



K4 Kalamity

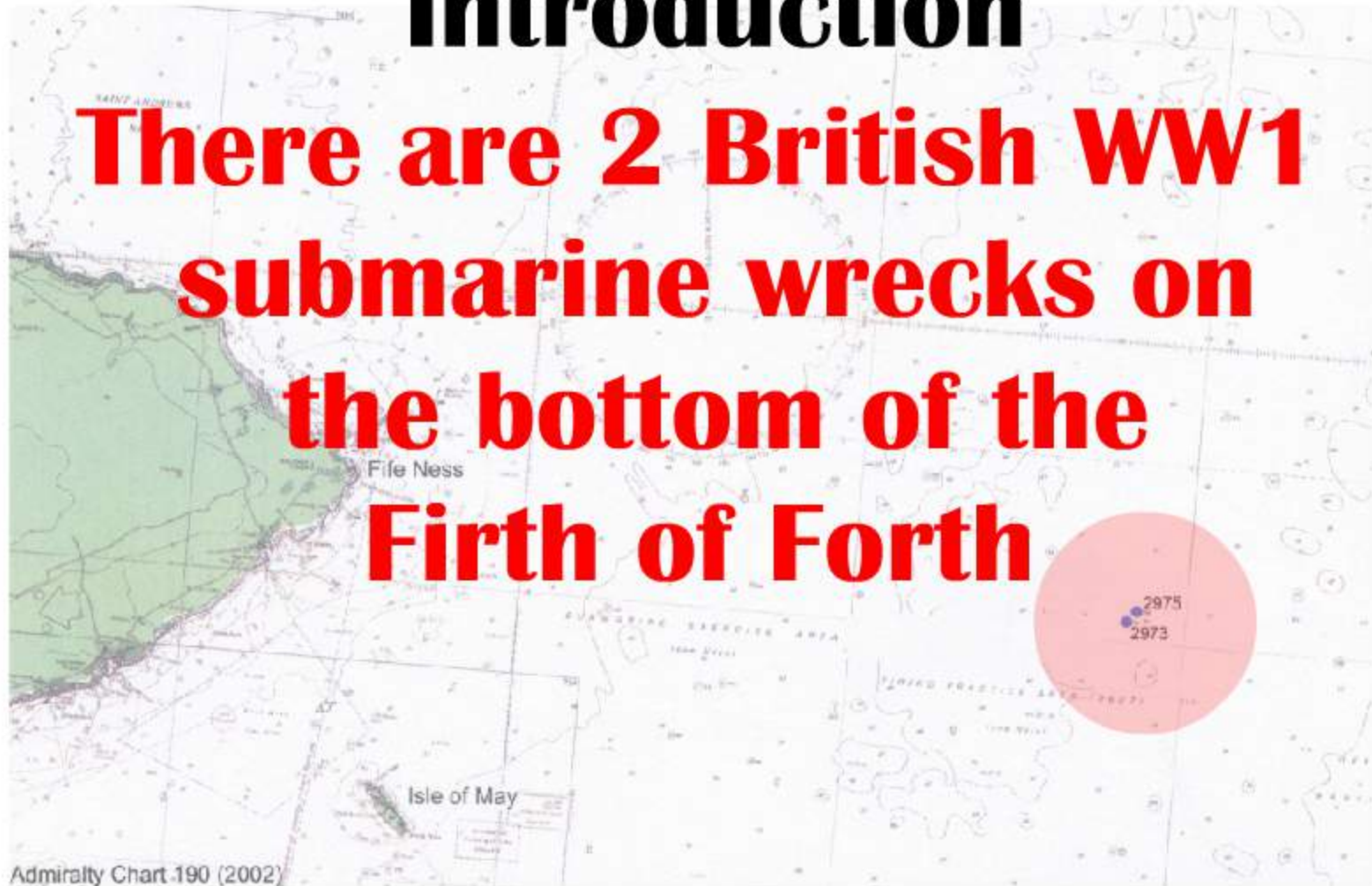
MMVIII

by Andrew Jackson

Part

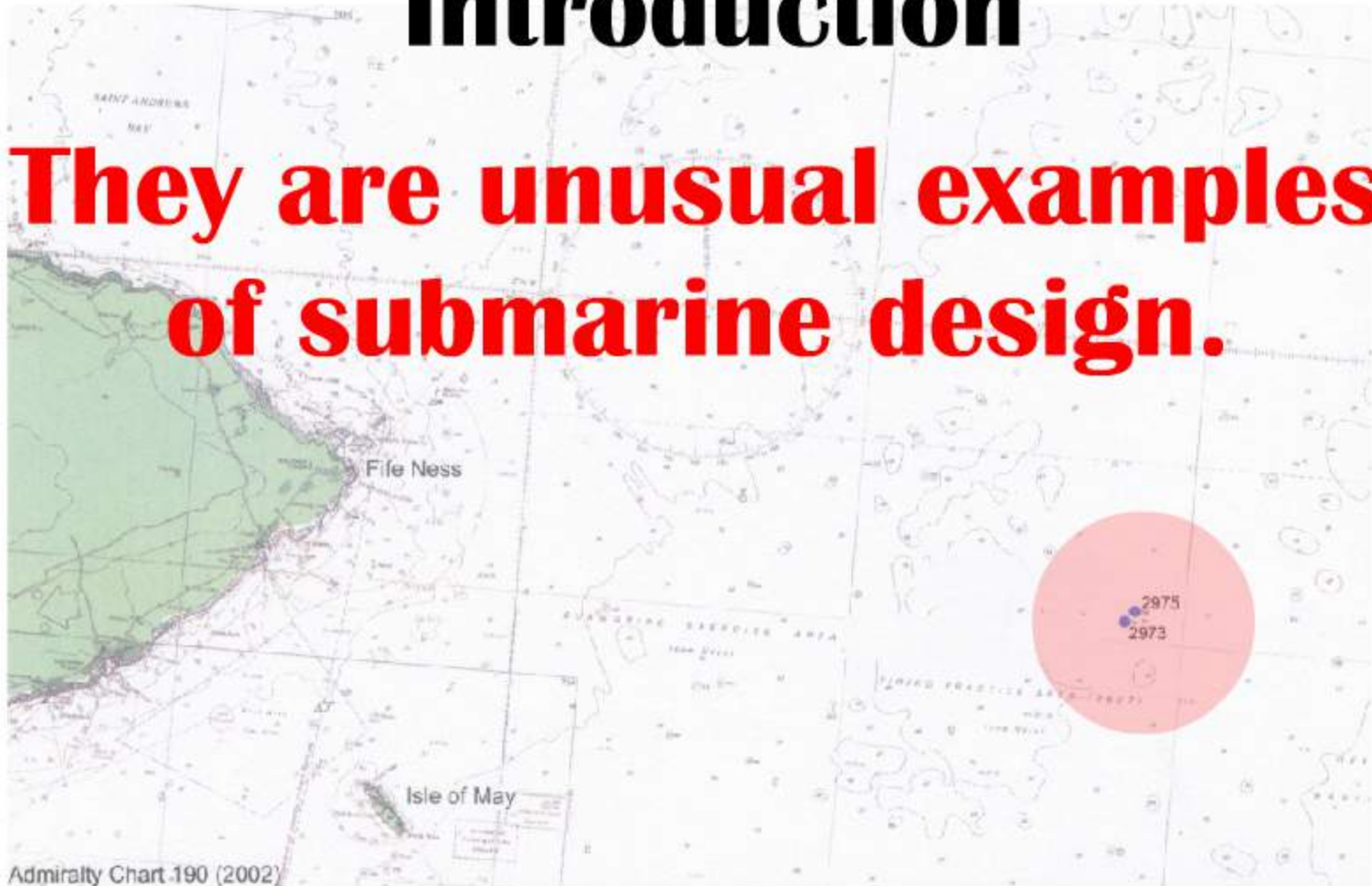
Introduction

**There are 2 British WW1
submarine wrecks on
the bottom of the
Firth of Forth**



Introduction

They are unusual examples of submarine design.



Introduction

The site was the scene of a tragic accident where many men lost their lives



Introduction

**For these reasons the site
was designated as a
"Protected Place" in
2006**

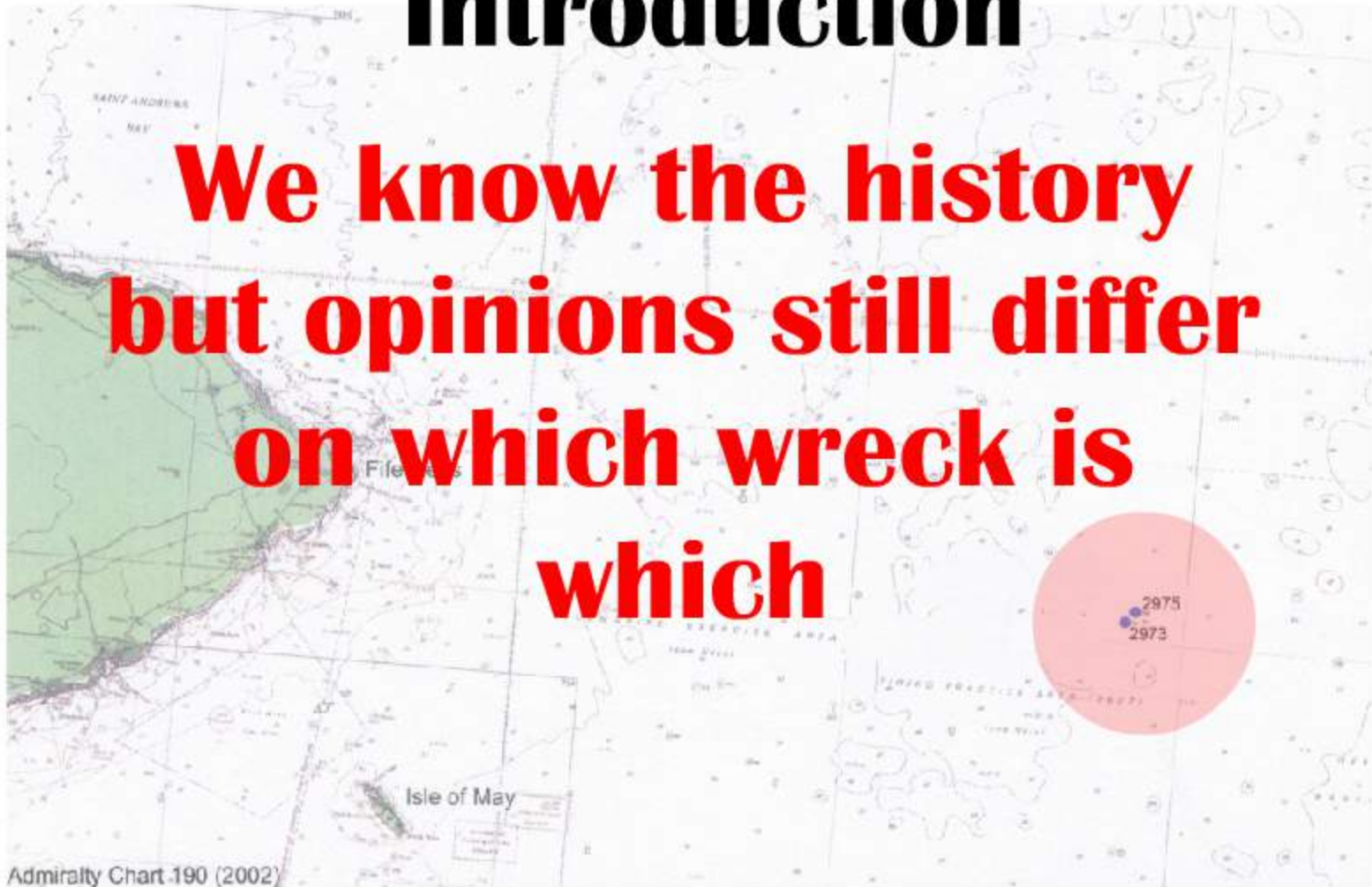


Admiralty Chart 190 (2002)



Introduction

**We know the history
but opinions still differ
on which wreck is
which**





Part 1 - Naval Developments

Part 2 - Operation E.C.1.

Part 3 - Site 1 Video Footage

Part 4 - Site 2 Video Footage

Part 5 - Future Work





First World War begins British slow to accept changes in Naval Warfare

**5TH SEPTEMBER 1914 U21 TORPEDOES THE
SCOUT CRUISER HMS PATHFINDER - 259 LOST**

**22ND SEPTEMBER 1914 U9 SINKS CRUISERS HMS
ABOUKIR, CRESSY AND HOGUE, - 1459 LOST**


YOU





**At the outbreak of war the RN
had 64 submarines - all but
17 were old and obsolete**

**Germany's U-boats were
developed over 2 years,
72 ordered**



**The loss of the Battleship HMS
Formidable on New Year's Day 1915
fuelled rumours about U-Boat speed**



**British efforts start to focus on
submarine development and the
need to match Germany.**



**Naval strategy was still focused
on the fleet and a fleet submarine
was developed**

**14 Ordered at a cost of
£500,000 each**

SECRET



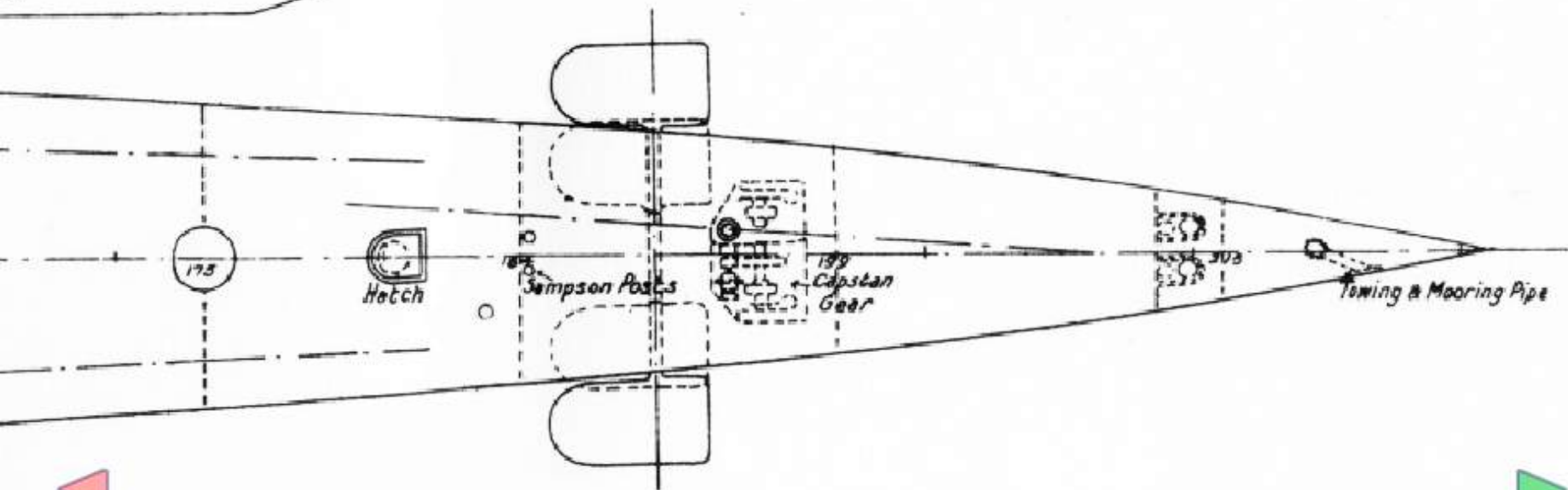
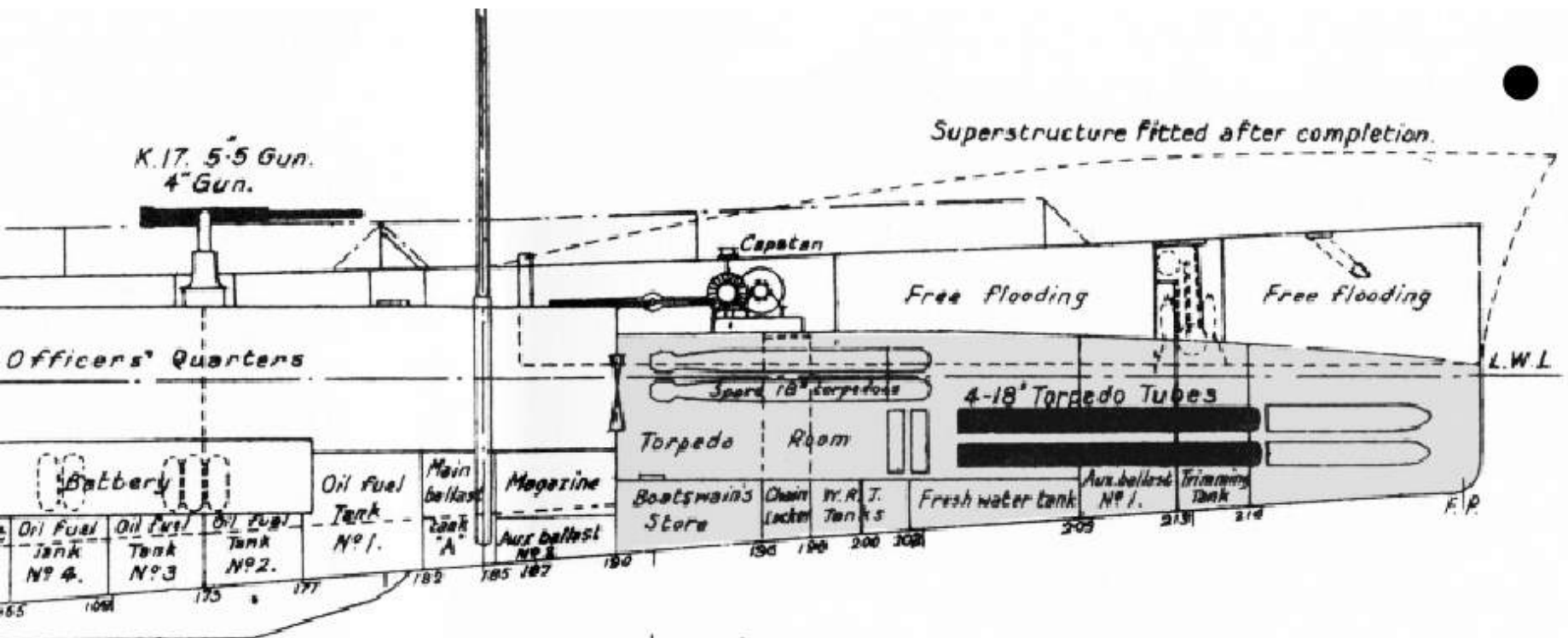
K Class



338 feet long

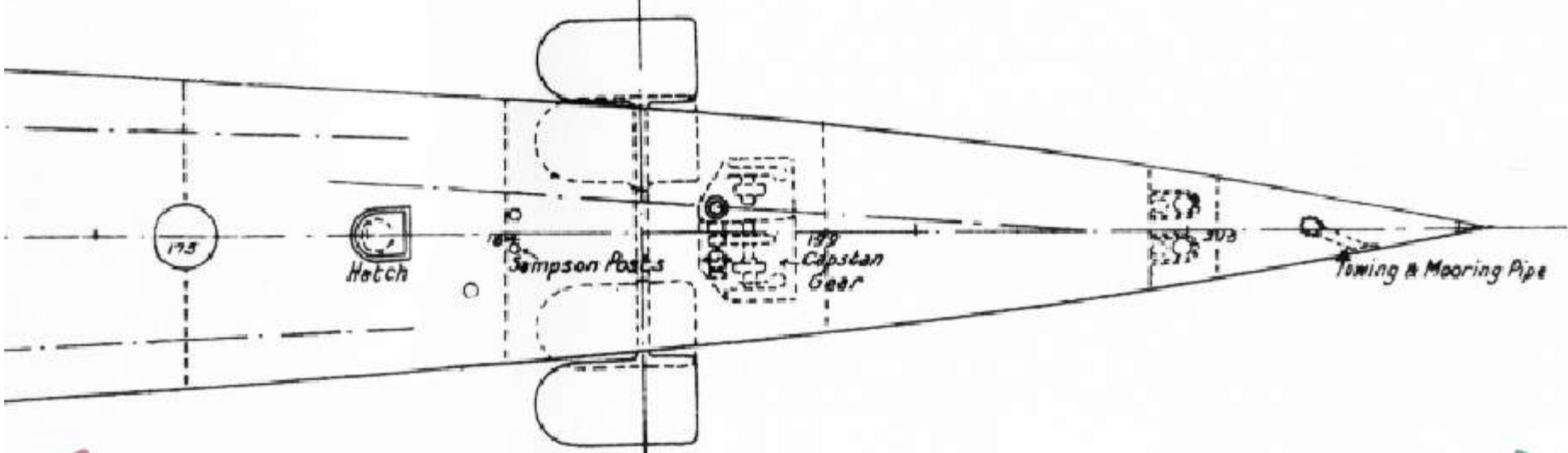
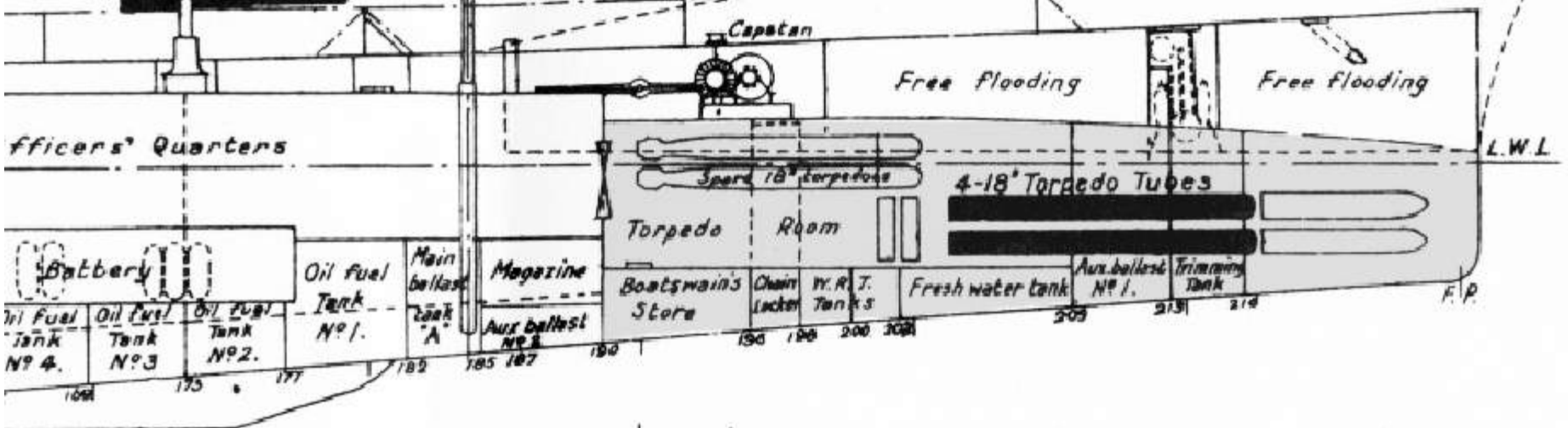
2500 tons

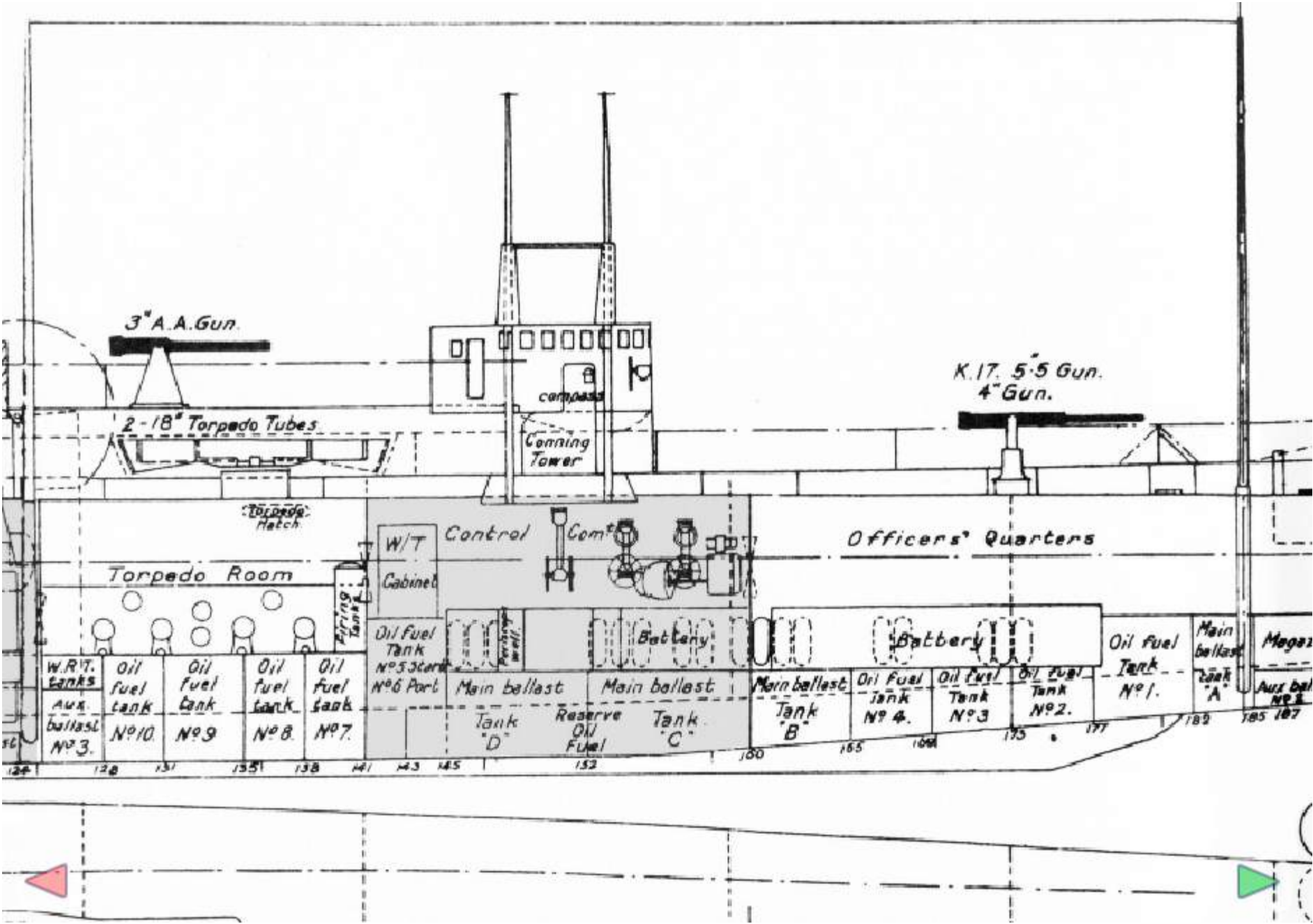


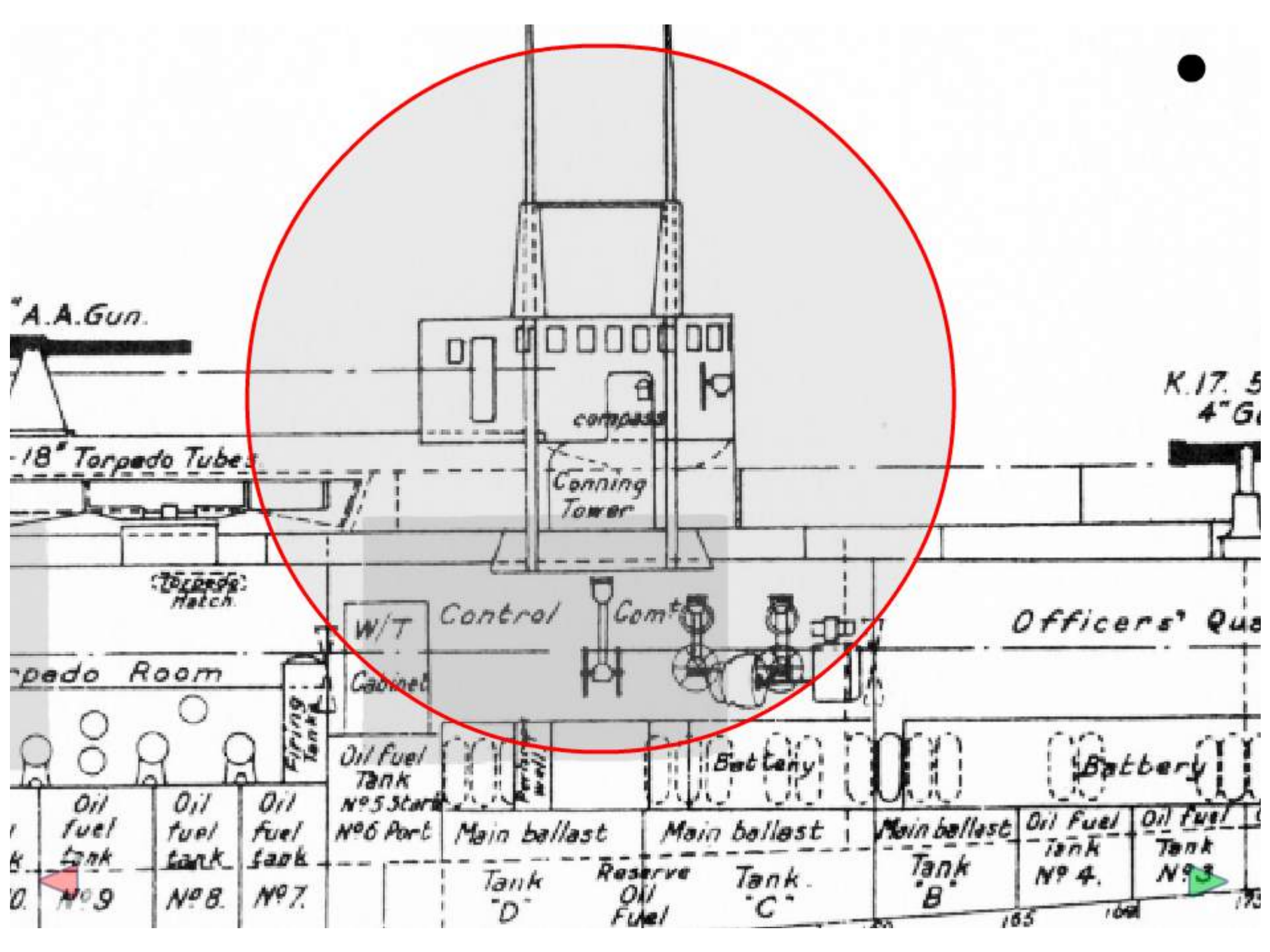


Superstructure fitted after completion.

K.17. 5.5 Gun.
4" Gun.







A.A. Gun.

18" Torpedo Tubes

K.17.5
4" G.

compass

Conning Tower

(Torpedo) Hatch

Officers' Quarters

Torpedo Room

W/T Cabinet

Control

Com

Battery

Battery

Oil fuel Tank
No 5 Starboard

Oil fuel Tank
No 6 Port

Main ballast Tank
"D"

Reserve Oil Fuel Tank
"C"

Main ballast Tank
"B"

Oil fuel Tank
No 4

Oil fuel Tank
No 3

Oil fuel Tank No 9

Oil fuel Tank No 8

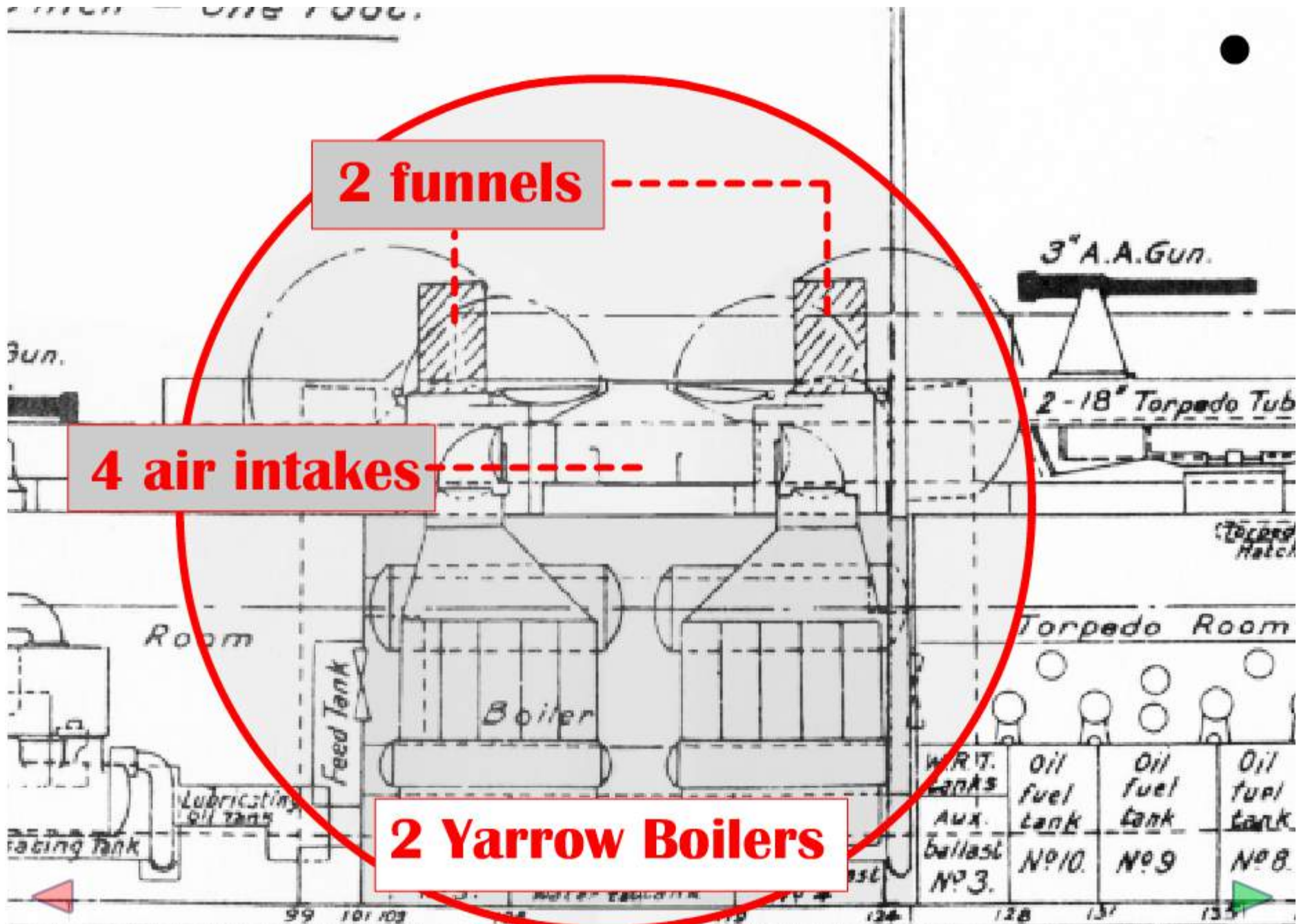
Oil fuel Tank No 7

165

168

173

PLAN — ONE FOOT.



2 funnels

4 air intakes

2 Yarrow Boilers

3" A.A. Gun.

2-18" Torpedo Tub

Gun.

Torpedo Hatch

Room

Torpedo Room

Boiler

Feed Tank

Lubricating Oil Tank

Facing Tank

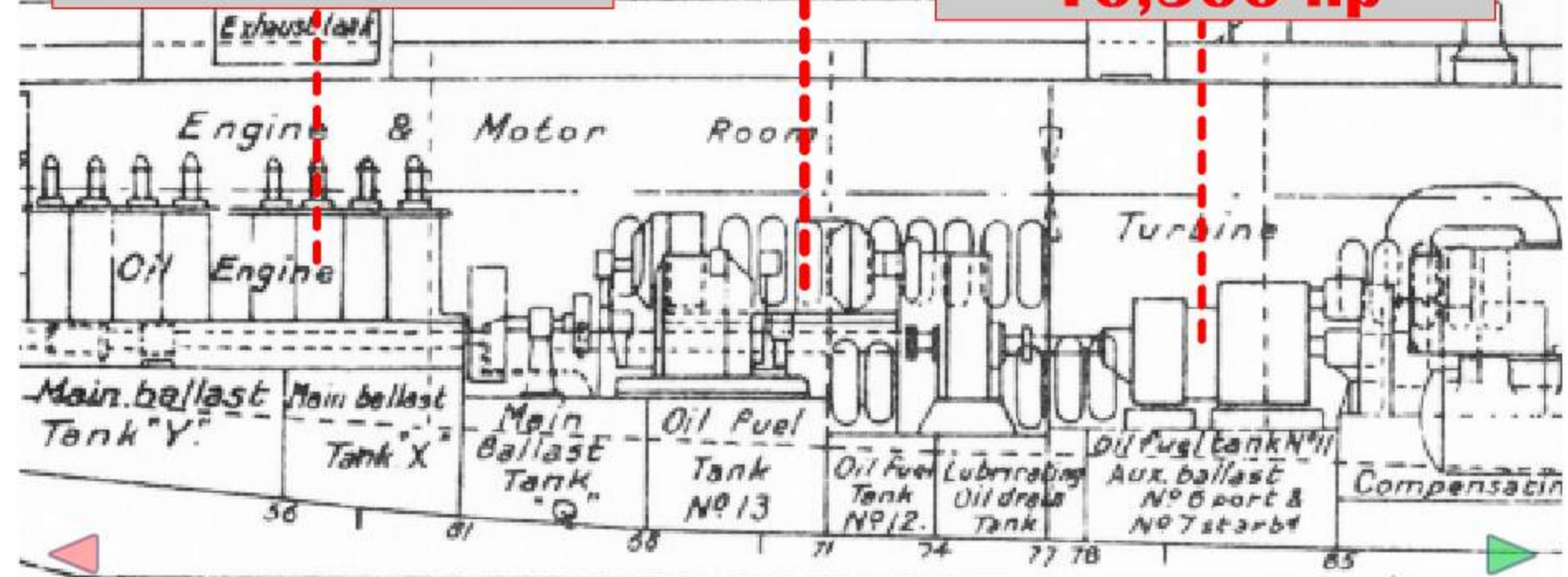
WRIT. Tanks	Oil fuel tank	Oil fuel tank	Oil fuel tank
Aux. ballast No. 3.	No. 10.	No. 9	No. 8.

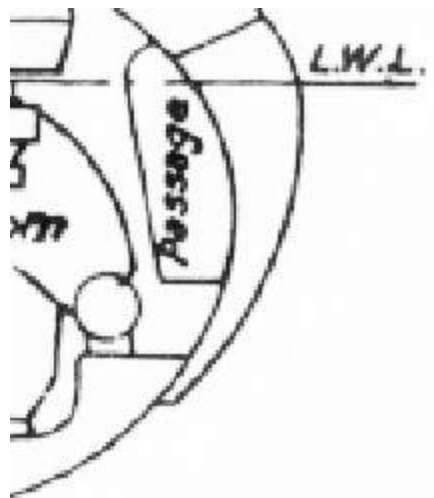
99 101 103 124 128 131 135

**4 Electric Motors
1440 hp**

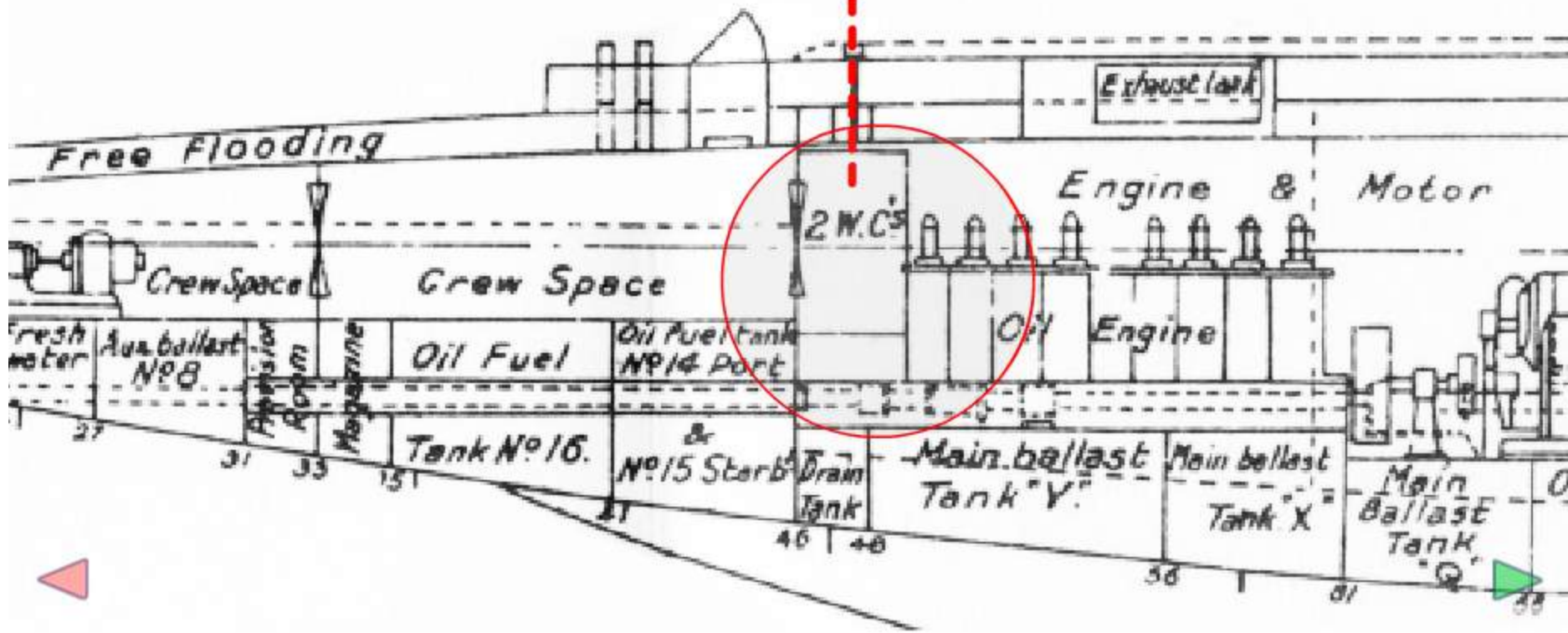
**1 Auxiliary diesel
engine
800 hp**

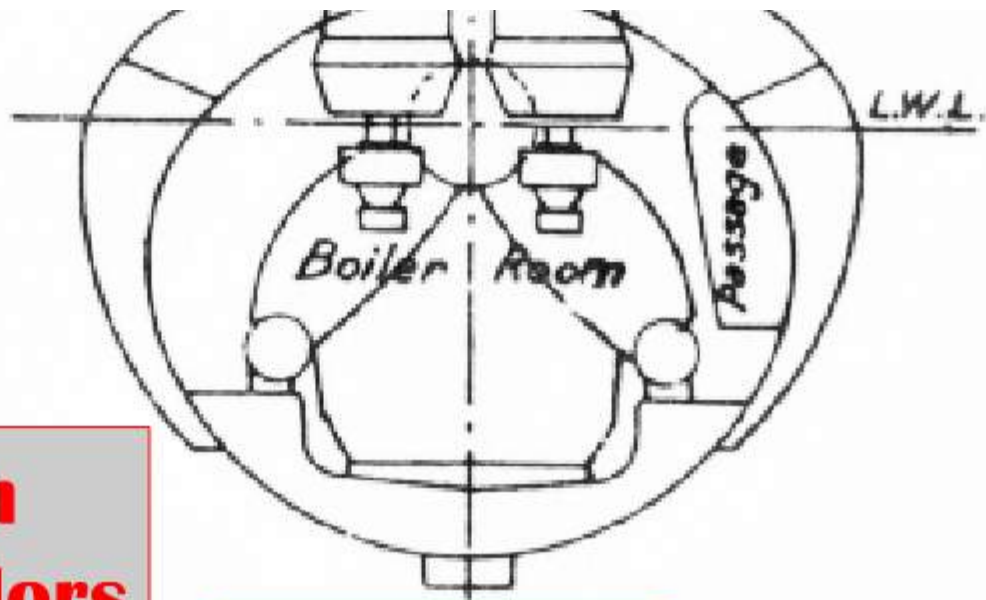
**2 Parsons steam
turbines
10,500 hp**





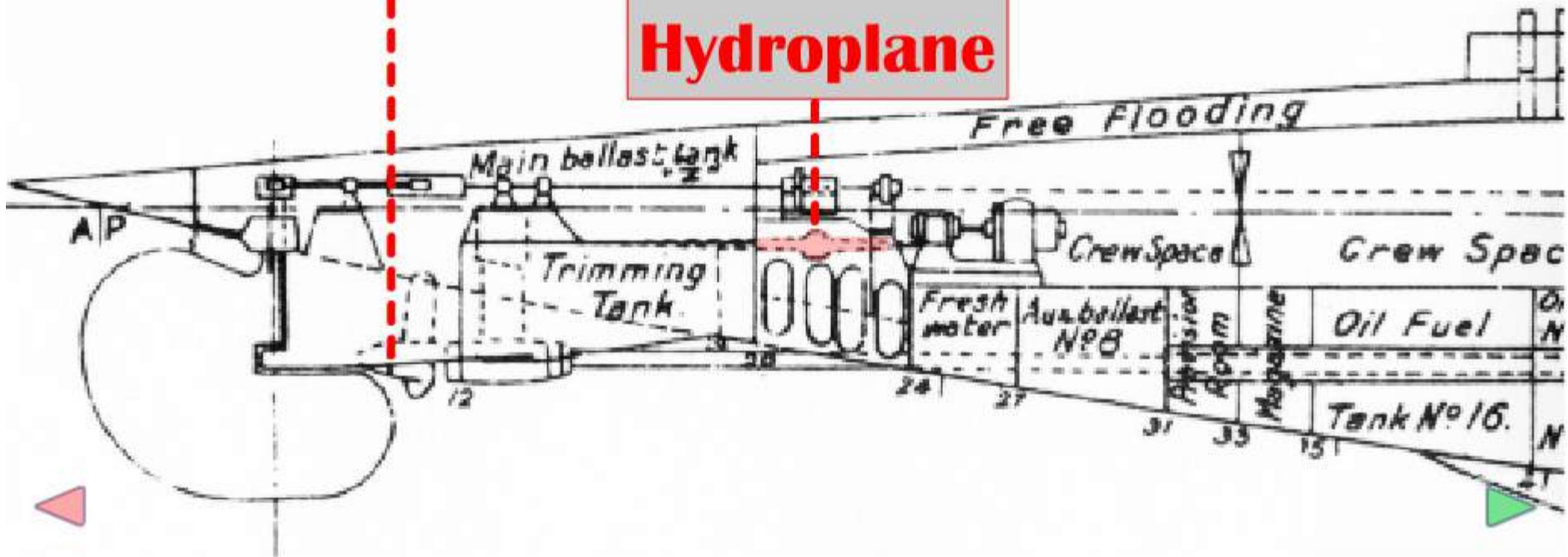
2 toilets






Twin Propellers

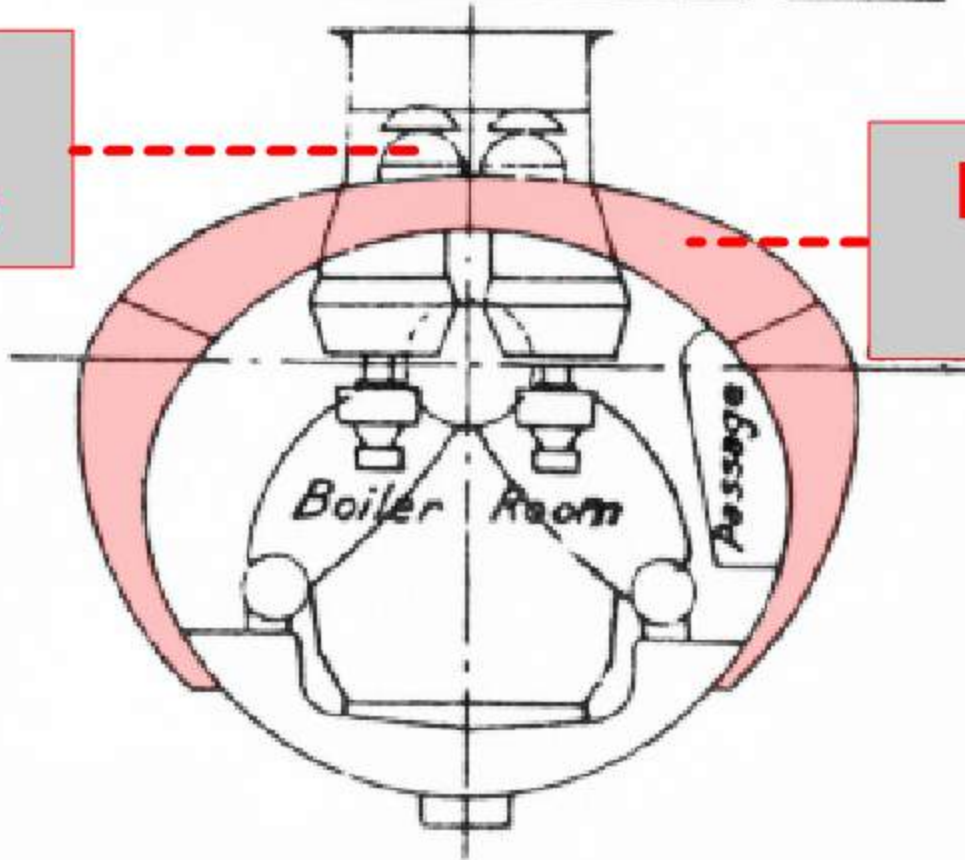
Aft Hydroplane



SECTION  Looking forward

Air Intakes

Double Skin



K for Calamity

**August 1916 - K3 first
boat commissioned**

**Wheelhouse windows cracked and
water shipped down funnels**

**Stokes Bay, Gosport - future
King George VI unplanned dive
in 150 feet of water**



29th January 1917 K13 on her trials in Gareloch - 80 men onboard including civilians



K13 dives with her air intakes open due to a faulty indicator lamp. Sinks out of control with her boiler room flooded.



**Minor mishaps
continue, numerous
modifications are
made, flotillas fully
formed in 1917**





Part 1 - Naval Developments

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Part 5 - Future Work



**Forces from Scapa
and Rosyth**

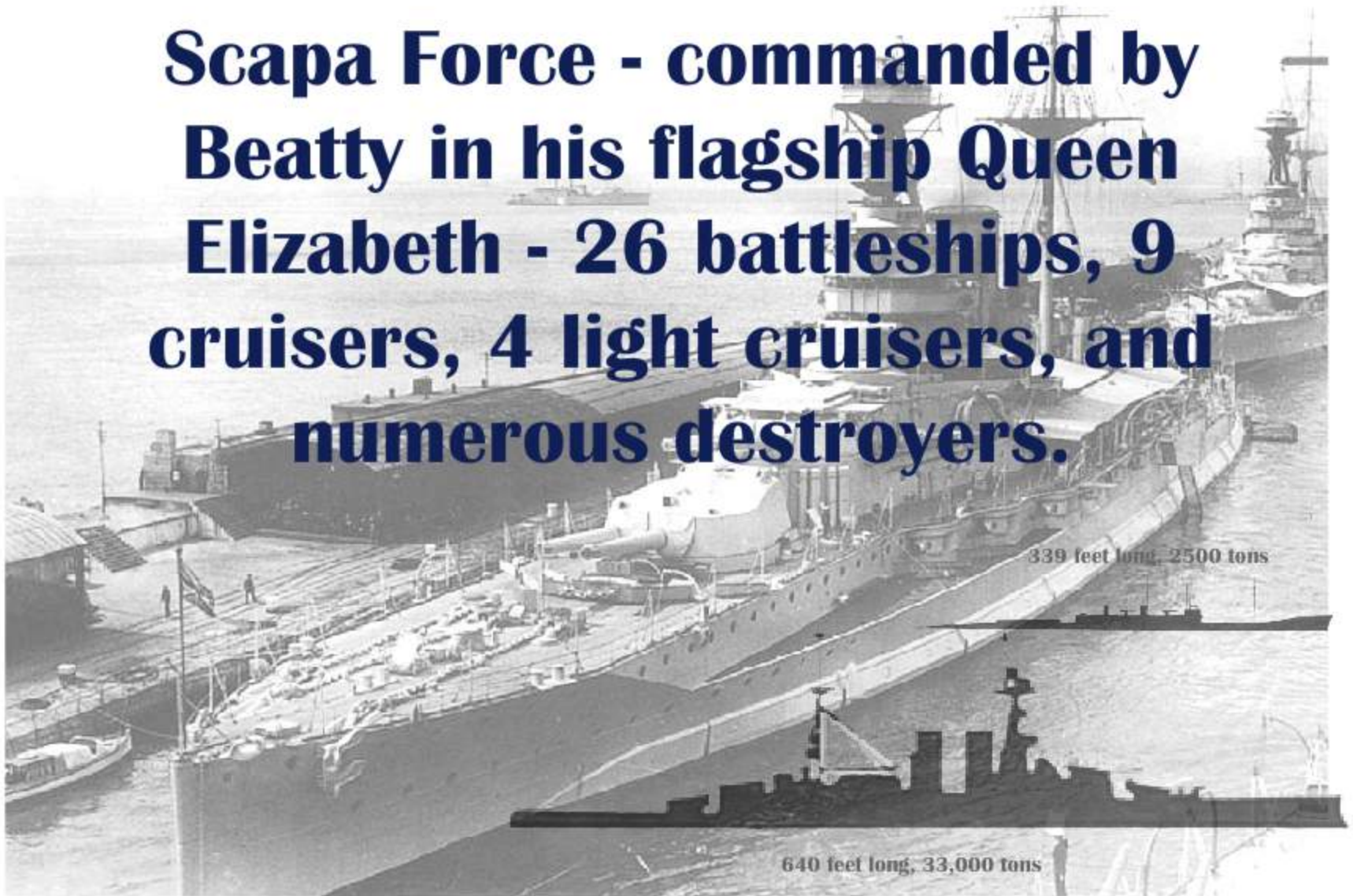
OPERATION

E.C.1.

VICE ADMIRAL BEATTY



Scapa Force - commanded by Beatty in his flagship Queen Elizabeth - 26 battleships, 9 cruisers, 4 light cruisers, and numerous destroyers.

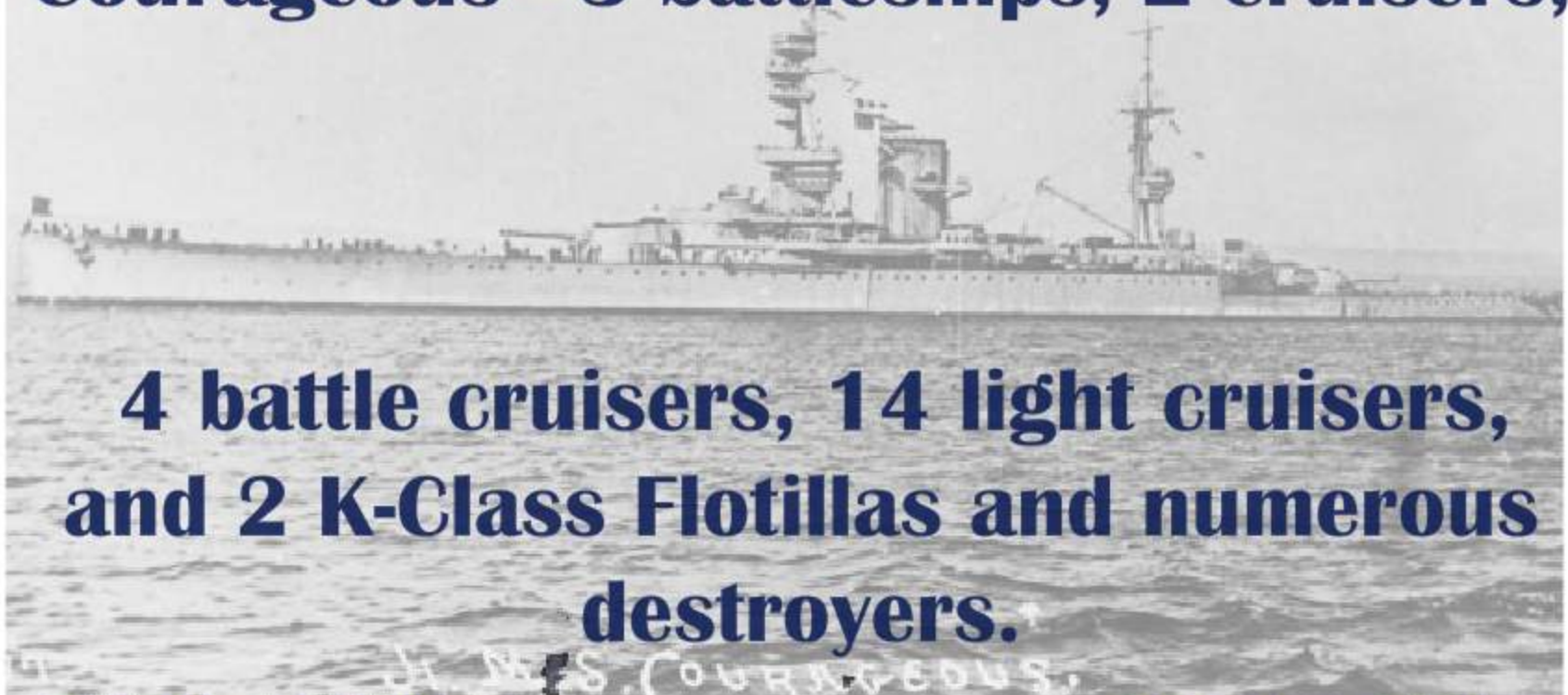


339 feet long, 2500 tons

640 feet long, 33,000 tons



Rosyth Force - Commanded by Evan-Thomas in the Cruiser HMS Courageous - 3 battleships, 2 cruisers,



4 battle cruisers, 14 light cruisers, and 2 K-Class Flotillas and numerous destroyers.

786 feet long, 26,500 tons

339 feet long, 2,500 tons



LEADING UNITS - ROSYTH FORCE

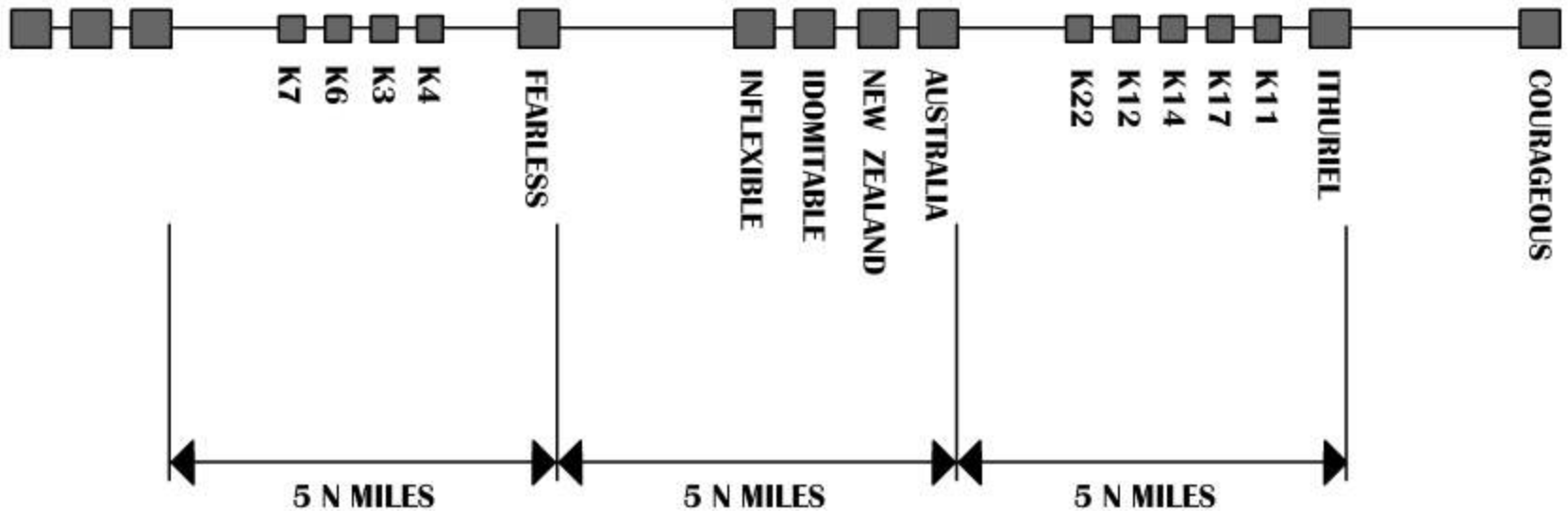
January 31st 1918

5TH BATTLE SQUADRON
3 BATTLESHIPS
AND DESTROYERS

12TH SUBMARINE
FLOTILLA

2ND BATTLE CRUISER
SQUADRON WITH
SCREENING
DESTROYERS

13TH SUBMARINE
FLOTILLA





Crail

Isle of May

Burntisland

North Berwick

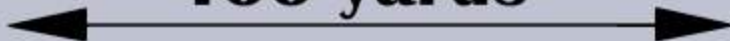
7

K111

19 knots



400 yards



11.25 deg



**Blue stern light at
half brilliance**



The stage is set



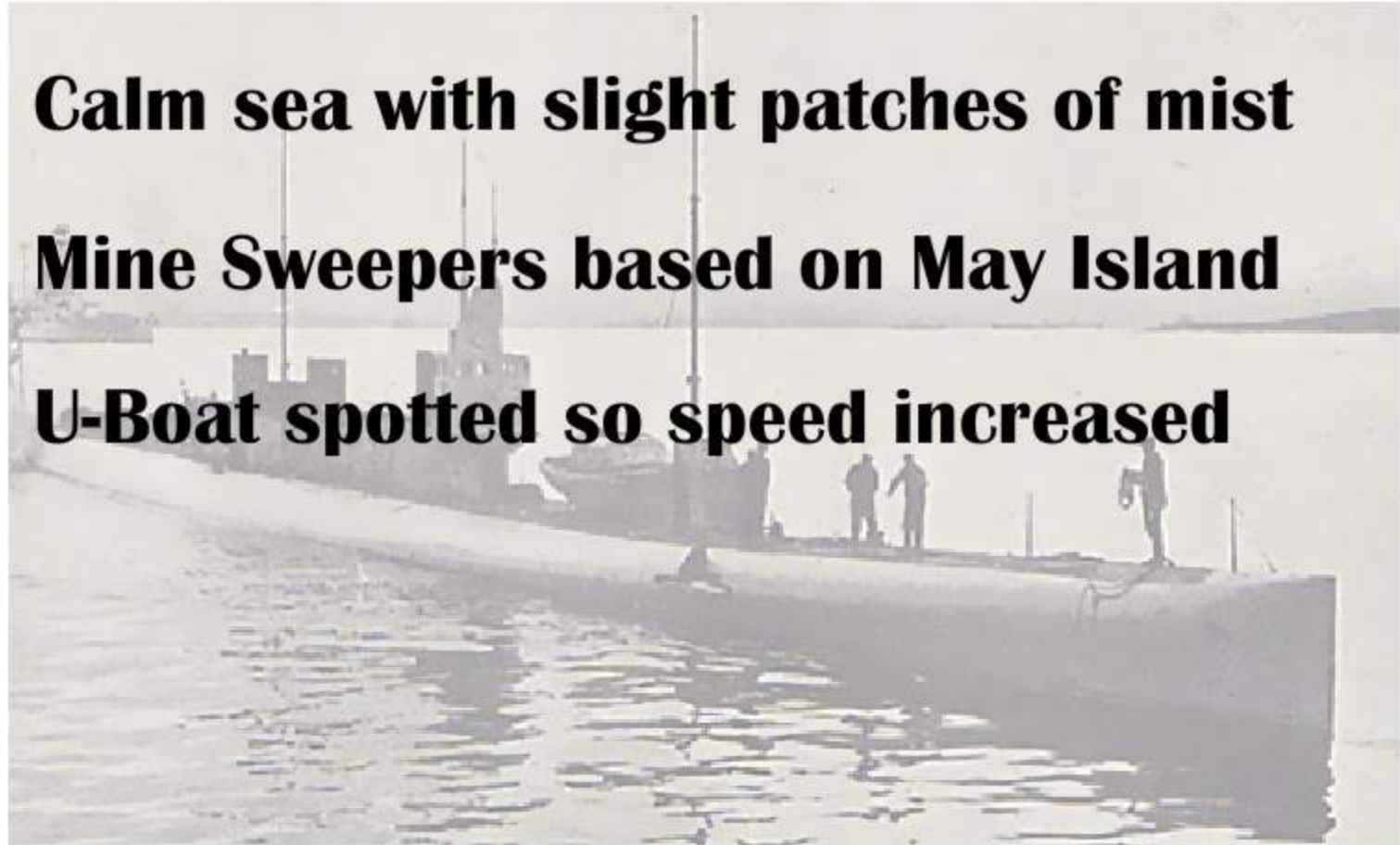
Calm sea with slight patches of mist



Mine Sweepers based on May Island



U-Boat spotted so speed increased



Act One

18:30 Operation begins

18:41 Leading ships clearing estuary all OK 19 knots

19:10 Minesweepers emerge out of the mist in front of K14

K14 evasive action, 15 degs to sb, slow both engines, nav lights on.

K12 reacts and avoids K14, light on

K22 lose sight of K12's stern light, sticks to course and speed

K22 sees nav lights crossing her bow at 200 yards

K22 slices into K14 severing part of her bow

Water tight doors save both boats

K22

K12

K14

K17

K11

ITHURIEL



Act Two

Ithuriel and her 3 remaining boats get a coded message and turn around

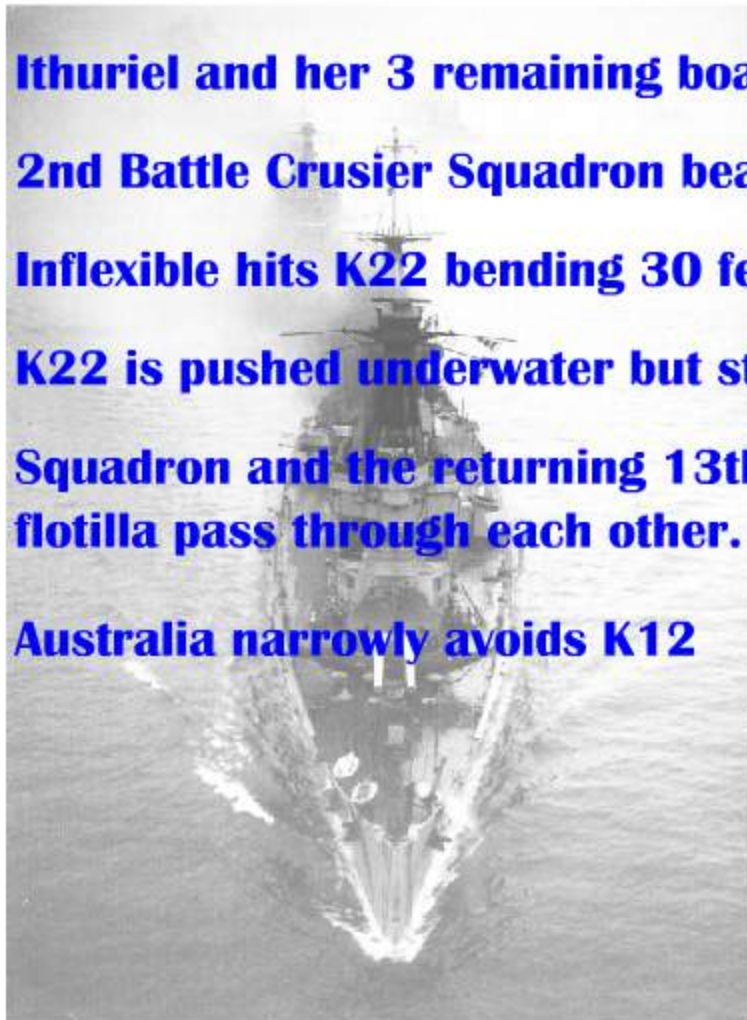
2nd Battle Cruiser Squadron bearing down on subs

Inflexible hits K22 bending 30 feet of her bow at 90 degrees to sub

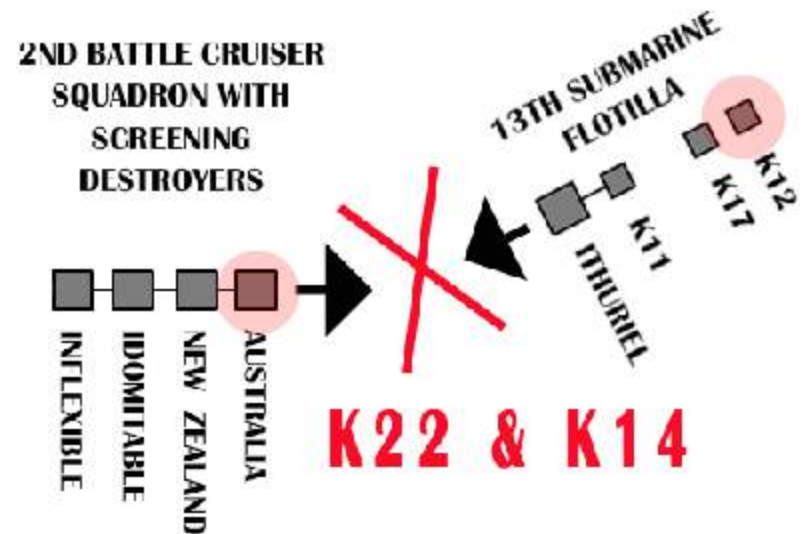
K22 is pushed underwater but stays afloat

Squadron and the returning 13th flotilla pass through each other.

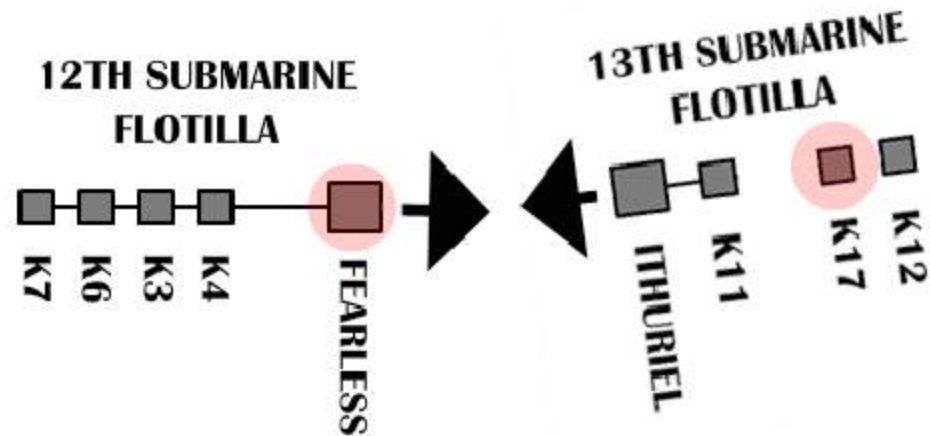
Australia narrowly avoids K12



HMS Australia



Act Three



Next outbound is Fearless and the 12th Flotilla

Lights of 2 approaching vessels seen ahead and judged to be clear

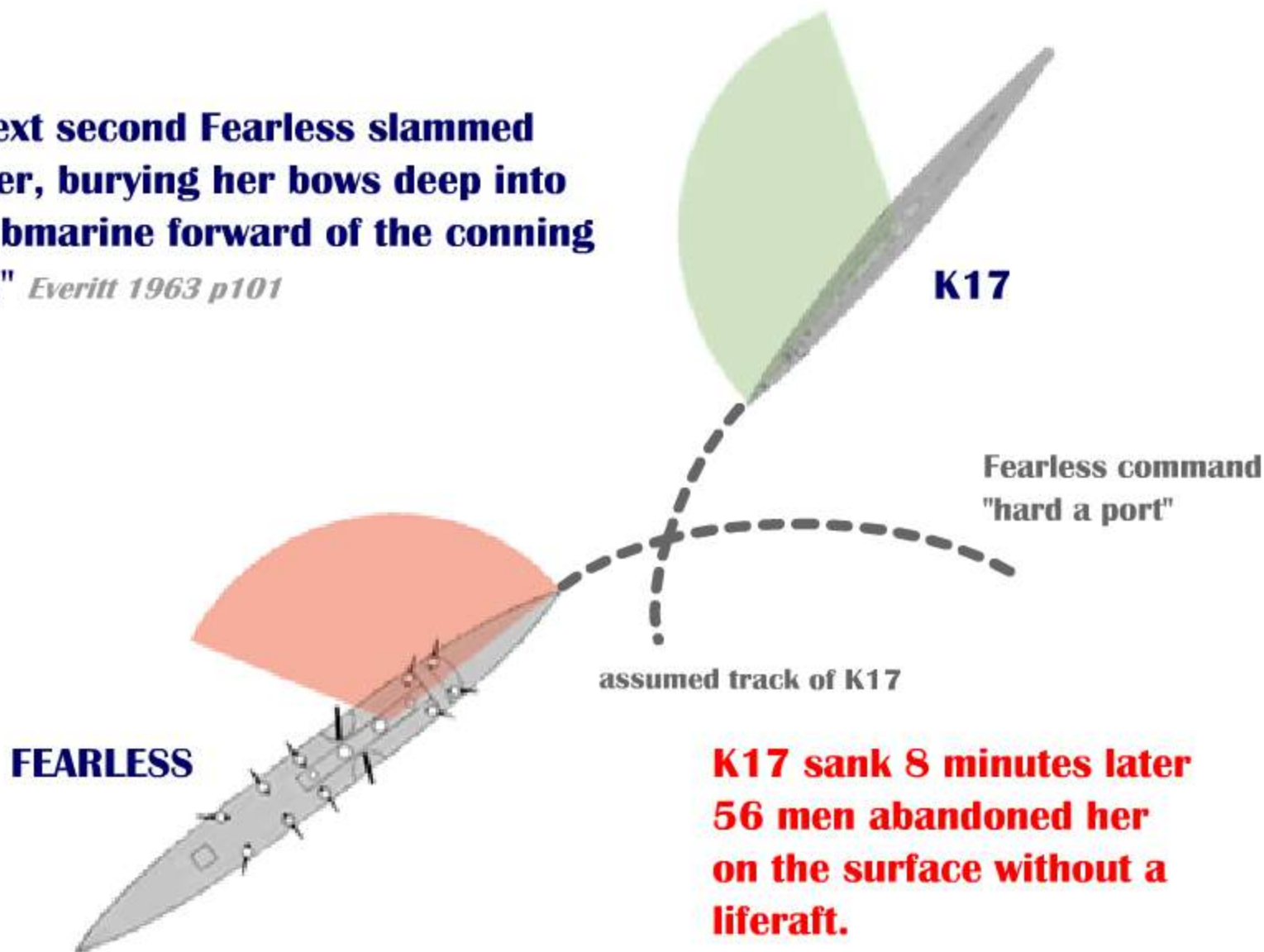
3rd vessel seen lagging behind, Fearless has right of way and holds on

K17 ahead but closing speed too great, evasive action left too late

HMS Fearless



"The next second Fearless slammed into her, burying her bows deep into the submarine forward of the conning tower." *Everitt 1963 p101*



Act Four

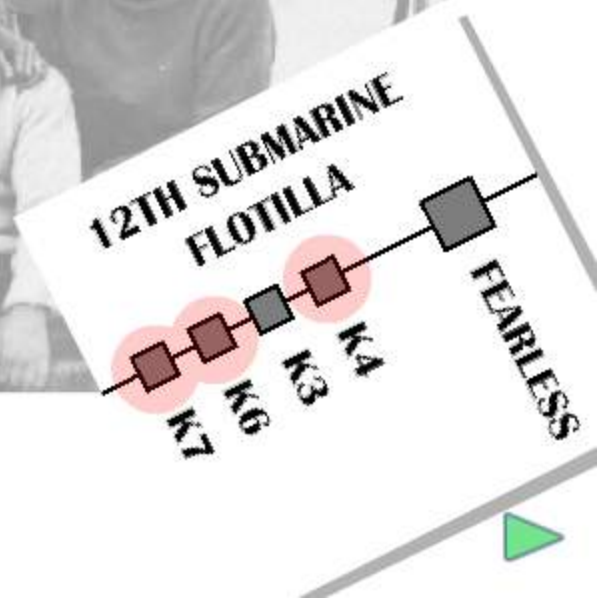


K4 stops to avoid Fearless and her lights go on

K3 sees this and narrowly misses K4

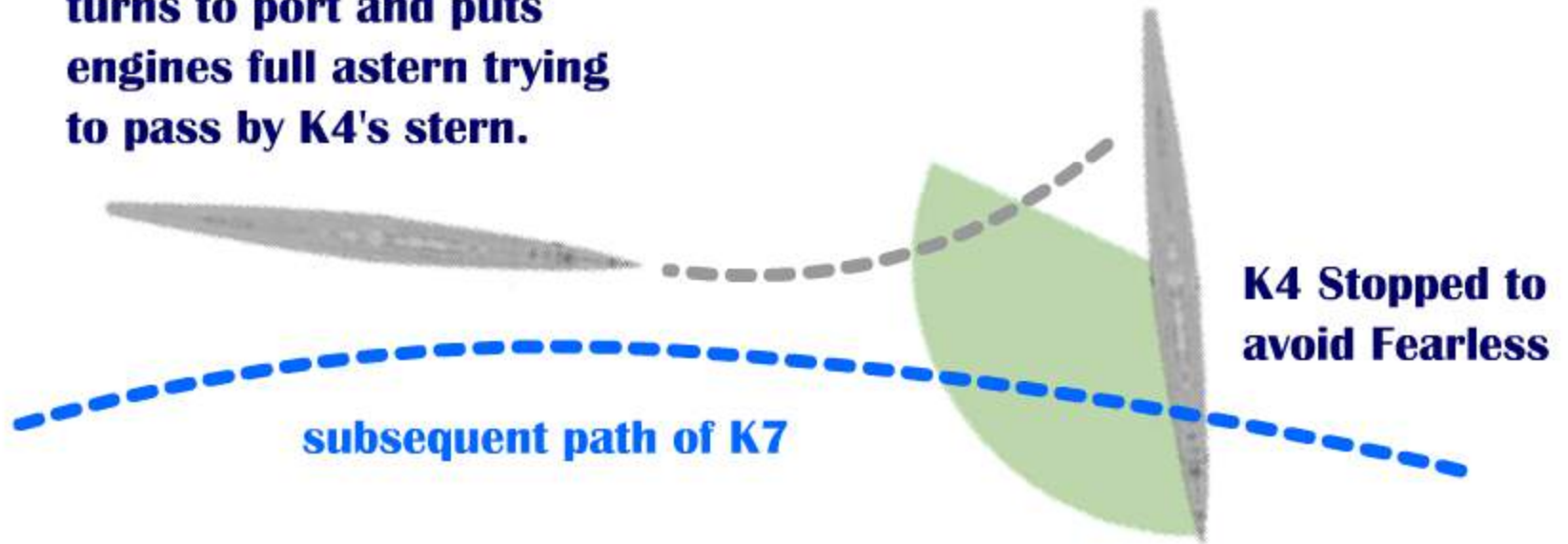
Next in line K6 has no warning and hits K4

K7 avoids K6 and runs over the sinking K4



K6 Collides with K4

**K6 - making 19 knots
turns to port and puts
engines full astern trying
to pass by K4's stern.**



"The bow of K6 penetrated deeply and K4 immediately settled by the stern."

"Ready for sail" H.K. Oram 1974 p233.





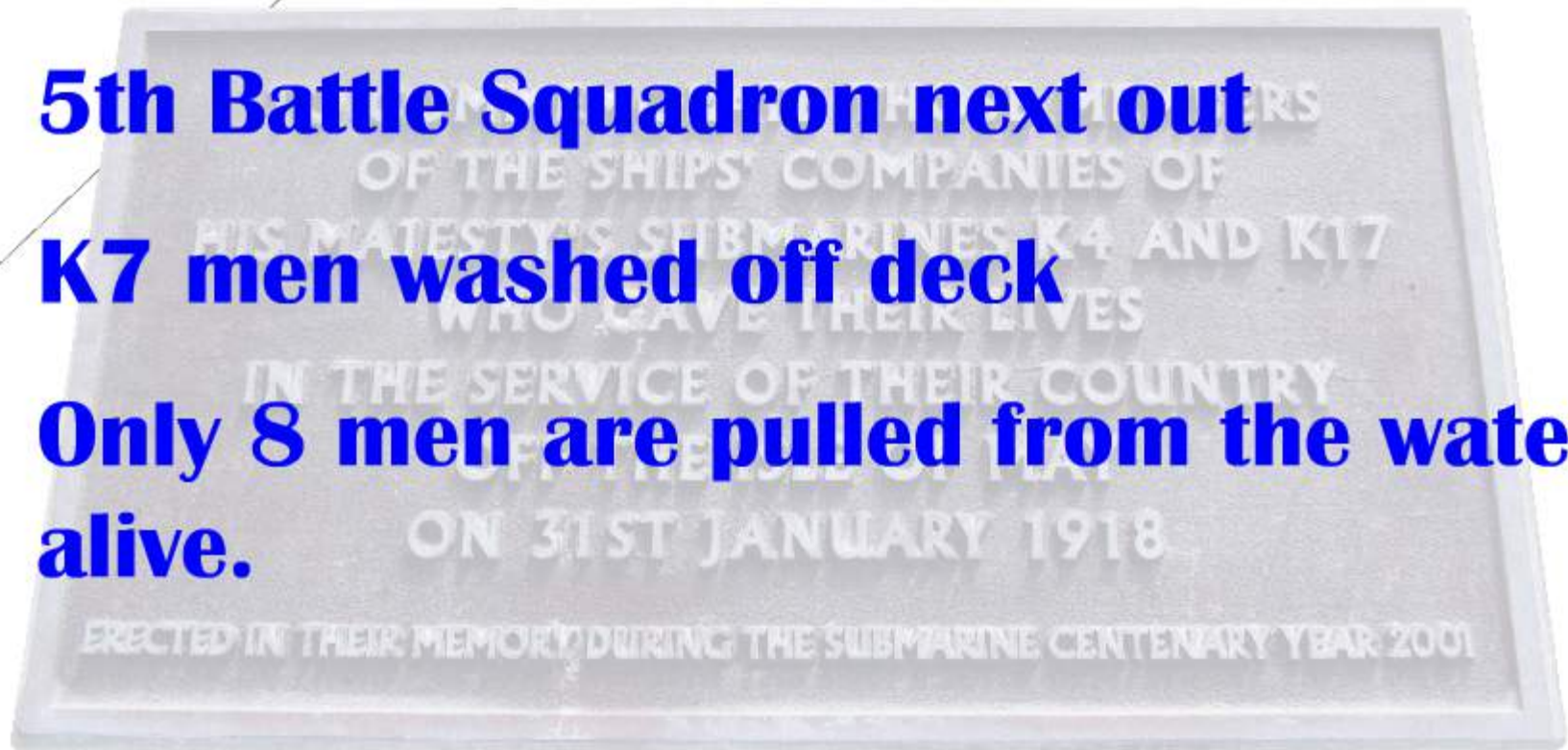
The Final Curtain

K17 - 56 men in the water

5th Battle Squadron next out

K7 men washed off deck

**Only 8 men are pulled from the water
alive.**



K4 aground at Walney Island January 1917



K4 also collided with K1 off the Danish coast. K1 was so badly damaged that she had to be sunk by gunfire by HMS Blonde





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Part 2 - Operation E.C.1.

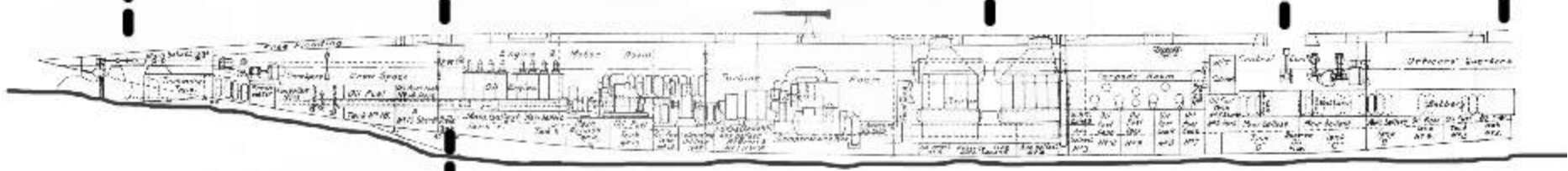
Part 3 - Site 1 Video Footage

Part 4 - Site 2 Video Footage

Part 5 - Future Work



Site1 - Video Footage



Part



Part 1 - Naval Developments

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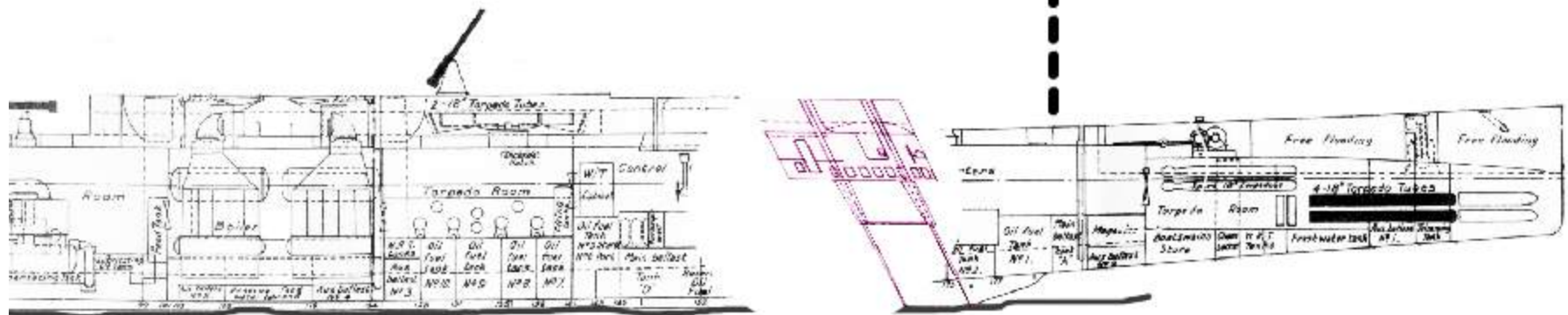
Part 3 - Site 1 Video Footage

Part 4 - Site 2 Video Footage

Part 5 - Future Work



Site2 - Video Footage



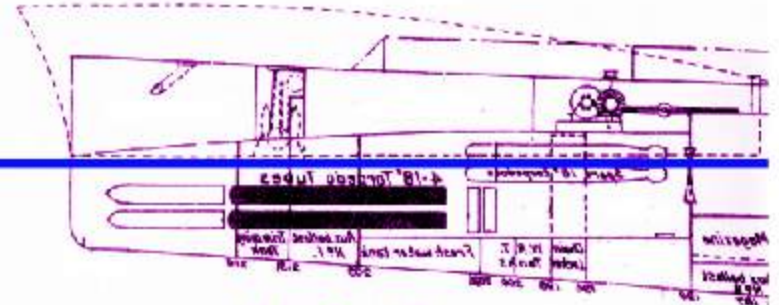
Part



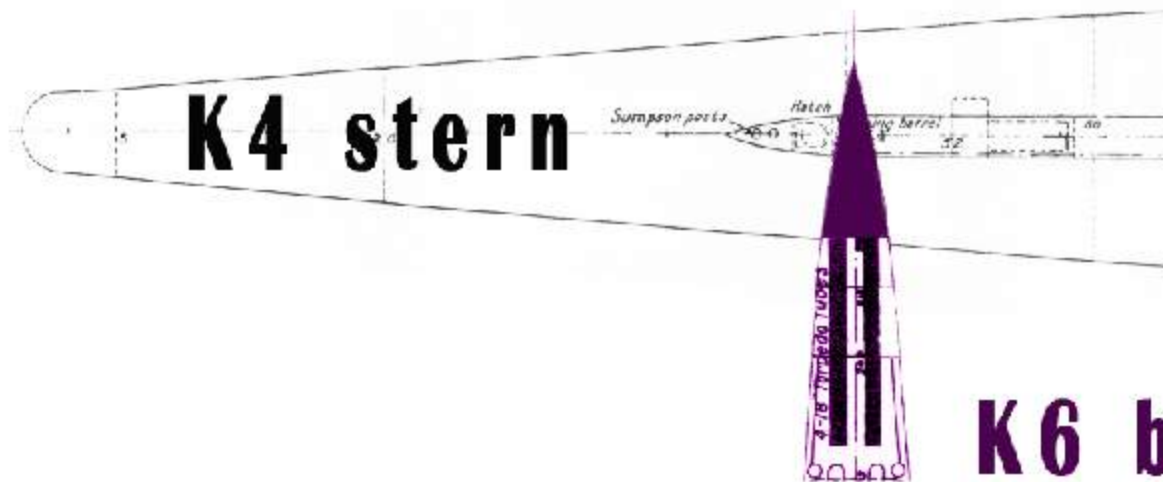
K6 - K4 Collision



K4 stern



K6 bow



K4 stern

K6 bow



MENU



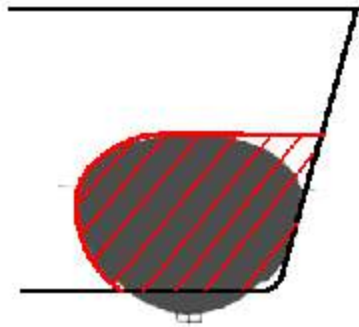
K6 - K4 Collision



MENU



HMS FEARLESS





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Further Work

This is a WIP, I want to film the rest of the K17 site and find out exactly how she sank.

Photo by Mal Jenkinson



Further Work

T
v
l
S
e

I would like to
film the rest of the
K4 site and put a
bit more detail on
key areas

Photo by Mal Jenkinson



Further Work

T
v
fil
K
S
bi
e

I would like to see
a documentary
made that
exonerates the men
who were wrongly
blamed for this
accident.

by Mal Jenkinson



The End



Photo by Mal Jenkinson

