisburg</i> . Became USN Base Two (29-09-42). Recommissioned 12-01-43 & paid off 19-08-43 before returning to USN as US Base Two until 05-05-45. Recommissioned as a tender to <i>Monck</i> to become Main Holding Base for UK Combined Operations personnel	Roseneath, Dumbartonshire	03-08-42 12-01-43 13-06-45	03-10-42 19-08-43 c.1948
<i>Rosmarkie</i>	LC Base	Fortrose, Ross & Cromarty	01-12-43	25-04-44
Roughs Fort	Thames Fort	Off Harwich	08-02-42	Unknown
<i>Royal Arthur</i>	Central Reception Depot, formally Butlins Holiday Camp	Skegness	22-09-39	c.1946
<i>Royal Arthur</i>	Adult New Entry Training Establishment to 03/50 Petty Officers' Leadership School from 02/01/47	Kingsmoor Camp, Westwells, Neston, Corsham, Wiltshire (built for underground aircraft factory workers, but not used)	12-01-47	12/92
<i>Royal Charter</i>	Minesweeper Base	Grimsby	04-06-40	18-08-41
Royal Marines Burma Camp	RM Commando Seamanship Training Camp	Llwyngwrl, Merionethshire	Unknown	Unknown
Royal Marines Depot Deal	Former Army Barracks, became RM Depot in 1861. Royal Marines Band from 1950-1996	Deal, Kent. Site now waiting for re-development?	c.1861	c.1996
Royal Marines Eastney	Royal Marine Barracks, constructed from 1862 Officers Mess, now RM Museum	Eastney, Portsmouth. Included hutted camps: Portsmouth Gun Battery (renamed Melville Camp 1960). Comacchio Camp	Unknown	Closed
Royal Marines Fort Cumberland	Fort constructed 1803 RM Amphibious School	Portsmouth / now largely demolished	c.1803	Unknown
<i>Safeguard</i>	Boom Defence Depot, formally HMS <i>Rooke</i>	Rosyth	01-07-46	c.1969
<i>Salcombe</i>	Combined Operations Base, became HMS <i>Tennyson</i> (1944)	Salcombe Hotel & Imperial Hotel, Exmouth	17-07-43	10-01-44
<i>Sanderling</i>	RNAS Abbotsinch, formally RAF Abbotsinch. Handed over to Ministry of Aviation	Abbotsinch, near Glasgow	20-09-43	31-10-53
<i>Sanderling II</i>	RNAS Machrihanish	Machrihanish	Unknown	Unknown

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Sandfly</i>	Combined Forces Base	Peterhead	05-05-41	25-10-43
<i>Sarepta</i>	Experimental Hydrophone Establishment	Portland	01-03-18	c.1919
<i>Satyr</i>	Sunderland Base	Sunderland Port	01-09-39	15-09-45
<i>Scotia</i>	Signals Training Establishment	Lowton St Mary's, Warrington	06-01-42	19-01-48
<i>Scotia</i>	RNR HQ Unit	Rosyth, lodger unit at Caledonia	Unknown	Extant
<i>Sea Serpent</i>	Combined Operations Base, formally Combined Operations 'Suspense Base'. LC Base. Former Ideal Holiday Camp & Gibson's Camp, Bracklesham Hotel Bracklesham Bay	Bracklesham Bay & Birdham, Chichester	20-10-42	30-06-45
<i>Seahawk</i>	Coastal Forces Anti-Submarine Training School	Ardrishaig	01-01-41	04-11-44
<i>Seahawk</i>	RNAS Culdrose	Culdrose, Helston, Cornwall	17-04-47	Extant
<i>Sefton</i>	Combined Forces Base also known as HMS <i>Forward II</i> & HMS <i>Aggressive</i>	Newhaven	Unknown	Unknown
<i>Sentinel</i>	Fife Base	Methil	01-09-39	15-11-45
<i>Sherwood</i>	Communication Training Centre. Reserve Training Centre	Carrington Street, Nottingham to 1986, then Chalfont Drive	01-10-84	Extant?
<i>Shivering Sands</i>	Thames Fort	Thames	c.1942	Unknown
<i>Shotley</i>	Shotley Port adjacent to <i>Ganges</i>	Shotley Gate, Suffolk	Unknown	Unknown
<i>Shrapnel</i>	Southampton Base. Also included Government Training Centre Letchworth	Southampton Port	09-06-42	03-09-46
<i>Siskin</i>	RNAS Dounreay, formally RAF Dounreay	Dounreay, Caithness	c.04-44	Unknown
<i>Siskin</i>	RNAS Gosport. Became <i>Sultan</i>	Gosport	01-08-45	31-05-56
<i>Skirmisher</i>	Milford Haven Base	Milford Haven Dock	12-09-39	31-08-45
<i>Skirmisher II</i>	Coastal Forces Base	Pembroke Dock	01-05-41	11-11-44
<i>Southwick Fort</i>	RNR HQ	Southwick, Fareham	11-06-58	31-03-94
<i>Sparrowhawk</i>	RNAS Hatston	Hatston, Kirkwall, Orkney	02-10-39	01-08-45

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Sparrowhawk</i>	RNAS Halesworth, formally RAF Halesworth. Transferred back to RAF	Halesworth, Suffolk	05-08-45	15-03-46
<i>Spartiate</i>	Glasgow Base (Western Approaches Command)	Clyde Port	03-09-39	31-03-46
<i>Spartiate II</i>	WRNS Training Establishment	Tullichewan, Balloch, Loch Lomond, Argyll	29-05-43	06-12-44
<i>Squid</i>	Combined Operations Tank LC Repair Base. Merged into Shrapnel. Also made use of Elmfield Court, Oakville Mansions, Devonshire Buildings & Southern Railway Depot were all used by HMS <i>Squid</i>	Harland & Wolff 'B' Works, Southampton	01-09-42	01-02-46
<i>Squid II</i>	Combined Operations Staff HQ	Westcliff Hotel, Hythe	26-02-44	19-04-45
<i>St Andrew</i>	Oban Base, renamed Caledonia	Oban	01-03-41	01-07-43
<i>St Barbara</i>	AA Range. Task transferred to <i>Dinosaur</i>	Bognor Regis	10-09-43	14-06-45
<i>St Christopher</i>	Coastal Forces Training School	Fort William	31-10-40	31-12-44
<i>St Clement &amp; St Clement I, II &amp; III</i>	Combined Operations Base in Tilbury	<i>St Clement &amp; St Clement III</i> at Coalhouse Fort. <i>St Clement I</i> at Perrys?, <i>St Clement II</i> at St Johns?	07-09-43	20-01-46
<i>St George</i>	Boy's Training Establishment for boys evacuated from HMS <i>St Vincent</i> & HMS <i>Caledonia</i>	Douglas, Isle of Man	09-09-39	31-12-45
<i>St George</i>	Fraser Gunnery Range, formally Experimental AA Battery. Officer Training School	Eastney Portsmouth	16-09-63	01-08-68
<i>St George &amp; St George II</i>	Training School for Short Service Ratings open on the closure of HMS <i>St George</i> in the IoM. Transferred to HMS <i>Raleigh</i> c.1948 and barracks to War Office	Gosport	01-01-46	c.1948
<i>St Mathew</i>	Combined Operations Training Base. Task transferred to HMS <i>Quebec</i>	Burnham-on-Crouch	08-11-43	31-10-45
<i>St Vincent</i>	Boys' Training Establishment. Boys then evacuated to IoM and replaced by: Air Branch Officer's TE Signal School, Torpedo Training School. Reverted to Boys' TE 01-12-45	Forton Barracks, Gosport	01-06-27	02-04-69
<i>St Vincent</i>	WRNS Accommodation	Queens Gate Terrace, London	c.1985	31-03-92

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>St Vincent</i>	Whitehall Communications Centre. Became part of HMS <i>St Vincent</i>	Whitehall, London	01-04-92	31-03-98
Staines	Combined Operations Base (not a ship)			
<i>Standard</i>	Naval Labour Corps Camp, for psychologically ill staff	Kielder Camp, Hexham, Northumberland	15-01-42	13-07-45
<i>Stopford</i>	Combined Operations Base. LC Base for 'working up' prior to operations. Passive Defence School & Balloon School	Bo'ness, West Lothian. Used the LNER Docks as its LC Base, as well as Bo'ness Hosiery factory as quarters	18-04-42	15-09-45
<i>Sultan</i>	Marine Engineering Training Establishment School of Aircraft Handling	Gosport, Hampshire	01-06-56	Extant
<i>Sunkhead Fort</i>	Thames Estuary Defence Unit No.2	Off Harwich	01-05-42	c.1945
<i>Sussex</i>	RNR HQ	Maxwell's Wharf, Hove, Sussex	28-04-51	31-03-94
<i>Sussex</i>	University Royal Naval Unit	Shoreham	c.1990	Extant
<i>Tadpole</i>	Coastal Forces Base. Merged with HMS <i>Turtle</i>	Sydenham's Yard, Pool also premises at Royal Motor Yacht Club, Sandbanks	24-05-44	30-11-44
<i>Temeraire</i>	RN School of Physical Training. A modern complex constructed 1988. The name was first used for a shore base in 1955, at the former Yardman's Training School at Port Edgar. In 1960 this college closed and a division of HMS <i>Temeraire</i> Training was established at the Britannia Naval College, Dartmouth. When that closed, the name remained unused until 1971 when the RN Naval School of Physical Training was recommissioned as HMS <i>Temeraire</i> at Pitt Street, Portsmouth which remained there until 1988 when it moved to its present site	Portsmouth, Burnaby Road	22-09-10	Unknown
<i>Tennyson</i>	Landing Barge Base, formally <i>Salcombe</i>	Imperial Hotel, Exmouth	10-01-44	24-07-45
<i>Tern</i>	RNAS Twatt	Twatt, Orkney	01-01-42	20-10-45
<i>Tern II</i>	RNAS Skeabrae satellite airfield to <i>Sparrowhawk</i> , formally RAF Skeabrae	Skeabrae	Unknown	Unknown

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Thunderer</i>	Engineering College. Founded at Keyham on 01-07-1880, opened at Manadon 07-05-40. Keyham closed 09-05-40	Keyham & Manadon, Plymouth	01-12-46	15-09-95
Tongue Sand Fort	Thames Estuary Defence Unit No.3 – this was the only fort to have sunk an enemy vessel	Thames	17-06-42	c.1948
<i>Torch &amp; Torch II</i>	Coastal Forces / Minesweeper Base (Western Approaches Command)	Holyhead	11-09-39	c.1945
<i>Tormentor</i>	Combined Operations Base. LC Maintenance Base	Former Household Brigade Yacht Club, Hamble, Southampton	12-08-40	31-03-46
<i>Tormentor II</i>	Training Camp. Merged into HMS <i>Vectis</i>	Cowes, Isle of Wight	05-42	08-06-42
<i>Tower</i>	London Auxiliary Patrol Base	Unknown	10-01-41	31-07-45
Towyn Camp	RM Commando Training Group HQ. Formerly RAF Towyn	Towyn, Merionethshire	Unknown	Unknown
<i>Trelawney</i>	Formally ‘Port ZA’ – ML Base (Western Approaches Command)	Lochalsh	11-06-40	16-07-45
<i>Triphibian</i>	Training Establishment, former War Office camp	Squires Gate Camp, Lytham St Annes	01-11-43	22-02-44
<i>Triphibian II</i>	Training Establishment	Uniacke Barracks, Harrogate	18-11-43	29-02-44
<i>Tullichewan</i>	Holding Base for Combined Operations personnel. Camp used by WRNS 1942-1944 for training	Tullichewan Castle Camp, Balloch, Loch Lomond, Argyll	10-03-45	10-06-46
<i>Tunsberg</i>	Norwegian Naval Depot	Liverpool Docks	18-12-41	Unknown
<i>Turnstone</i>	Training Establishment. Preliminary Training of Air Fitters at Watford	Watford & Fulham	01-01-44	18-08-45
<i>Turtle</i>	Combined Operations Training Establishment, LC Base & Assault Gunnery School. Absorbed HMS <i>Tadpole</i> during 1945	Shaftesbury Homes, Pool & Lake Camp Hamworthy (former BOAC HQ and Terminus)	07-10-42	01-03-46
<i>Valkyrie</i>	Radar Training Establishment	Regent Camp, Douglas, Isle of Man	21-07-41	31-12-46
<i>Valkyrie II &amp; IV</i>	Training Establishment	Central Camp, Douglas, Isle of Man	10-43	26-03-45

Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Vectis</i>	Combined Operations Base – formed by amalgamating HMS <i>Tormentor II</i> and HMS <i>Osborne</i> . HQ and training for ‘Force J Flotilla’	Royal Yacht Squadron, Seaview, Isle of Wight	08-02-42	20-05-45
<i>Vector</i>	Radar Training Establishment, merged into <i>Wildfire</i>	Sheerness	c.1946	c.1948
<i>Vernon (D)</i>	Coastal Forces Base, then ‘P’ parties from <i>Firework</i> , returning from France	Dartmouth and Brixham	27-10-44	30-11-45
<i>Vernon</i>	Torpedo & Underwater Weapons Training. Associated with the development of mine disposal and underwater countermeasures	Portsmouth, Gunwharf, The site is now known as Gunwharf Quays and is the location of the Spinnaker Tower. Also at Roedean Girls School, Brighton (03-05-41 to 11-06-45) Known as HMS <i>Vernon</i> (R) (also a former Army Camp)	01-10-23	01-04-96
<i>Victory</i>	RN Barracks, renamed HMS <i>Nelson</i> 1974		1903	01-08-74
<i>Victory I, Victory II</i>	Accounting Base	46 Commercial Road, Goodings, near Newbury	04-09-40	09-44
<i>Victory II</i>	Training Depot	Crystal Palace	1914	21-03-19
<i>Victory III</i>	Accounting Section. Merged with HMS <i>Victory IV</i> 1939 & transferred to Wooley Park, Wantage. Moved to Newbury 12-44. Task absorbed by HMS <i>Victory II</i> 1947	Wooley Park, Wantage	01-10-39	31-03-47
<i>Victory IV</i>	Accounting Section	London & Petersfield	Unknown	Unknown
<i>Victory V</i>	Southampton Base, formally HMS <i>Collingwood II</i> . Renamed <i>Shrapnel</i> 1942	South Western Hotel, Government Training Centre, Redbridge & Gas Light & Coke Shop, Fulham	05-04-41	09-06-42
<i>Victory V</i>	Ports Combined HQ	Unknown	30-06-44	Unknown
<i>Victory VI</i>	Depot for RN & RNR Divisions	Crystal Palace	1914	21-03-19
<i>Vivid</i>	Devon RN Barracks – (the first shore barracks in the RN)	Mount Wise Plymouth	1889	
<i>Vivid</i>	RNR HQ Unit	Underground Operations Room, Mount Wise, Plymouth, moved 1996 into Staff Officers' Mess	1957	Extant
<i>Vivid II, Vivid III</i>	Accounting Base	Plymouth	1914	1918
<i>Vivid V</i>	Accounting Base	Milford Haven	1919	07-10-21

<b>Royal Naval Shore Establishments – Stone Frigates (contd)</b>				
Name	Function	Location	From	To
<i>Volcano</i>	Bomb Disposal Training Establishment	Holmrook Hall, Ravenglass, Cumberland (demolished)	31-01-42	10-45
<i>Vulture</i>	RNAS St Merryn, renamed HMS <i>Curlew</i> 01-01-53	St Merryn	10-08-40	Unknown
<i>Vulture II</i>	RNAS Treligga, Bombing & Gunnery Range	Treligga, Cornwall	1939	1955
<i>Wagtail</i>	RNAS Heathfield, former RAF Ayr	Heathfield, near Ayr	06-09-44	10-03-46
<i>Wallington</i>	Auxiliary Patrol Base	Immingham Docks	06-11-15	01-01-20
Warnford	Combined Operations Base (not a ship) Repair Base & Combined Operations Pilotage Parties Training Establishment	Warnford, Hants	Unknown	Unknown
<i>Warren</i>	No.4 Combined Training Centre (senior officers). Combined Operations Base (Western Approaches / Rosyth Command) Aircraft Recognition School to Dinosaur 06/45	Hollywood Hotel, Largs. Included RAF Vanduara (Hotel Vanduara) located in Largs, this building became HQ Combined Operations and is extant	12-10-42	31-12-46
<i>Warrior</i>	Fleet HQ / Joint Service Unit Northwood. Name assumed 30-04-63 (the 7th ship). Formally HQ RAF Coastal Command	Eastbury Park Estate, Northwood, Middlesex	30-04-63	Extant
<i>Wasp</i>	Coastal Forces Base	Lord Warden's Hall, Dover	02-09-40	14-11-44
<i>Watchful</i>	Minesweeper Base	Great Yarmouth Port	01-09-39	31-07-45
<i>Waterrail</i>	RNAS Campbeltown	Campbeltown	Unknown	Unknown
<i>Watford I</i>	Government Training Centre. RN Aircraft Training Establishment	Hempstead Road, Watford	09-06-42	Unknown
<i>Watford II</i>	RN Air Fitter's Training Establishment	Hempstead Road, Watford	09-06-42	Unknown
<i>Waxwing</i>	RN Camp	Townhill, Dunfermline, Fife	01-07-42	09-46
<i>Wellesley</i>	RN Training Establishment	Royal Southern Hospital, Caryl Street site, Liverpool	08-05-40	31-01-46
<i>Wessex</i>	Due to open 21-10-39 but overtaken by mobilisation. RNVR Solent closed, and reopened 06-46	South Western Hotel, Southampton moved to Royal Southern Yacht Club	06-46	01-03-94



Royal Naval Shore Establishments – Stone Frigates (contd)				
Name	Function	Location	From	To
<i>Westcliff</i> <i>Westcliff II</i>	Combined Operations Base. Training element from HMS <i>Effingham</i> when this college transferred to USNR. Main Holding Base for Combined Operations personnel	Southend-on-Sea	17-11-42	21-01-46
<i>Westcliff III</i>	Combined Operations LC Base	Burnham-on-Crouch	WWII	Unknown
<i>Western Isles</i>	Work Up Base	Tobermory	17-07-40	03-11-45
<i>Wildfire</i>	Sheerness Base. Amalgamated with HMS <i>Vector</i> 04-11-47 to become Radar Plotter Training School	Sheerness Base	04-1889 16-02-37	03-1933 01-0450
<i>Wildfire</i>	Communications Training Centre & Reserve HQ Unit	Khyber Road, Chatham	10-09-64	02-09-94
<i>Wildfire</i>	RNR Training Establishment	Brackenhill House, Northwood, Middlesex	Unknown	Extant
<i>Wildfire II</i>	Accounting Base for Auxiliary Minesweepers	Sheerness Base	01-10-39	29-02-40
<i>Wildfire III</i>	Combined Operations Base. Tender to HMS <i>Wildfire</i> , MTB, MGB & ML	Sheerness Base	07-12-42	15-10-46
<i>Woolverstone</i>	Combined Operations LC Base & Training Establishment	Ipswich / Harwich / Southwold various locations including Harwich Yacht Club, grounds of Woolverstone Hall, Harwich & St Felix School, Southwold	01-01-43	20-02-46

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