

# **The Armoured Cruiser HMS *Defence*:**

## ***A Case Study in Assessing the Royal Navy Shipwrecks of the Battle of Jutland 1916 as an Archaeological Resource***

By Innes McCartney

### **Introduction**

Fought on the last day of May 1916 in the North Sea, the Battle of Jutland was one of the most important gun to gun naval actions in British history. The Royal Navy lost fourteen ships of which the most important were the battle cruisers, *Queen Mary*, *Indefatigable* and *Invincible*. These three shipwrecks have now been located, along with the armoured cruisers *Black Prince* and *Defence* and the destroyer *Nomad*.

The author was the finder of three of these wrecks and over several private and commercial expeditions has amassed an archive of unique material relating to all six of them and how they sunk. This includes many hours of ROV and diver shot video film and photographs and a wide range of first-hand accounts by survivors and witnesses to the loss of each of these ships. All of this has been used as the basis of this study.

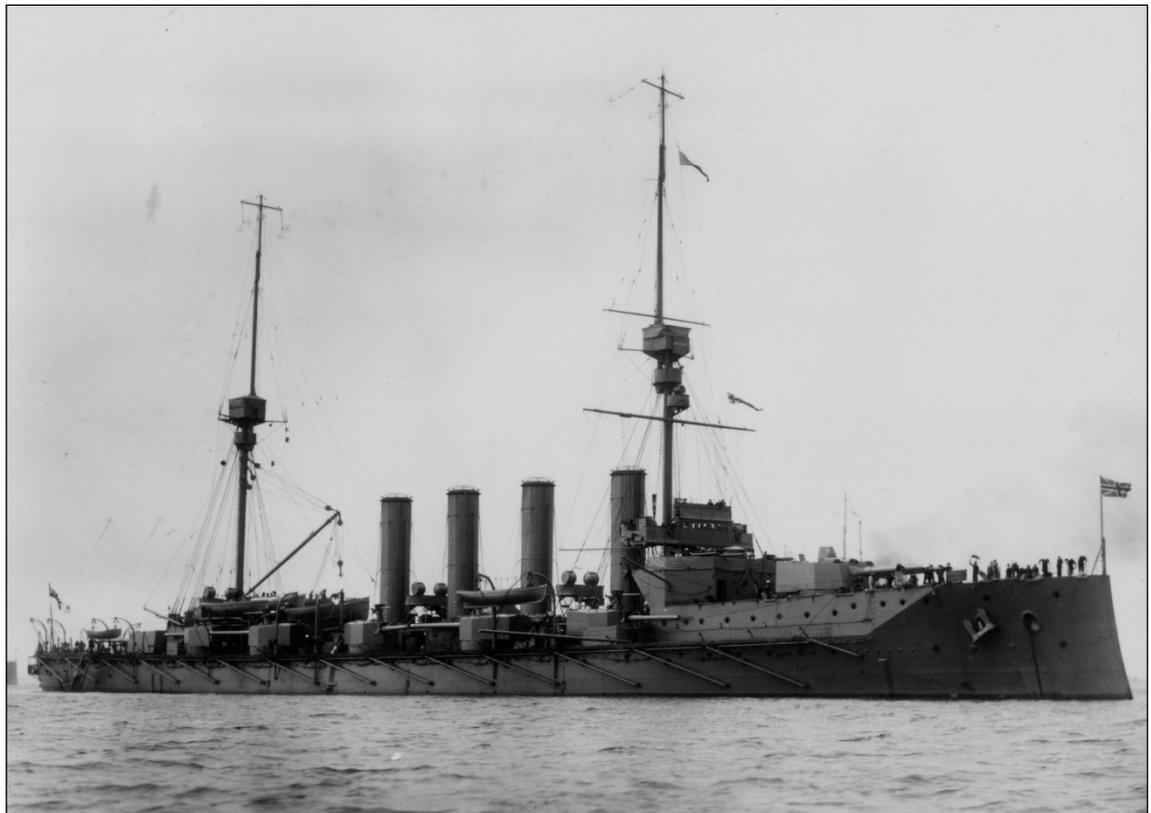
While all six wrecks have been studied, this paper sets out to evaluate just one of them. In practice this means to test whether it can offer new and unique insights into the Battle of Jutland which cannot be garnered in any other way but by locating and visiting the wreck itself. There are three main areas to examine: a) an evaluation of whether the actual wreck can contribute new data to how the ships was destroyed; b) detailed knowledge of the wreck can be compared to eyewitness accounts and photographs to build a more robust sinking scenario; c) positional data can lead to a more accurate picture of events by challenging unreliable track charts and reports.

By this measure, the most successful results were found on the wrecks which have not been subject to salvage. Undoubtedly the most important and informative of all the wrecks was the *Defence*, which belied all previous evidence by being found largely intact and undisturbed. The detailed ROV survey of this wreck yielded a mass of new information which has rewritten the history of the ship's last moments and clearly

demonstrates the important nature of its archaeological value. Similar insights are possible on the other wrecks as well.

### **The loss of HMS *Defence***

One of the last and largest of the armoured cruisers, HMS *Defence* (see Figure 1), although only nine years old at Jutland, had effectively been rendered obsolete by the rapid development the battle cruiser, its natural replacement. Nevertheless armoured cruisers were employed by the Grand Fleet in a screening role, of which HMS *Defence*, under the command of Admiral Robert Arbuthnot, was the lead ship of the First Cruiser Squadron (1<sup>st</sup> CS), also made up the armoured cruisers *Warrior*, *Black Prince* and *Duke of Edinburgh*. Only the *Duke of Edinburgh* was to survive Jutland; *Warrior* foundered whilst being towed back to Britain.



*Figure 1 Admiral Arbuthnot's flagship, HMS Defence. Launched in 1907, Displacement 14,600tons, Length 520ft, 4x9.2inch guns, 10x7.5inch guns. The twelve gun turrets make her class unmistakable. (Imperial War Museum Q21149).*

Shortly after the loss of the battle cruiser *Queen Mary*, the Battle Cruiser Force (BCF) had sighted the main body of the High Seas Fleet and had swung north towards Jellicoe, to draw the Germans onto the guns of the Grand Fleet. This phase of the battle

has become known as the 'Run to the North'. The battle cruisers, belatedly supported by the fast battleships of the 5<sup>th</sup> Battle Squadron (5<sup>th</sup> BS) duly delivered their prize and as the Grand Fleet deployed and the battle cruisers sped towards the van of the Fleet, the 1<sup>st</sup> CS was caught in a dangerous situation between several lines of ships redeploying at high speed in what has come to be known as 'Windy Corner' (see Figure 2).

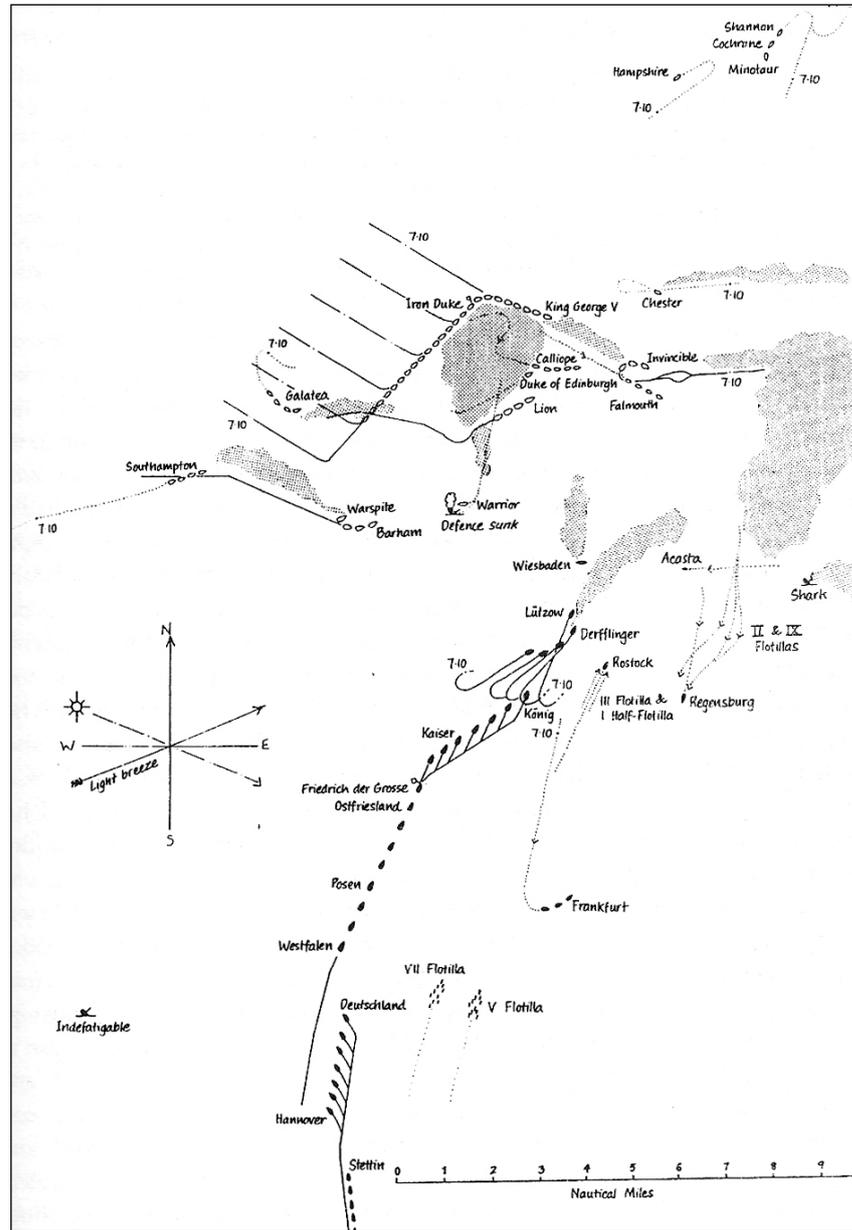


Figure 2 shows the battle between 1810 and 1820. The Grand Fleet is deploying to port, with the battle cruisers, led by the Lion heading for the van. The 1<sup>st</sup> CS has passed between the Grand Fleet and the High Seas Fleet for unclear reasons and come under heavy fire, which rapidly sunk the Defence and fatally damaged the Warrior. Note all times are in CEST (Tarrant 1995, p119).

This danger was partly of Arbuthnot's own making, for being on the starboard wing of the Fleet, as it deployed to port, he would have naturally deployed astern of the battle line. However, the eccentric Arbuthnot seems to have had his eye on the disabled German light cruiser, SMS *Wiesbaden*, aiming to sink it as it could still fire torpedoes at the long line of British battleships deploying to the north of her. So the 1<sup>st</sup> CS steamed into the way of the approaching BCF, nearly causing a series of collisions and ultimately paid for this decision by coming under fire from the approaching enemy battle cruisers of The First Scouting Group (1<sup>st</sup> SG) and the following van of the German battle fleet (Gordon 1996, p444). Rapidly surrounded by shell splashes, the inevitable happened when the *Defence* blew up and rapidly foundered with all 903 hands on board (Harper 1927a, p117).

### **Witnesses to the sinking**

The destruction of the *Defence* was seen by many witnesses during this chaotic ballet of ships manoeuvring at high speed. Interestingly, there is little controversy between the various testimonies which survive. The ship which mostly likely sunk the *Defence* was Hipper's *Lützow*, because behind her, the *Derfflinger* was about to open fire when:

“something terrific happened: the English ship, which I had meanwhile identified as an old English armoured cruiser, broke in half with a tremendous explosion. Black smoke and debris shot into the air, a flame enveloped the whole ship and she sank before our eyes. There was nothing but a gigantic smoke cloud to mark the place where just before a proud ship had been fighting. I think she was destroyed by the fire of our next ahead...the *Lützow*” (von Hase 1920, p179-80).

From the nearby 5<sup>th</sup> BS, the merciless exposure of the *Defence* and the *Warrior* to heavy fire was witnessed at close range. Captain Poland of HMS *Warspite* reported that:

“I saw three salvos fall across her in quick succession, beauties. A flicker of blame ran aft along her forecandle head and up her fore turret, which seemed to melt. Then - whoof, up she went, a single huge sheet of flame, 500 feet high, mixed up with smoke and fragments. As it died down I saw her crumpled bow, red hot, at an angle of sixty degrees, and then she sank. I nearly vomited - God it was an awful sight. I couldn't get to sleep that night for thinking of it” (Liddle 1985, .113-4).

Among the battle fleet witnesses, an officer in the foretop aboard the battleship *Neptune*, which was deploying towards the rear of the British battle line witnessed that the *Defence* and the *Warrior* were:

“practically continuously hidden by splashes, they were being repeatedly hit by heavy shell and must have been going through hell on earth. The *Defence* which was leading was just about abeam of the *Neptune*, and barely a mile away, when she was hit heavily and blew up in one fearful cloud of smoke and debris. The foretop fell with a sickening splash into the water, and the *Warrior*...raced over the spot where the *Defence* had been, through the smoke cloud of her flagship’s explosion” (Fawcett & Hooper 1921, p160-1).

In the narrative of the battleship *Colossus* (two ships ahead of the *Neptune*) the following was recorded:

“We thought she [*Defence*] had gone about a minute before she finally blew up, as she completely disappeared in a mass of spray smoke and flame. But she came through it apparently still intact, only to disappear a few seconds later in a tremendous belch of vivid flame and dense black smoke, from which some dark object, possibly a boat or a funnel, was hurled through space, twirling like a gigantic Catherine-wheel” (Fawcett & Hooper 1921, p159).

Another interesting, yet unattributed description appeared in Wyllie, Owen & Kirkpatrick (1919, p131):

“*Defence* was hit by two salvos fired in quick succession. The effect was instantaneous. Her magazine exploded with tremendous violence...Fire seemed to run along from the explosion in each end of the ship and to meet in the middle. In a moment she simply disappeared”.

All of these descriptions depict a horrible and almost instantaneous end to Admiral Arbuthnot, the *Defence* and her crew. There can be no doubt that the memory of this event by those who saw it was of a cataclysmic explosion, a fireball, smoke, and then nothing. Certainly, the expectation of what might be uncovered if the wreck could be found would be of a largely exploded ship. The discovery of the *Defence* by the author in 2001 proved that this was not the case at all.

While there no photographs of the *Defence* sinking, there is a photograph of her five minutes before she was destroyed (see image (A) in Figure 8). It seems to show the *Wiesbaden* being much closer to the *Defence* than depicted in many of the maps

produced of the battle, such as the one in Figure 2. This inevitably would have made the task of the German gunners even more one-sided.

### The wreck of HMS *Defence*

The wreck of HMS *Defence* remained unknown and undiscovered until the 6<sup>th</sup> June 2001 when it was finally located and dived by the author. The quite startling discovery was made that the wreck itself was largely intact, although there wasn't time to explore it all. Only two dives were possible before poor weather drove the team back to Esbjerg. It wasn't until 2003 on the documentary filming project that the site was examined in any detail. The project team was equipped with a ROV and whenever time allowed it was lowered to the wreck and used to explore the entire site and get a unique and unprecedented overview of what is there. The intact and undisturbed nature of this wreck, in comparison to the scattered remains of the *Queen Mary* and the *Indefatigable*, simplified the task of recording and proved far more productive than the mixed results from the geophysics, undertaken by side scan sonar (see Figure 7) and has allowed for some very detailed analysis of the *Defence's* last moments to be made.

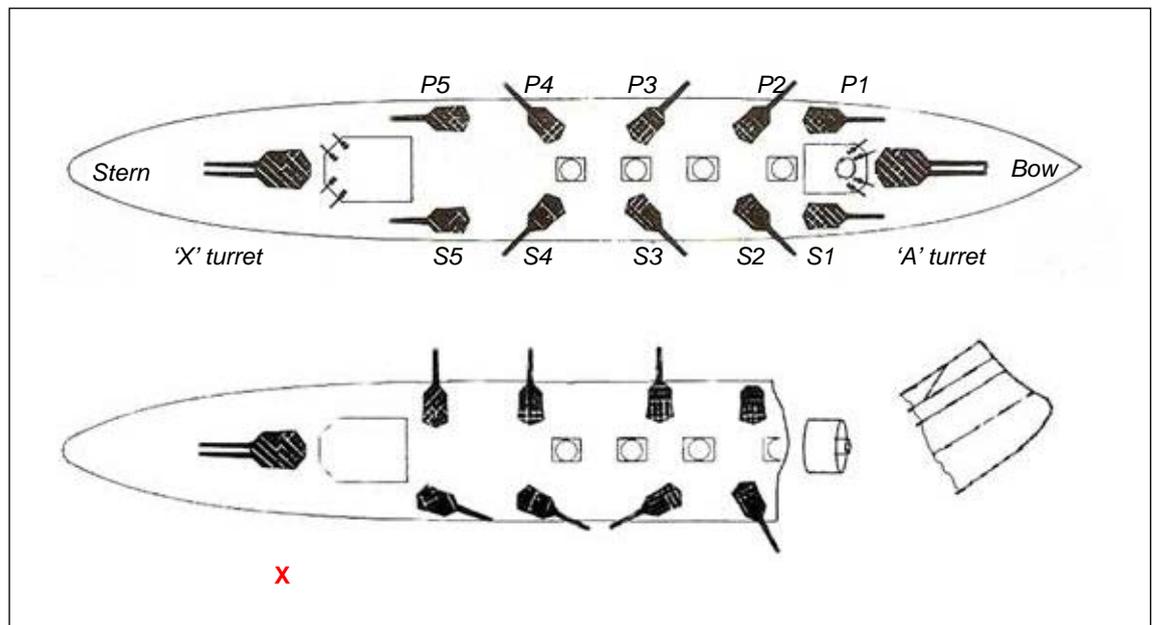


Figure 3. Plan schemes of HMS *Defence* as built (Top) and as seen as a shipwreck (bottom). 'A' and 'X' turrets were equipped with 9.2-inch guns and the ten side turrets, numbered for reference by the author, each held a single 7.5-inch gun. The orientation of the port side guns on the wreck is indicative of engagement with a target on that side. Of note is the entire absence of either S1 or P1 turrets, apart from possible parts of S1 at the location marked with the x (Innes McCartney, adapted from Jane's 1990, p51).

Figure 3 introduces the design of the *Defence* as seen in plan as it was built and compares it to a schematic of the wreck, based on the plan drawing. The orientation of the remaining gun turrets is of particular interest. The evidence from Figure 8, image (A) and from Figure 2 is that the *Wiesbaden* was to the port of the *Defence* when she

Fold-out map goes here

sunk. The orientation of the 7.5-inch gun turrets along the port side of the wreck, labelled P1-5, indicates that the *Defence* was engaging a target on that side. However, it is curious that the remains of 'X' Turret point aft, roughly along the centreline and not to port, which one might have expected. At present there is no logical reason for this, but Figure 8 image (A) although quite faded seems also to show this turret pointing aft as well. An inability to rotate the turret would most likely be caused by a mechanical failure, although we will never know for certain.

Of note also is the entire absence of either turret S1 and P1. The ROV survey did not encounter any easily recognisable parts of these turrets. During the diving operations a possible armoured sleeve was found on the seabed (see image (E) of Figure 6) which might relate to turret S1. Its location is marked with the red X above.

The ROV survey was conducted over a total period of four hours, during which the entire wreck was filmed and all of the main features captured on tape. The wreck lies at a maximum depth of 50 metres and the visibility on site was excellent. The wreck was filmed in ambient light conditions. Figure 4 is a series of screenshots from the original tapes oriented to depict the items seen in the central schematic. Some items depicted have been highlighted in red for ease of identification. The images are described below:

- A. The bow section has broken away from the main body of the wreck and lies on its port side. The image shows the exact point of the bow, as viewed from deck side. The planking has been well preserved in this area;
- B. The bow section sheared off forward of 'A' turret, leaving the armoured sleeve with the remains of the barbette lying on its side in the space between the bows and the main part of the wreck. The image shows the central part of the barbette, snapped open, revealing the ammunition hoists (also see image (A) in Figure 5);
- C. The 7.5-inch turret S2 (see image (B) in Figure 8 for one under construction). Its gun points skyward, not as it was aimed, but because the turret is tilted backwards into the collapsed engine space behind it. The roof of this turret is complete (also see Figure 5);
- D. The roof of turret S3 has been mainly blown off, revealing the breech of the gun inside (circled);

- E. Turret S4 has also had its roof partially blown off. The roof of turret S5 (not shown) was intact;
- F. The collapsed remains of 'X' turret seen from above, with the guns highlighted. This turret mysteriously points aft. Its armoured roof has largely been blown away;
- G. At the extreme stern of the wreck are the remains of the Admiral's stern walk (also see image (D) of Figure 8), now collapsed onto the seabed. The port side propeller is to the left, outside of shot;
- H. Turret P5 pointing out to port. The roof of this turret is complete;
- I. Turret P4 has a similar orientation to P5 and P3. In this case the turret roof has been blown off and reveals the gun breech inside;
- J. The roof of turret P3 is intact and the remains of a smaller 12-pounder gun mount (circled) can be seen on the roof top surrounded by net. A gun mount was also identified on the roof of turret S2 (see Figure 5). There were 12-pounder guns mounted on the roofs of all turrets except P5 and S5, yet only two mountings have so far been identified;
- K. Only the base of turret P2 remains in place. The rest of the turret has been totally blown off, along with the gun;
- L. The windlass of the bow section hanging out of the foredeck with its shaft distorted by the blast which blew the bows off. This marks the exact area where the bow section separated from the rest of the ship.

The ROV survey was extremely useful in building up a picture of what the site actually contains. The major drawback with the ROV is that it is difficult to assess the scale and spatial relationship of the items seen through a television monitor. Nevertheless the data gathered then allowed for more detailed examination of the more interesting areas by diving. Some of the areas examined and the more interesting finds are represented in Figures 5 and 6.

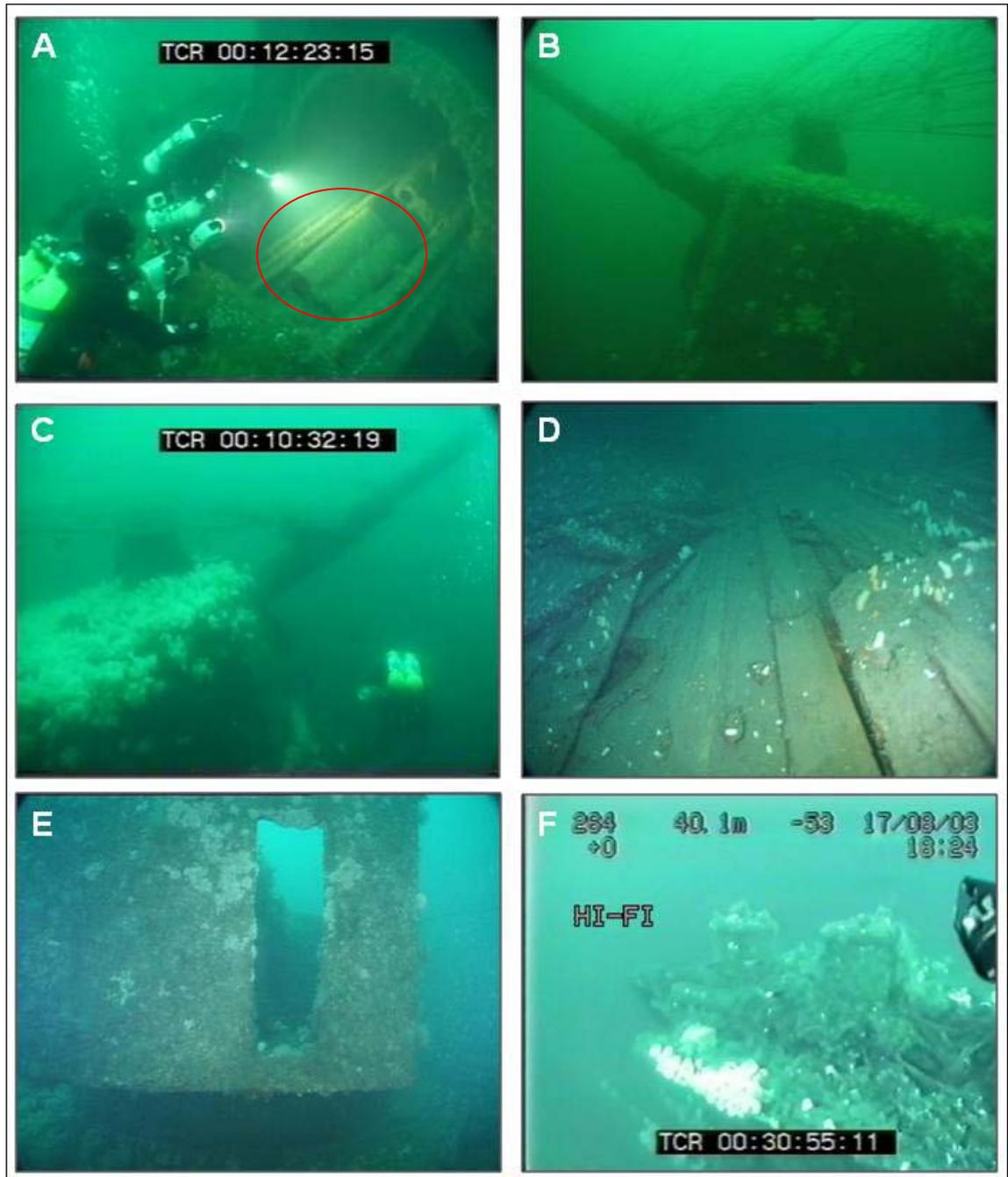


Figure 5 Details of the wreck of HMS Defence. A) Examining the shell hoist of 'A' turret barbette. Note the twin shell cases in the hoist (circled), on their way up to the turret when the ship exploded. It proved impossible to establish whether the flash doors in this turret were open or closed. B&C) Turret S2 seen from both sides. Netting is wrapped around the gun and partially obscures the view of the 12-pounder gun mount on its intact roof. D) The wood decking around turrets S3-4 is very well preserved, as it is across large sections of the wreck. E) The entrance door to S3 has been entirely blown off. Most of the 7.5-inch turret doors are open or gone. F) Mooring bollards just aft of turret S5. (Innes McCartney/Ideal World Productions).

The exposed hoist of 'A' barbette was an area of particular interest, because it offered the possibility to see if the flash arrangements in the turret system were being used, or had been left open for rapid loading as suggested by Lambert (1998). A thorough examination of the hoist revealed that it had collapsed internally at the point where the upper doors to the hoist might be seen and therefore it wasn't possible to make any conclusions in this regard. The magazine under the remains of 'X' turret has collapsed as the wreck itself has settled over its time on the seabed and whilst the presence of rounds and cordite containers (closed and opened) in the same area is of note, the wreck is too collapsed now to offer any hard evidence. This is similar to the effect seen around 'X' magazine on the *Queen Mary*, although she is inverted on the seabed.

While the major area of damage is to the bows, it was noted that the stern section, although now partially collapsed, belying its initial appearance of looking remarkably intact, had probably also suffered damage during the sinking. The best evidence for this is the absence of much of the armoured structure of 'X' turret, which we may have presumed would be present had the turret not experienced some degree of explosion when the ship sunk.

The extent to which the 7.5-inch turrets were involved in the explosion which sunk the *Defence* is attested to in several ways. The roofs of four of the remaining eight turrets (if the blasted remains of P2 are included) have been blown off showing that whatever propellant was present in the turrets certainly did burn. There are some heavily damaged and corroded cordite containers in some of the turrets along with unexploded rounds. It seems that the cordite present was ignited in some way, although the consequent explosions varied in power, from turret to turret, being less powerful in the turrets which still possess their roofs.

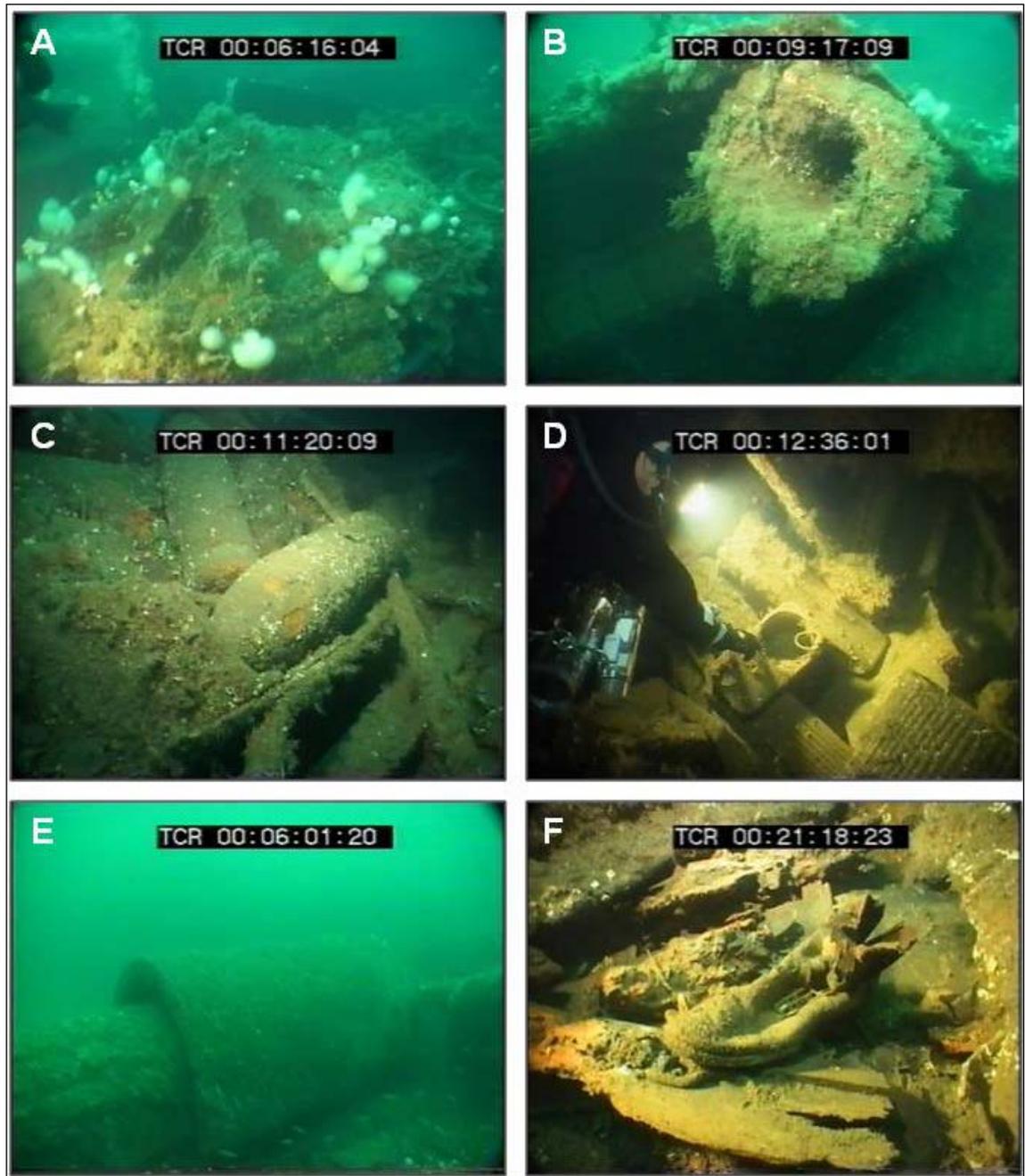


Figure 6 Details of the wreck of HMS Defence. A) The top of the aft cylinder of the ship's engine is located between turrets P5 and S5. All four of the cylinder heads are in this condition. B) The muzzle of the starboard side 9.2-inch gun of 'X' turret now partially buried under the turret's remains. C&D) Unexploded rounds and open and unopened cordite cases are scattered in the wreckage of the stern section in such a manner as to show that the magazine is now collapsed. E) This is thought to be the armoured sleeve which would have been at the base of turret S1, now lying on the seabed much further aft (see the x on Figure 5.3 for its exact location). F) The human element of the sinking is evident in several places on the wreck by the presence of shoes, such as this (Innes McCartney/Ideal World Productions).

The complete absence of turrets S1 and P1 means that they were inevitably involved in the detonation of the forward section. What is thought to be the armoured sleeve around the base of turret S1 was found on the seabed on the starboard side of the wreck in line with 'X' turret. It suggests strongly that these turrets were completely destroyed when the ship exploded. Moreover, the extremely damaged nature of the remains of turret P2 in contrast to the intact turret S2 is evidence for the explosion in the fore section of the ship being more violent on the port side.

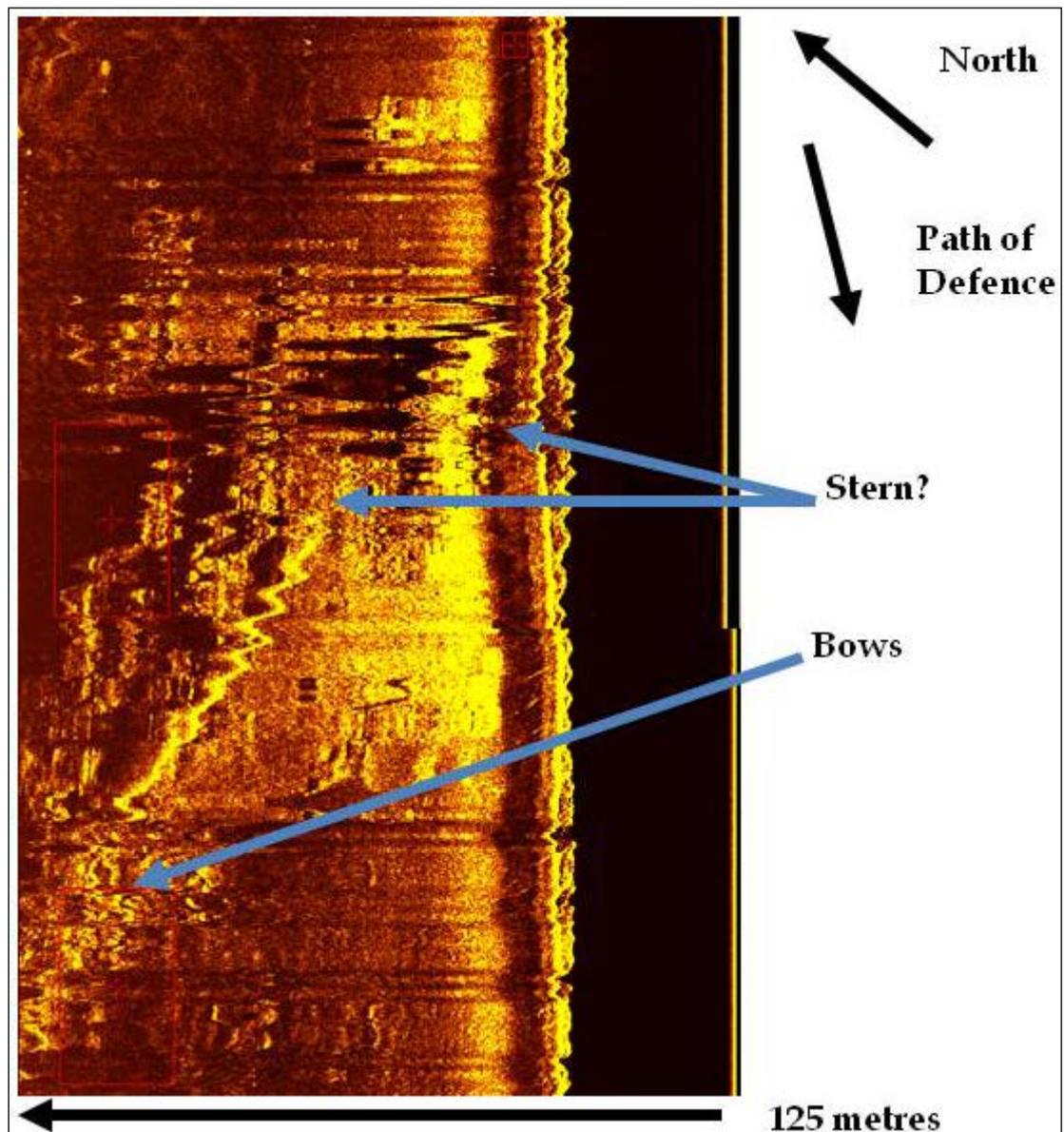


Figure 7 Side scan trace of the wreck of HMS Defence. The wavy nature of this image is caused by the rough seas at the time jerking the sonar fish. Consequently the image does little more than establish the orientation of the shipwreck and raise the question of another piece of wreckage to the north of the stern (Innes McCartney/Ideal World Productions).

During the documentary expedition the site of the wreck was also surveyed by side scan sonar and the best trace recorded is shown in Figure 7. Sadly the sea state was increasingly rough during the time the scans were made, causing the images to be very difficult to assess in any detail. However, aside from establishing the correct orientation of the wreck, the possibility of a large piece of unexplored wreckage being present to the north of the stern has been raised.

### **Conclusion**

Because of intact nature of this shipwreck and its condition, the boundaries of the site itself have seemingly been easily identifiable. This has made the process of surveying and identifying its key features a project which was manageable by ROV, because it was possible to know the location of the ROV at any time it was on the wreck site. This meant that it was possible to work without having a map of the site, as produced by side scan sonar, or similar. In this way the process was akin to walking around a museum ship and recording what is present.

The largely intact remains of HMS *Defence* as found by the author in 2001, initially seemed to contradict the eyewitness reports of the ship largely atomising in one big explosion and caused a ripple of surprise in the world of the Jutland historians as evidenced by the following:

“Contemporary descriptions of the demise of the *Defence* have been slightly undermined by divers and marine archaeologists, who recently discovered the wreck to be in remarkably good condition for a ship reported to have been blown to smithereens” (Steel & Hart 2003, p201).

However once a detailed record of the site had been made, a scenario for how it sunk can be pieced together. There was only one major detonation and it ignited the magazine underneath ‘A’ turret and also detonated the contents of both P1 and S1 turrets. This explosion tore off the bow section in line with the forward windlass and the ship immediately dropped straight to the bottom, bow first. Almost simultaneously, the flame from this magazine detonation then ran aft along the top deck, igniting the propellant in each of the eight surviving 7.5-inch turrets and ‘X’ turret, giving the impression of flames running along the ship as depicted in Wyllie, Owen & Kirkpatrick (1919, p131) and by the flicker seen by Captain Poland (Liddle

1985, p113-4). The image of the ship breaking in half was seen by several of the witnesses (see above).

However, there remain two big unanswered questions about this wreck and how it sunk. Why is the *Defence* upright on the seabed? And why did it sink so rapidly? The evidence of every other armoured ship sunk at Jutland, except the stern half of the *Invincible* (for which there is an explanation) is upside down and that in the cases studied in the most detail; the *Invincible* and the *Queen Mary* the ship's momentum drove them forward as they broke up, scattering wreckage along a path on the seabed behind the wreck.

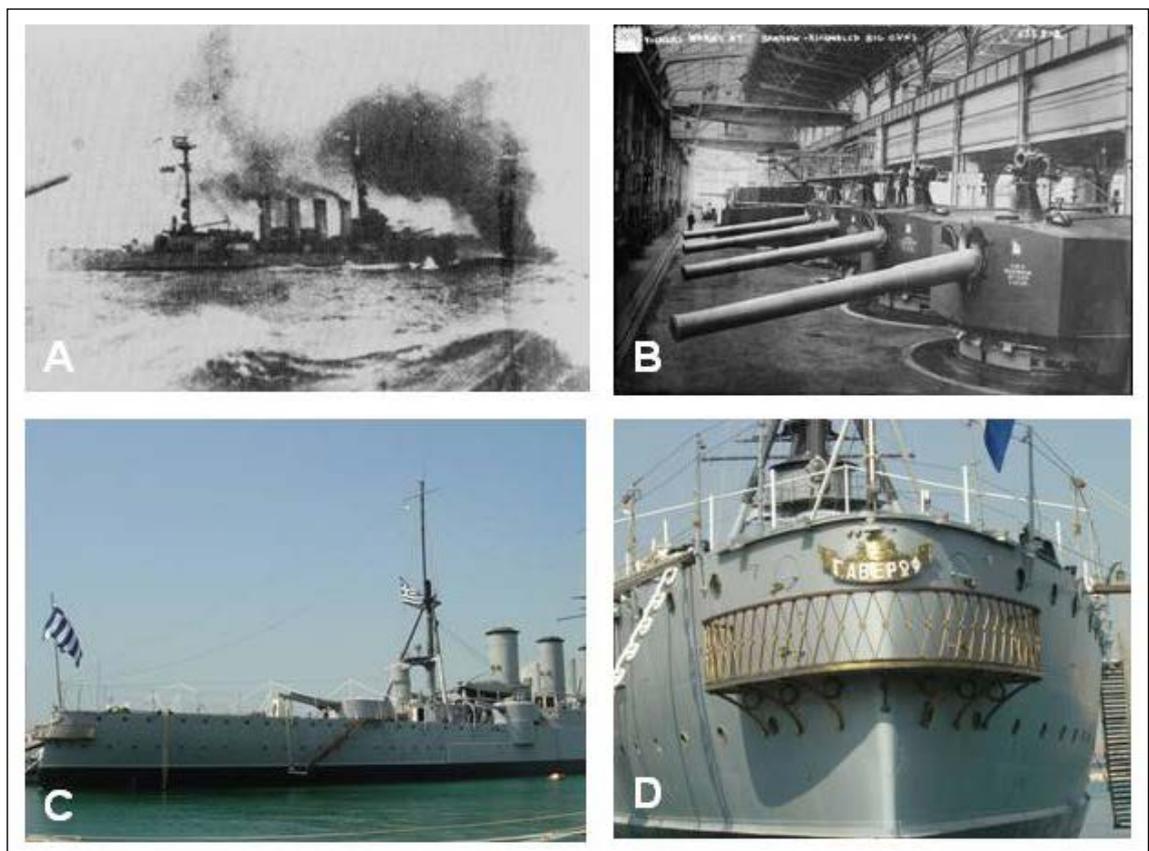


Figure 8. A) The last known photograph of HMS Defence taken five minutes before she blew up. The smoking ship in the background is thought to be the *Wiesbaden* (Liddle 1985, p113). B) the 7.5-inch turrets as fitted to the *Defence*. Note their shape compared to the underwater images and the 12-pounder gun mounts on the roofs (Vickers Photographic Archive 6486). C&D) The armoured cruiser *Georgios Averof* in Athens. She is fitted with twin 9.2-inch guns fore and aft, like *Defence* and her stern deck area is very similar. The stern walk is akin to that on *Defence*, (see image (G) on Figure 4) (Innes McCartney).

Why the *Defence* didn't turn over is hard to assess, especially when it is seen that a portion of the similar HMS *Black Prince* did so in only 38 metres of water. However if the keel of the ship had been blown out as part of the magazine detonation, then it is possible. Such a scenario would also account for her very rapid sinking as well. It seems that all of the 7.5-inch turrets were fed from below from a central ammunition store. Sadly the constructor's plans of HMS *Defence* do not exist in the National Maritime Museum and those of her sister HMS *Minotaur*, (Ship's plans collection, NPB 712 series, National Maritime Museum) are unclear in this regard. If such a store was detonated as the forward explosion ripped through the ship, then the keel could have been blown out accounting for her upright condition on the bottom and the rapid sinking, although this is entirely speculative.

Only one armoured cruiser exists today, the *Georgios Averof* on display in Athens (see Figure 8). Although only notionally similar, a visit to this ship in 2006 showed that her side turrets were in fact fed from a central magazine. In addition to this theory there is the evidence of a possible large piece of additional unexplored wreckage as seen in Figure 7 which needs further examination. It is possible that this could be a portion of the ship's keel. If so, then it would explain why HMS *Defence* is upright and support the theory that the 7.5-inch magazine also detonated. Further work on the wreck site, including the use of side scan and multibeam could conclusively answer this question.

In the introduction, I highlighted three distinct areas where the shipwrecks can contribute uniquely new facets of the Battle of Jutland. First, forensic analysis of the wrecks themselves can add new factual detail to what we know of how the ships sunk. Second, that the validity of eyewitness statements can be measured against what the wrecks tell us. Third, the positions of the wrecks can add to our understanding of the battle and its primary source paperwork record. So what genuinely new information about the Loss of HMS *Defence* has been discovered? Aside from its startling condition, the ROV survey established actually how the ship blew up, and the extent of the detonation. None of this could ever have been known without the wreck being found and surveyed. Forensically, then this wreck offers much new information to the study of the battle not available elsewhere. Also importantly, we now know which eyewitnesses reliably reported what the wreck itself actually yields. These are the testimonies upon which to rely. In positional terms, the *Defence* is where it should be.

The work so far undertaken on this site has focused mainly on unravelling how the ship sunk. However while this survey was being conducted it became clear that wrecks of this type can yield unique archaeological perspectives in host of other areas of study. As an untouched example of a major ship of the Grand Fleet, *Defence's* remains depict a snapshot of the lives of the men of the Royal Navy of 1916. The extent to which human agency can be detected on wrecks of this type is best demonstrated by an example from *Defence's* sister ship *Black Prince*, sunk later in the battle. In the aftermath of Jutland the captain of the light cruiser HMS *Chester* wrote:

“watertight doors should be properly closed. If a door is closed by [only] one or two clips and a shell explodes in its vicinity it will be blown away bodily and will act as a very large splinter, being hurled the length of the compartment and killing everyone in its way (Gordon 1996, p505).

Such a door, closed by only two clips was found on *Black Prince*. The complacency depicted by historians as seemingly endemic in the Grand Fleet leading up to Jutland, caused by what Gordon (1996) has termed “the long calm lee of Trafalgar” is nowhere better illustrated than in this example, although undoubtedly many others await discovery. In framing a research agenda for further work on wreck of *Defence*, the human element (notwithstanding the sensitivities of working on a major naval grave) is one area with much potential.

Another area is geophysics; by means of illustrating what could be done to enhance our knowledge of the Jutland wrecks further, Figure 9 shows the high resolution side scan and multibeam images taken during the survey of HMS *Audacious* for the television series *Deep Wreck Mysteries*, on which the author works as a historical and archaeological advisor. The *Audacious* would have been at Jutland if it had not succumbed to a mine in 1914. The wreck lies in a similar depth to the *Queen Mary* and is comparable in size to the larger of the Jutland wrecks. What becomes immediately apparent is the leap in technological capability of sonar imaging since sidescan of *Defence* in 2003.

The wreck can be seen to be lying upside down with the keel now collapsed over the internals of the ship. The *Audacious* blew up as she rolled over and her bow section was blown off. The explosion occurred in the region of ‘A’ and ‘B’ magazines. ‘A’ turret barbette lies empty in the right position on the foredeck. ‘B’ turret is upside down with

its guns on the sand, slightly out of position. 'Q' turret can be seen through the collapsed keel, as can the boilers and engine spaces. The stern can be seen to have snapped off, as the ship was probably already resting on it when she exploded. Alarming, the advanced state of collapse of this wreck is clearly demonstrated by a almost complete lack of the underside of the ship, with all of its internal features now evident.

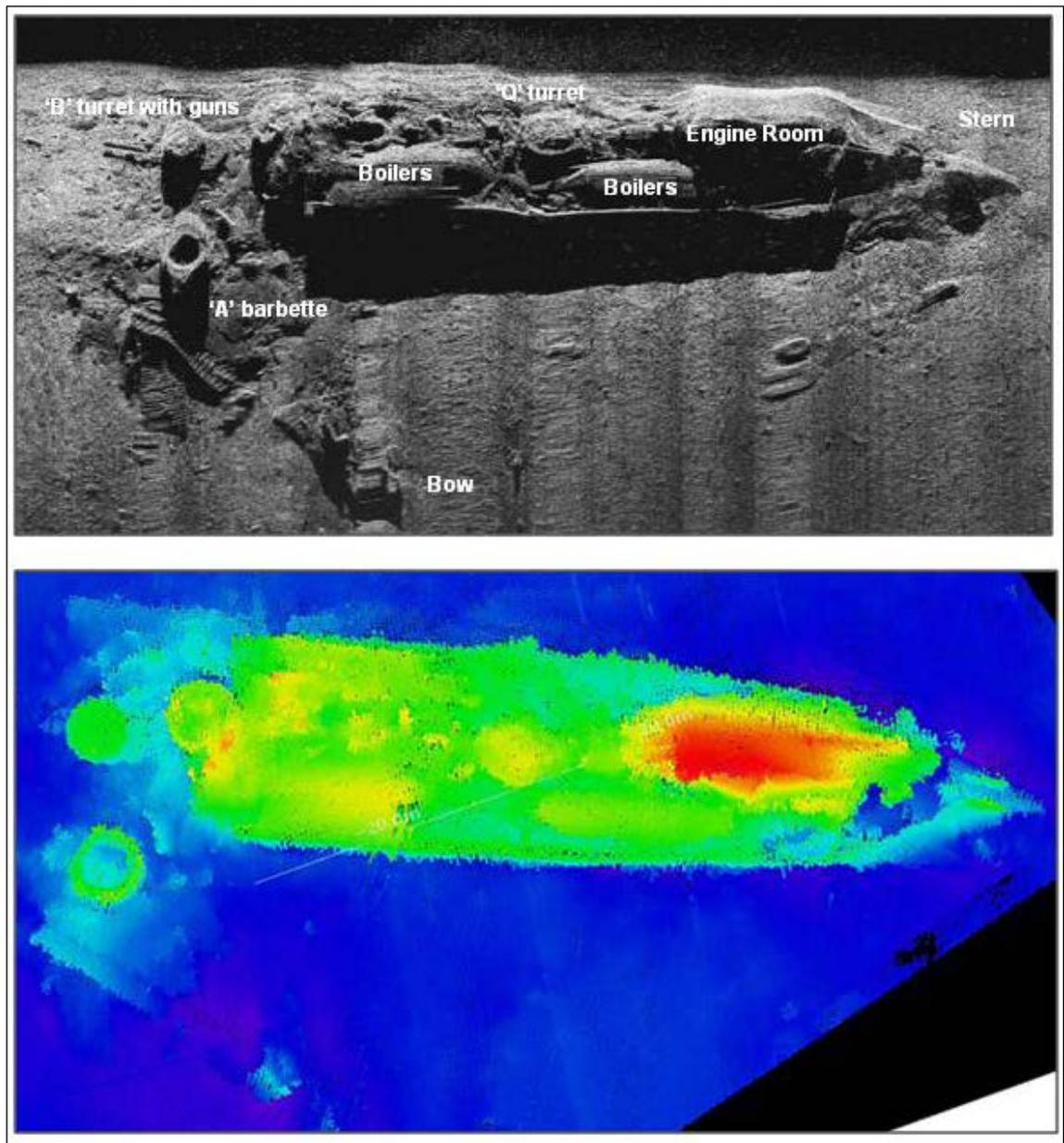


Figure 9, the wreck of HMS Audacious seen using high resolution side scan sonar (top) and multibeam (bottom) (Innes McCartney/Mallinson Sadler Productions).

By mapping the entire site of the wreck of *Defence* in such a way would identify if any element of ship (especially its keel or turrets P1 and S1) could be located near the main

wreckage and would also help establish the spatial relationship between all of the main features so far studied. Topographically too, the extent to which the wreck has actually collapsed on itself could be estimated.

With the hundredth anniversary of the Battle of Jutland now only six years away, the wrecks of Jutland, especially HMS *Defence* are beginning to reveal more about the battle than has been known simply by studying the history. It is hoped that by building on this paper, future studies with a broader agenda and more modern technology will reveal a lot more. The wreck of HMS *Defence* is, in the estimation of this author, one of the world's most important warship wrecks. Its unsalvaged and intact nature offers a rare insight into war at sea in the early twentieth century and is worthy of more detailed study before the wreck collapses and a unique line of research is lost for all time.

## **Abstract**

This paper presents the findings from a survey of one of the shipwrecks of the Battle of Jutland and is extracted from a longer report (forthcoming) which examined the six known Royal Navy wrecks. While all of the wrecks yielded unique insights in the battle, *Defence* was a particularly surprising case. The extant remains of this wreck showed the world for the first time how the ship was destroyed and explains what some eyewitnesses reported at the time. Intact and unsalvaged it is a source of much valuable archaeological and historical data.

## **Acknowledgements**

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