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The Great Landing1917

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It is not generally well-known that, in addition to the much-publicized amphibious operations around Gallipoli, and the Zeebrugge Raid, the Royal Navy maintained a very keen interest in a major attack on the Belgian coast throughout the First World War. The classic idea was that of a landing to outflank the virtually static line of the Western Front where it met the sea just north of Nieuport.

It has been a constant source of strategic concern to the British that a continental enemy should not obtain the possession of the coastlines opposite the United Kingdom, particularly those of Belgium and Northern France. This strategic nightmare was realised to a large degree in 1914, when the Germans held 27 miles of the Belgian Coast, and then completely in 1940.

As soon as static trench warfare developed on the Western Front in 1914, the British attempted to nullify the advantages which ownership of the Belgian coast had given to the enemy: principally the ability to use the harbours of Zeebrugge and Ostend as bases for submarine and destroyer operations. This is where the Dover Patrol enters the story. In October 1914, it became apparent that the Belgian Coast would form an increasingly important area of operations for the then–established Admiral of Patrols, and on 13 October, Admiral Horace Hood assumed the Dover Command. In his six months' tenure, Hood conducted at least four bombardments of the coast aimed at damaging the German communications close to the sea. Because of the difficulties of accurate spotting, enemy counter fire, and the threat of mines and submarines, most of these bombardments had little military value other than to reassure the beleaguered troops ashore that they were being supported by the Navy. Hood grew progressively more convinced that the risk to his bombarding ships far outweighed any benefits unless the purpose was to support a definite Allied advance on land.

In April 1915, Vice Admiral Sir Reginald Bacon succeeded Hood in command of the Dover Patrol. Bacon's previous job was that of Managing Director of the Coventry Ordnance works, which entailed working with heavy howitzers in France. It was therefore only to be expected that he would have a particular interest in developing means of bombarding the German–held coast. He brought an inexhaustible energy to the task, which, combined with his seniority and forceful personality, enabled him to get through a prodigious amount of work.

Volume 1 Number 1 April 2002 Bacon was fortunate that by August 1915, he had available 3 of the new shallow draft 12 inch gun monitors, the Sir John Moore, the Lord Clive, and the Prince Rupert, and he employed some ingenious solutions for overcoming the existing problems with bombardments: to reduce the vulnerability of the force, they would remain under way, where previously they had been stopped or anchored. This made them much more difficult targets. To improve the accuracy of their guns, Bacon produced two spotting platforms, to be deployed from specially adapted dockyard craft: these were five ton tripod towers, over 40 feet high, which were lowered into the water until they rested on the sea bed. At the top was a deck, clear of the water, big enough for 2 spotters and two signallers. Once lowered, they would be levelled and their exact position ascertained by fixing. From two of these precisely-placed observation towers, accurate intersecting bearings could be produced for the monitors for spotting fall of shot. Minesweepers would ensure that the vessels only passed through swept water, and the large ships would be protected against submarine attack by a huge line of nets towed by drifters. [1] Using these methods, Zeebrugge, Ostend and Westende were all targetted in August and September; however, during these attacks, an unpleasant surprise was revealed in the form of the Tirpitz Battery, consisting of four modern 11 inch guns sited just to the west of Ostend, which outranged the British monitors, and proved distressingly accurate. By June and August 1917 respectively, two other long-range batteries had been installed – at Knokke, east of Zeebrugge, (The KAISER WILHELM), and east of Ostend (known as the DEUTSCHLAND). The risk, therefore to the bombarding vessels became increasingly severe, and although there were several other attacks, no terminal damage to shore facilities resulted. In fact, the lock gates at Zeebrugge proved so difficult to hit from seaward, that they were the object of a separate and daring raid on St George's Day 1918. Incidentally, so concerned was Bacon about the Tirpitz Battery, that he landed a 12 inch long range naval gun (weighing 50 tons) at Dunkirk, moved it and its 50 ton specially-adapted mounting by road using low-loader bogies he had himself designed, pulled by three large tractors coupled together to do the towing. The gun was known as Dominion, as it was largely installed by Canadian engineers at St Joseph's Farm near Adinkerke. This was about 27,000 yards from the Tirpitz battery, while being outside the accurate range of other nearer German guns. It carried out a continual duel against Tirpitz, obtaining hits which, however did not result in long-term damage, but rendered the harbour at Ostend much more dangerous to use by the enemy. A post-war inspection by a US army team revealed that there were innumerable shell holes around the battery, but not one decent hit.

Bacon had already proposed a landing on the Belgian coast: in late 1915 he sent a memo to GHQ France and the Admiralty which set out the possible benefits of a surprise attack on Ostend. At the time the main military imperative for such a raid was to render Ostend untenable for the minelaying vessels, particularly submarines. If a larger raid were to be sanctioned and the port, and the Belgian coast up to it held on a permanent basis, Bacon pointed out that this would remove one great bargaining counter from the Germans should a negotiated peace be concluded. The former plan was eventually

Volume 1 Number 1 April 2002 discarded because of the possible damage to Ostend, which might be required later on for our own use, and the latter, because it depended on a major attack by the Army up the coast from Nieuport and Ypres to effect a junction with the landing forces, which was just not on the cards at this point of the War.

The Army were not against such a plan in principle, but General Hunter–Weston, appointed by Haig to work with Bacon, with the memory of the Dardanelles still fresh in his mind, expressed doubts: the landing forces would be very vulnerable, notably because of the large number of guns the Germans had sited all along the coastline and in the harbour of Ostend itself. And so, the project was put in abeyance until circumstance became more advantageous to the Allies.

Bacon, however, was not to be shaken from his view that the capture of this vital stretch of coast would yield gains disproportionate to the risks, and he set about planning ways to overcome the objections inherent in the original proposals. He was keen to act as early as possible, as the Germans were busily fortifying the area in an attempt to make it impregnable by land or sea. For example, along the 27 miles of coastline, there were, at the beginning of 1917, more than 80 guns of 6 inch calibre and above. He had already discussed his ideas with Haig as early December 1915, who invited him early in 1916 to work out plans for a landing and offered support when the military situation was favourable. It is of note that, on 18 September, only 3 days after they had first been used in action, Haig suggested to Bacon that tanks should form part of the assault force for any landing, which those who believe in the 'Donkeys' might ponder.

The Germans were similarly aware of the importance of this region. The permanent garrison, under Admiral Schroeder, Commander of the Naval Corps, was two naval divisions, to be reinforced in the event of an attack by Army formations. Schroeder was no fool, and in June 1917 issued a memorandum to his divisional commanders which included the following:

'A landing on a large scale is most unlikely because of the strong armament and garrison of the coast, with which the enemy is well acquainted, the great difficulties of navigation, and the lack of large fleet transports. The most likely operation would be a flank attack on the land front west of Westende Bains combined with a strong attack from the land side'. [3]

However, a later memorandum, which formed a handover document for Schroeder's relief, dated 31 October 1917, was far more confident in tone. It stated that 'the landing of strong forces of all arms is technically only possible where there are landing facilities on a large scale (such as moles and harbours)'. ie only at Zeebrugge and Ostend. A little further on in the same paper, it is stated that 'As long as the Coastal batteries are not put out of action, which would hardly appear to be possible even after a most violent bombardment of several day's duration, the attempt to land strong land forces is

Volume 1 Number 1 April 2002 hopeless'. A little further on in the same document is an exhortation that 'the enemy, who is crowded in his boats, must be annihilated before he reaches the beach'. Bacon was well aware of the difficulties, and had set his mind to overcoming them, particularly Schroeder's last point.

The first of these problems was, of course, the vital need to land men sufficiently quickly to overwhelm the defenders, who we have seen were relatively thinly-spread. Even allowing for total surprise over time and place, any landing from small boats and lighters was unlikely to provide the initial shock required. It was estimated that the whole force would need to be ashore in twenty minutes. Part of the requirement was that tanks would form part of the initial assault – a wholly new concept. In a study of over 200 Amphibious Operations by the UK Centre for Defence Analysis commissioned in 1996 by the MoD, shows that the 'presence of tanks in the assault force was significantly associated with attack success'. On GOLD Beach on D Day, casualties suffered were 40% below what might have been expected without tanks in the assault. This serves as a rebuttal to those who criticize WW1 leaders of lack of imagination: the first occasion when tanks were landed in anger in an amphibious assault was in 1942, 25 years later. Bacon's solution was typical: the men would have to be transported in big lighters, or pontoons. These pontoons were to be large enough to carry a column consisting of a full brigade of infantry, 3 tanks, four 13pdr guns, two 4.5inch howitzers, a machine gun battery mounted on motorcycle sidecars, 8 Stokes carts, 150 hand carts, 2 box cars, 2 ambulances, and between 183 and 388 pedal cycles depending on the column. The pontoons would be secured by chain cables to two 12 inch monitors, lashed close alongside each other, who would push the whole contraption forward like a giant nose. The pontoon would have a draught which increased from 20 inches forward to 9 feet aft (the same as that of the monitors). One was hurriedly built: it turned out to be 540 feet long and 30 feet in width. It was in fact an engineless ship of over 2,500 tons. Trials with monitors were held in conditions of utmost secrecy and showed, however, that the scheme was perfectly feasible.

The length of the pontoons was critical: the bow would need to be as close to the sea wall as possible, while the stern of the monitors had to be in 14 feet of water. Bacon arranged for extensive and detailed measurements to be made to discover the exact water depth using a bottomed submarine taking readings every quarter of an hour at spring and neap tides; the slope of the chosen beaches was determined from thousands of aerial reconnaissance photographs specially commissioned to show how the water receded as the tide ebbed. The results were tested by comparison with an actual survey of a similar beach in British hands which confirmed that the estimate for the selected landing places were likely to be accurate to within 6 inches. It was this information which confirmed to Bacon the need for long thin lighters, rather than short fat ones, for example. After the successful trials of the first pontoon, the other two were ordered in a hurry. In order to increase the number of days in a month that the pontoons could be used, wooden rafts were designed: these would extend the length of the lighters by about 150 feet,

Volume 1 Number 1 April 2002 effectively allowing their use in shallower water, but these would only be used if no date was available for a landing at the preferred state of tide. As the rafts could not bear the weight of a tank, they came equipped with lowerable pillars one foot square with steel feet four feet square, which could be dropped on arrival at the beach and pinned down. Experiments proved that this would allow the tanks to land, even at unfavourable tidal conditions.

The next problem was to ensure that the that the three pontoons were deposited in exactly the right positions. This was effected by a complex process known as the 'taut wire' method. Basically, the ships and accompanying boats had to have a very accurate idea of their distance offshore; to ensure that the monitors with their attached pontoons turned together to starboard in the right place. Leading lights were placed on the Allied-held shore which provided an accurate position. From these known positions, small patrol boats would drop a small anchor to which was attached a reel of piano wire. Keeping the wire taut meant that the exact distance from the known position could be continuously read. At the points where the monitors needed to turn, buoys would be laid by these small boats. So precise was the system, that it had been proved possible for a line of such markers to be laid almost up to the water's edge.

Having confidence that the landing could be made in the strength necessary and at the intended places, a method had to be found to get the tanks over the sea wall. The chosen positions for the landings had now been fixed along the stretch of coastline from Middlekerke to Westende les Bains, with the columns about a mile apart. This location had been chosen despite the fact that there was a twenty foot sea wall, sloping at about 30 degrees, and capped by a formidable coping which overhung the wall by three feet. In terms reminiscent of Blackadder, Bacon reports that the area "seemed so impossible that it would not be expected by the Germans, and therefore would probably be easier than a landing in an apparently more favourable locality". [4] There was, of course more to it: it was thought that a landing further up the coast, ie nearer Ostend, might prove too far for the main attack, advancing from Nieuport, to effect a junction with the raiders. Also, this part of the coast, although heavily fortified, relied on large numbers of enfilading machine guns sited in strongpoints to destroy any landing on the beaches. There were few coastal batteries in this section; nor were there the same number of second line trenches and strengthened positions, running parallel to the shoreline as in the other areas held by the German Marines, notably around Ostend and Zeebrugge. The operation, if successful, would not give staggering gains: the line would only be advanced a maximum of four and a half miles. But It was considered that even this small gain would be sufficient to render Ostend untenable as a harbour, and move our guns close enough to neutralise the large batteries around that port. Bacon and Rawlinson, Commander of the Fourth Army, with whom he was now in regular contact, calculated that the Germans north of Ypres would find themselves in an untenable position, and a general withdrawal would be forced on them. So the prize was definitely worth the risk.

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It was now possible for the amphibious parties to be landed quickly, and at the right place, but two more difficulties required resolution: how to minimize the danger from the larger German batteries, and how to get the tanks over the steep and overhanging concrete sea wall. To overcome the first problem, no fewer than 80 motor launches, divided into 4 flotillas and 8 divisions would lay a huge curtain of phosphorus smoke immediately the monitors turned towards the landing sites. Various orders were prepared to cope with different possibilities of wind direction, and the decision on which to use would only be made at the last minute. Thus obscured by smoke, the monitors would have enough time to land their troop and withdraw, before visibility was restored to enable the German batteries to have a reasonable chance of accurate shooting. At the same time, these same batteries would be under fire from three 15 inch monitors, Soult who would be taking care of the more distant batteries, while Erebus and Terror made life unpleasant for the many guns around Raversyde, just to the north of the landings.

Additional support would be provided by the guns of five smaller monitors, numbers M 23 to 27, fitted with 9.2 inch guns, which would open fire when the pontoons were half a mile from shore, and from the pushing monitors – firing themselves when the lighters grounded with reduced charges. Combined with a major attack by the BEF on the land front, by these means it was confidently predicted that the enemy guns would be satisfactorily neutralised, and that the strong points on the shore and the electric fence which ran the whole length of the Belgian coast would be destroyed. Any surviving machine guns would be accounted for by the tanks, once they had surmounted the sea wall.

To achieve this, an exact replica of the sea wall was built at the Tank Headquarters in France, and after exhaustive trials, it was found that it was possible for the tanks to carry an inclined platform, which each vehicle would drop before the wall and use to climb over the parapet. It was absolutely vital that these arrangements worked: the tanks would be first off and they were crucial to the infantry's advance.

The prevention of attack by German light forces was delegated to the Harwich Flotilla, reinforced by the units of the 6th Flotilla not otherwise employed in the operation. All the apparent problems having been shown to be able to be overcome, all that remained was to plan the details of the operation, and await the expected advance of the Army past Roulers as a result of the Ypres campaign. By 25 May, Rawlinson and Bacon had decided that 8 August would be the best date for the operation, as there would be no moon and favourable tides. The ten days either side would also be acceptable if the weather or military situation prevented the operation taking place on the optimum date. 1 June, Rawlinson was convinced that the scheme could work.

The first requirement was that of absolute secrecy: the operation could not succeed without the element of surprise. Throughout June the monitors practised with the barges in the Swin estuary just off the Thames. All evolutions were conducted at night or during

Volume 1 Number 1 April 2002 cloudy weather to ensure they were not observed by aircraft, and on completion the pontoons and the monitors were moored apart so that they could not be associated with each other. The ships' companies of the monitors and other vessels participating in the landing were confined to their ships, and the 1st Division, chosen by Rawlinson to be the assault formation, was likewise sequestered in an isolated camp at Le Clipon, a few miles down the coast from Nieuport, where they began intensive training in complete secrecy on 16 July. Rumours were leaked that they had been quarantined for a serious medical problem. There was no leave, of course. No—one outside the camp had any dealings with those inside: even the stores were transferred without the receivers meeting those delivering them. The camp was guarded and patrolled, and the strictest censorship was undertaken, and all the troops inside the wire had it made clear to them that their lives and those of their comrades depended on absolute secrecy.

The training of 1st Division was based on the vital necessity for surprise, and a model of the sea wall at the landing areas was built: the soldiers at first struggled to climb the 30 degree slope without full kit, but after training, they were completely at home on the incline, even in battle order and carrying bicycles and ammunition. The heavier equipments, guns etc, would be hauled up the sea wall using winches fitted to one of the tanks. In view of the limited space available, and the need for the force to be independent of outside assistance for at least 48 hours, the landing parties were to be comprised of:

All the infantry, including the trench mortar batteries, but no horsed transport. An artillery battery of 4 - 18 pdrs and 2 - 4.5 howitzers plus 6 ammunition wagons – all with limbers, per brigade

One Field Company plus One Pioneer Company for each landing Cyclists for each landing, a full battalion on the left, 3 companies in the centre, and 1 company on the right.

One motor MG battery per landing

A medical section with 2 motor ambulances per landing

Hand carts

3 Tanks, 2 Male, 1 Female, which would be the rearmost of the 3.

Over 15000 men would be landed together

For practising loading, full size plans of the monitors and models of the pontoons were set up at Le Clipon, and the best arrangement decided upon [vufoil]. The troops then practised the disembarkation procedures until remarkable improvements were noted: eventually, each Brigade Group was able to clear the pontoons and land within 10 minutes, well within the 20 minutes proposed at the start by Bacon. The troops were also trained in new tactics for the operation. Very few had any experience of anything other than trench warfare, and the landing would require proficiency in open warfare. The troops proved eager learners and improved enormously.

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A special team was trained for a particular mission: to destroy the guns of the Raversyde Battery, 4–6in guns situated between Ostend and Middlekerke. [point out on map]. If this battery remained in operation for any length of time, it could on its own deny the operation success. Therefore, a flying column would be despatched as soon as possible after the landing, consisting of a battalion of cyclists, a motor machine gun battery, and a detachment of a Field Company, also on bikes. They would rush the guns from landward, destroy the guns, and withdraw. Much experimentation was undertaken to determine the best and most economical way to render the guns useless.

Finally, special communication arrangements were made so that a telephone line would be run from the Fourth Army HQ behind Nieuport to the Divisional HQ by a monitor. Each of the Brigade Groups would also have telephone lines run out from a buoy at sea by the monitors pushing the pontoons, to be connected up subsequently. Thus it was hoped that relatively secure submarine communications between Army HQ, Divisional and Brigade HQs would be achieved.

The landing would be supported by a major attack by XV Corps from Nieuport, notwithstanding the fact that the Germans had launched a surprise and pre-emptive attack on the 1st Division holding the positions north of the Yser. The division had only just taken over the line from the French, who had operated a policy of live and let live with their opponents. A cursory glance at the map will show, however, that any troops north of the river would be immediately and completely cut off if the three bridges were destroyed. In the event this happened on 10 July, when the Germans began a bombardment at about 0900 which lasted all day. At 2000 they attacked with infantry and storm-troops, outnumbering the British defenders 3 to 1. By 2020 they were on the river bank. Of the two full battalions – the 2/KRRC and the 1/Northamptons holding the positions, only 4 officers and 55 men managed to swim across to British lines. As early as 15th July the AG reported that the 2 destroyed battalions could be easily reconstituted, and therefore this setback would not interrupt planning for the landing and on 16th, the 1st Division was withdrawn for training for its part in the landing. Haig's diary noted that his troops in this previously quiet area had suffered 10,000 casualties since taking over the part of the front from the French. (26th July entry)

Haig took a deep personal interest in the planning. We have already seen that it was the Commander in Chief who had first suggested the use of tanks in the assault, and in the months preceding the proposed landing, he kept a very close eye on proceedings: after the German attack of 10 July he urged caution on Rawlinson not to attack until he had sufficient artillery dominance. On the 16th July, the day that the 1st Division began its training, Haig attended a demonstration of the tank assaults at the testing grounds, where he noted with satisfaction that they could scale a sea wall over 20 ft high with an overhanging lip. On 21st Haig laid down 3 conditions for the landing to go ahead:

- if the enemy were in disorder

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- if the enemy coastal divisions had been diverted to the main battle front, or were otherwise used up, and,
- if the advance from the Clerken/Staden Ridge was going well.

His diary shows that he remained very cautious, and was pre-occupied with the need for artillery supremacy for the land offensive.

Rawlinson learned on 25 July that the proposed attack at Ypres would not begin until 31 July, which meant that any advance would be unlikely to have been sufficient for the landing operation to go ahead on the originally intended date. He and Bacon therefore decided on a later date for their assault, either 24 August or 6 September. On 13th August, Du Cane, GOC of XV Corps tried to convince Rawlinson and Haig that the landing should precede his attack, and was given short shrift by the CinC, who visited the training camp at Le Clipon the following day, and expressed great satisfaction at the morale and efficiency of the troops preparing for the landings. On 22nd August, Haig told Bacon and Rawlinson that the main effort by Fifth Army was not sufficiently advanced for the 6th September date to be met, and he ordered a further postponement, but he told them to continue preparations.

As we now know, progress around Ypres was nothing like as rapid as had been hoped, and it became apparent after the 1st Battle of Passchendaele that the situation was not going to be favourable, and on 15 October the 1st Division was moved from its camp at Le Clipon, and the operation formally cancelled for that year.

The preliminary programme had as its main aim the avoidance of premature detection by the enemy. The following possible account of the eventual landing has been compiled from the accounts of Bacon and Dobbie, a Staff Officer of the 1st Division, and may or may not be optimistic.

The first problem was to get the lighters and monitors across to Dunkirk. They would be towed by the monitors over two nights: on the first night they would be taken from the Swin to Trinity Bay, on the Goodwin Sands, where they would lie innocently during the hours of daylight. If spotted by the enemy, it was hoped that they would be ignored as being a new part of the South Coast defences. The following night the pontoons would complete their journey to Dunkirk, where they would be berthed out of view from nosy eyes. Loading of the equipment would take place over two consecutive nights at the RNAS seaplane base, and the pontoons returned to their lonely berths. At dusk the following evening the pontoons would be moved to the buoys one mile apart where they would be attached to the monitors, who meanwhile were lashing themselves together and embarking the troops, which they would put into the lighters when connected up. All this would take place under a strong air patrol to prevent observation by enemy aircraft. The four Flotillas of escorting smoke boats would be massed at Dunkirk only that night. The Harwich Flotilla of destroyers protecting the landing would be sailed.

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By 2200 the monitors would be connected, and would then slip and proceed. Immediately, the escorting vessels would take station: the destroyers on the seaward bow, the smoke boats on the landward side, the escorting small monitors, and the small boats carrying the taut wire distance measuring gear. Before the leading lights came into line they would drop their anchors for the taut wires to be zeroed when the lights aligned. At the appropriate distance the monitors would turn to starboard using wheel and engine revolution orders tested many times and head for shore about 1 mile apart. As they turned, the monitors Soult, Erebus, and Terror would engage the Raversyde Battery and the others east of Ostend, and the smoke boats would begin there work. Half a mile from the shore the accompanying small M. monitors would open fire. Continuous soundings would be taken of the water depth from the bows of the pontoons, and as soon as 8ft was reported, the engines of the monitors were to be put into reverse, the tank engines started, and the pontoons gently grounded. As the first 400 troops rushed ashore with the tanks, the 12 and 6 inch guns of the monitors would open fire with reduces charges, blasting the coastal defences. The tanks would reach the wall, deploy their special inclined wedges and scale the wall quickly. Once over, the first two, accompanied by an ever-swelling tide of infantry would destroy troublesome machine gun posts and wire, while the third would haul the guns and other heavy equipment over the sea wall before adding its weight to the assault. Every man in the attacking force had seen a map and model of his area, and every section had an allotted task. The telephone lines would be laid, and as soon as possible the troops of the left hand brigade despatched as a flying column in their well-rehearsed mission to destroy the guns at Raversyde, which had no landward defences, and rout their astonished crews.

After a few hours of intensive fighting, all the objectives would be achieved, the German defenders overwhelmed, and a junction made with the troops of XV Corps attacking from the Nieuport area. During the following night, every effort would have been made to land extra stores and transport to consolidate the position. German counter attacks would have been hampered by the marshy ground and the loss in the assault of much of his mobile rtillery. Bacon planned to install 2 or 3 of the new 18 inch guns in the Palace Hotel at the newly—captured Westende. Ostend would have been brought to within smaller calibre gun range and made untenable as an operating base for submarines and smaller craft, and might well have been abandoned by the Germans, in which case Zeebrugge would quickly have been rendered unusable. Practically the whole of the Belgian coastline would either be in our hands or under our guns.

Throughout, Haig had been a strong supporter of the idea of an amphibious assault, if the military situation warranted it. His circumspection counterbalanced the optimism of Rawlinson and Bacon who were both confident that the possible gain was worth the risk. In addition, Jellicoe, who during the planning had been notable for his caution, was convinced that the plan would have succeeded. Others were not so sure: after the war Gough looked at the plan and visited the landing areas. He was convinced that it was lucky that the operation never took place. Bacon's successor, the able Roger Keyes, also

Volume 1 Number 1 April 2002 reached the conclusion that the attacking division would have been annihilated, but then one should remember that Keyes thought that the Dardanelles operation was feasible. This operation, notwithstanding the fact that it never actually took place, provides, I believe, an excellent example of how far the Royal Navy and the British Army had advanced in its practises in a relatively short time. Conceived before the Battles of the Somme, it can be seen that great imagination had been applied to the planning, and every effort made to learn the lessons of the past. In particular, the problems of assaulting an enemy–held shore were given much consideration: surprise, secrecy, overwhelming local firepower, specific training for the attack units, close cooperation between the services, the use of tanks, – all illustrate that, given the right circumstances, and the time to plan, British military leadership was as able as any in devising daring and manouevrist as any. The objectives may not have been as grand or grandiose as the Dardanelles adventure, but they were far more likely of achievement at much less cost.

There is no doubt that the landing would have been a huge gamble, but the most that could have been lost was one division of the BEF and some obsolete monitors: on the basis that the Third Ypres campaign eventually cost about 350,000 British casualties, a further 15000 or so – in the worst case – would seem a reasonable risk for the enormous potential gains.

Volume VI on the Dover Command, written by the Historical Section of the Training and Staff Duties Division of the Naval Staff, and published for internal use in 1922. Originally allocated the Confidential Book Number CB 917 (D), it is available in the Public Record Office. This monograph, however, admits that many of the original documents are 'not forthcoming', and much of the information is therefore based on Admiral Bacon's books, *The Dover Patrol 1915–1917*, Two volumes, published by Hutchinson and Co, in 1919, and *The Concise History of the Dover Patrol*, published by Hutchinson and Co in 1932. The latter work was produced by Bacon partly to correct 'the inaccuracies and omissions of the Admiralty Departmental account of the work of the Patrol during my command'. These inaccuracies are not significant in the account of The Great Landing, probably because the Official account was based on Bacon's first book.

This memorandum did not come to light during the compilation of the Admiralty account, but it is clear that it had existed, as references had been made to it in other documents

After the War, a joint Naval, Military and Air Force Committee was appointed to *Examine the German Defences on the Belgian Coast*. A highly comprehensive report was produced in 1919 as CB 1524, including translations of captured German documents.

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[4] Bacon. op.cit., 228