

Assessment of Admiral 'Jackie' Fisher's achievements and limitations as a naval reformer

Narrative up to and including the Anglo-German Naval Race

In 1863 Lieutenant Fisher briefly joined the *Warrior*: the world's first iron-hulled and armoured battleship and response to a French similar but wooden-hulled vessel. Already armour-plate had shown itself to be susceptible to modern artillery pieces. Accordingly greater speed was required in order, per the thinking of the Surveyor of the Navy, Captain Sir Baldwin Walker, to elect a suitable longer gunnery range against all other warships and minimize the shortcomings of plate.¹

On the staff of the gunnery-school *Excellent*, at Portsmouth, for much of this decade, Fisher was involved in practical research: particularly into mining. Already in a position of authority he favoured controlled mines, but had a lesser opinion of contact mines. Although not fully responsible by any means, he had a not insignificant part in the Royal navy *not* adopting the Hertz-type mine.²

By now a Commander he returned to Portsmouth in 1872, this time to experiment with the recently-adopted Whitehead torpedo: aboard the *Vernon*. Also, as a member of the Committee on Torpedoes (1873-6), some of its conclusions are interesting.³

Gaining his fourth ring, as a captain he headed *Excellent* (1883-6). The development of the torpedo-boat brought about anxiety in the whole concept of the battleship: so much so that Britain built comparatively fewer than other countries. Saliently, a shortage of public funds also contributed to this though. In this period, even if the relative numbers of ships were less than desired, upgrading artillery in line with a great many technical advances, including breech-loading, was seen as essential. Fisher and his staff worked closely on this with technical experts: Sir William Armstrong and Josiah Vavasseur.⁴

As a natural progression, he became Director of Naval Ordnance in late 1886 (attaining the rank of Rear-Admiral in 1890). In an effort to be cost effective and save duplication, all of Britain's ordnance had since the Crimean War been dealt with by the War Office, but with the increasing complexities and large-scale adoption of breech-loaders since 1879, hold-ups were becoming intolerable. In all likelihood on the orders of the Admiralty,⁵ Fisher immediately sought to wrench control away from the Army. In 1888 this was in part accomplished, with the R.N. maintaining its own budget.⁶ Nevertheless, Fisher's overwhelming contribution as D.N.O. was in pushing forward the re-arming.

Stormy political relations with France allowed for a modest building plan in 1888. With public agitation (partially stoked up from within the R.N. itself)⁷ the Naval Defence Act of 1889 began a new intensity in competition with the French and a stated commitment to the 'two-power standard'. Technical shortcomings in battleships had been overcome with the introduction of triple-expansion engines and nickel-steel armour. These, permitting better value for money and an improved fiscal state meant an availability of the same.⁸

In defence against torpedo-boats smaller-calibre quick-firing guns had evolved. Even so, French large-scale deployment of these boats across the English Channel

required attention. Already aware, Fisher devoted resources to this problem from 1892, when he became Controller. In close conjunction with William White and two civilian ship-building companies, Yarrow and Thornycrofts, the result was the torpedo-boat destroyer. Importantly, new water-tube boilers proved highly successful in these.⁹

His other input regarding Belleville water-tube boilers was less noteworthy however. In time these would prove better than the old cylindrical boilers; but Fisher made the dangerous assumption that because they were suited to small ships such as torpedo gun-boats, they would be fine in large ships.¹⁰

After other duties and further promotion to Vice-Admiral, he was appointed Commander-in-Chief of the Mediterranean Fleet in 1897. All through the 1890s the major powers had constructed evermore powerful battleships and armoured-cruisers (consequently with larger ships' companies). However, in spite of massive improvements in theoretical fire-power, the British fleets had been left almost totally unsupported by the gunnery school in practical terms. At least *some* officers had been experimenting (prior to Fisher's arrival): the most notable being Captain Percy Scott. Developing a 'continuous-aim' with the more easily-controlled quick-firing guns, his hitting capacity at the then normal range of 1,600 yards was impressive. Fisher increased the range for target practice in his command, possibly to 3,000 or 4,000 yards for main armament:¹¹ the flagship *Ramilles* is known to have conducted shoots at 6,000 yards. Although individuals like Scott were the exception, Fisher's term was marked by some changes in attitude. Less time was said to have been devoted to social aspects and pointless cleaning; more to training and there was an emphasis on speed, fighting efficiency and evolving tactics: with officers encouraged to make submissions. Additionally there were numerous organisational changes and recommendations: although Lord Charles Beresford may have actually been behind many of these.¹²

Meanwhile, far from being deterred,¹³ the foreign competition just kept on building and more importantly, developing technological improvements: especially the French. Quick-firing guns with capped armour-piercing rounds had been proved to be devastating to medium armour at short range, so battleships required heavier plate protection (because ranges had not yet opened up for main armament). Similarly, to counter each others' designs, cruisers became ever larger and armoured almost overall: with attendant cost implications.

Turning the century, in 1902 the First Lord of the Admiralty, Lord Selborne, pushed for and received approval for 'equality plus a margin' over the combined French and Russian fleets.¹⁴ And, exacerbating the situation even further, by this time Germany had also embarked on a major naval programme (even if at this stage it was not particularly noticeable in Britain). The overwhelming strategic reason behind this was a coming perceived change of colonial power (supposedly to be in Germany's favour): ergo a powerful naval weapon in which to force diplomatic concessions out of Britain. On a tactical level, it was estimated that a main battle-fleet two-thirds the size of Britain's combined (allied to large-scale use of torpedo-boats, superior warships, superior training etc., etc.) would be required, plus further forces for colonial defence. However, there was also a social element in all of this. It was estimated by Tirpitz that the gargantuan industrial activity caused would mollify democratic politicians and the general populace, leading them away from more constitutional reform.¹⁵

Anyway, by now a *highly* controversial figure, on leaving the Mediterranean Fisher was made Second Naval Lord (unusually as a full admiral) in 1902. Selborne had already been in contact with Fisher¹⁶ and it may be that even at this stage that he had secured this position in order to put into commission his personnel reforms and efficiencies: as a precursor to far more grandiose plans.¹⁷

Over one-hundred pages detailing proposals were presented and after opposition these were announced on Christmas Day 1902. It is worth pointing out that only the less realistic ideas were Fisher's.¹⁸

Central to this was an emphasis on education and all-round training for officers entering naval and marine service, producing officers technologically able to fight these increasingly complex engines-of-war. Fitting in with the public school system and creating better facilities ashore for the young gentlemen; as well as normal school-work aspirants would study equally as seamen officers, engineers and marines (the latter soon to be discarded). After sea-time specialisation as lieutenants was to be the norm, with the option to later become purely executive officers (originally intended to include engineer officers). Also of import, in a socially elitist organisation, engineers were to be given a better status within the officer classes: assuming the rank-structure and allowed the same dress and marks of rank as seamen officers.¹⁹ Other aspects of officer training may have also been improved, such as in navigation.²⁰

A second scheme was drawn up in 1903 but was not put into operation until 1904, after Fisher had moved on to another appointment (as Commander-in-Chief, Portsmouth). This was primarily a rearrangement of rating personnel. On ships out of commission or in long-refits they were to be replaced by dockyard workers and instead drafted to the Fleet Reserve. Two-fifths of normal ships' companies plus 'principal officers and specialists' were to be put onboard vessels near or ready for sea-duty, forming a 'nucleus' for mobilisation.²¹ Incidentally, this was a French procedure.

On returning to the Board of the Admiralty on Trafalgar Day 1904, as Senior Naval Lord,* Fisher immediately began reforms of a *most* controversial nature. With Britain's overseas empire widely dispersed, her naval forces tended to be the same. Single or small units, often ancient or of dubious value, were to be found in all sorts of out of the way places. Again not entirely his own idea, concentration of effort in five fleets would enable the regions of importance to be covered: allowing for units to be despatched as necessary for localised tasks. Saliently, this would enable a great many of the inefficient warships to be de-commissioned and their personnel deployed more usefully. Additionally, less important foreign naval stations were shut. Based on his earlier opinions, the new emphasis was to be placed on the Mediterranean, in Fisher's mind the prime overseas strategic areas to be defended in order to maintain the Empire. *The main threat he saw was France. Germany did not at this time figure in the re-organisation.*²²

Fisher can be quoted over a long period as having a simplistic belief in superior speed and gunnery-range and this had now become apparent as a way of primarily countering French strengths and past tactics; and also taking the Russians into consideration in the event of the two nations joining forces in the Med.²³ Using current gunnery-ranges with batteries of the more efficient medium-calibre quick-firing guns (over slower firing larger calibres); and while staying out of torpedo range it was thought

* Shortly renamed First Sea Lord

that fast armoured-cruisers could get the better of the slower, heavier armed and armoured battleships. Some classes of battleships had actually gone over to quick-firers as their main armament, something that Fisher favoured as late as 1902. So, the differences between the types had significantly closed in the minds of many.²⁴

Anyway, early in 1905 at Fisher's behest a committee was appointed, in order to produce new designs for major warships. Reporting the same spring it is now clear that the committee did not entirely share Fisher's analysis. The good admiral was of the opinion that submarines (in coastal defence) made battleships utterly obsolete, but that fast armoured-cruisers with uniform-calibre armament were the way forward. At some point in the interim he had also begun to think in terms of using the newly developed steam-turbine engine for speed and artillery in heavier calibres.

However, the committee came up with two designs. The *Dreadnought*-class battleship was driven by Parsons' turbines (design speed 21 knots); with a main armament of ten 12-inch guns: an increase in firepower that normally numbered four pieces. Not entirely original in concept, it is a moot point whether any other nation had seriously thought of building similar vessels *in any numbers at least*, if only on a basis of cost.²⁵ The *Invincible*-class armoured cruiser (later to be designated battlecruiser) again turbine-driven (design speed 25 knots); and had an offensive capability of eight 12-inch guns, plus some lesser four inch weapons.

It is now relatively safe to conclude that Fisher wanted to build the new battlecruisers *only*, with Lord Selborne's blessing. Simplification by standardisation amply shows up in copious writings throughout his career – with the specific aim of good value for money. The fast battlecruiser able to act both as a battleship-killer and super defender of trade routes was therefore the ultimate: the inference being that all types of smaller cruiser would be superfluous and the next variety in his preferred order of battle would have been the large destroyer. Although highly expensive as individual units, per this thinking overall spending on building should have been brought under control: especially with the debts of the recently fought Boer War to contend with.²⁶

The construction of one battleship initially, followed by three battlecruisers went ahead: the former completed in late 1906 and the latter during 1908. By the time they were in service the Conservative-Unionists had fallen from power (in December 1905), replaced by the Liberals. Not only had the international situation changed significantly, the new government was committed to social reform and had a number of internal problems. Consequently, for a spell the armers within the R.N. had to temper their ambitions.

Even before the new designs committee had been formed, the original strategical and tactical problems in war with France had been resolved: the British had ended their differences through the *Entente Cordiale* in April 1904. Secondly, the Russian navy had been utterly thrashed by the Japanese at Tsushima in September 1905. Unfortunately, this did not usher in a new period of peace and understanding, especially since the Germans were concerned at the Royal Navy's intentions against them also.²⁷

Berlin had learned basic details of the *Dreadnought* one month even before she was laid down. Inherently disrupting Tirpitz's building programme, without recourse to any offices of his government, he had within weeks, decided to match the British. Already there was a colossal strain on the finances of the *Reich* and initially, redesigning of battleships in building was carried out.²⁸ Genuine opposition from the Treasury was

defeated, but it was not until mid 1907 that the first German Dreadnoughts were laid down.²⁹ Other nations responded in their own time.

Perceiving a real threat from across the North Sea, the government of Great Britain, of course, responded with increased battleship building once more (and to a certain degree social reform was put on a back-burner). With huge naval spending, taking a quarter of all government spending,³⁰ British government attempts even to negotiate a slowdown with the Germans failed.

Wider analysis of Fisher's reforms

As an administrator Fisher can claim some kudos. His time as D.N.O. can be judged as highly successful, with large-scale modernising of weaponry capabilities: if only in theoretical terms. Similarly, his efforts to inject realism within his command as C-in-C Med can generally be seen as of worth: *if only localised and transitory*.³¹ The reforms of junior officers' training appear to have been beneficial.³² The more esoteric ideas, such as suggesting that Commanders (E)* could somehow metamorphosize into commanding officers of the executive branch, were reasonably dropped in time. However, attempting to break down the social wall between line and engineering, was in my opinion, admirable as well as eminently sensible. (In time this has been successful.) Rearranging rating manpower for the Fleet Reserve, on paper at least, seems to have been perfectly practical: it remains to be seen *how* these ratings were actually employed in their new drafts.³³ Again, scrapping of old and dispersed units and redeploying their ships' companies can be regarded as useful: with two provisos. The first is in the nature of support to isolated colonial governments and the second, there should have been regard for keeping adequate home-waters flotilla and other miscellaneous craft (that proved problematical in 1914). Little space is given to the closure of the lesser naval bases. Other reforms regarding the lower-deck (not mentioned up to now) can be viewed as highly edifying, while cost effective.³⁴

However, technology changed fundamentally many times through Fisher's career and with ensuing complexities it is all too apparent that he (like most executive branch officers) did not have an in-depth understanding of the concepts involved. On his own, he was *not* apt to see the true potential in new devices. As an example as a young man can be seen in his opinion on developments with the contact mine. It is obvious he could work well on projects with men of technical ability though: on gun-mountings, torpedo-boat destroyers etc., etc. Even so, a certain impatience in proper testing shows itself from the debacle over the Belleville boilers.

As an admiral putting through far-reaching reforms, this lack of understanding became *far* more important. A prime example of this was in relation to the all big-gun ships. While C-in-C Med, gunnery exercises conducted at 5,000 to 6,000 yards were not unsuccessful when fired as salvos and the results observed; the process of controlling this centrally became known as fire-control.³⁵ Unfortunately, this was not the full story by any means. As distance increases the problems of one moving ship hitting another moving ship with artillery fire become very much greater. Both ships are liable to be subject to pitch, roll and yaw. The relevant bearings and ranges will in most occasions be changing and not necessarily in a uniform manner. Plus, with increased distance the

* Engineer

projectiles spend a longer time getting to the target and as a result, have to be vectored onto where the target will be judged to be on the point of impact (and not on point of firing). The full extent of these variables were not *generally* realised by naval officers, even after an interested civilian, Arthur Pollen, repeatedly attempted to persuade the R.N. to develop a series of devices for working out the solutions mechanically. In spite of promising trials, Pollen's system was only partly taken up and only after bitter recriminations. Fisher's input in this was cursory – brief support waned, when a cheaper but arguably fundamentally-flawed system by naval officers was underhandedly also offered.³⁶ Pollen's system if adopted could have given the Royal Navy an *immense* superiority over Germany's *Kaiserliche Marine*.³⁷

The potential tactical (and ultimately strategical) use of submarines was another area where Fisher clearly had not thought through the implications. While clearly encouraging experimentation, his own doctrine of using these in purely coastal defence, allied to hostility and disinterest within the upper echelons, held back tactical development significantly. It was not until after his forced-retirement, that in 1912, he apparently realised the threat to merchant shipping from the submarine: something that had been staring him in the face since at least 1903, when he wrote of sinking transports.³⁸

As for mining, having earlier in his career had little confidence in contact mines, by 1905 Fisher is said to have found favour in these, in the offensive role of blockading enemy ports at least. Nonetheless, budgets were just not provided for the requisite stocks, or vessels to lay them. Less than three years later, even this was all but cancelled. Also, it is recorded that Fisher was highly optimistic over the ease of mine-sweeping.³⁹ Unfortunately, as Britain was to find out in the coming war, this confidence was dangerously misplaced.

With Fisher's quest to squeeze every knot of speed out of his men-o-war, he has been associated with the changeover from burning coal to oil. Even although one of his nicknames was the 'oil maniac', in reality he was on the periphery and was not at the Admiralty when the important decisions were taken.⁴⁰ Also, Fisher's interest in large diesel-driven turbines should be viewed in the same way.

One action that could have potentially identified and dealt with these and other technological, tactical and strategical concepts, was the formation of a naval General Staff. Fisher is definitely known to have advocated such an organisation,⁴¹ but when he reached a position where he could have brought about its creation, to his discredit, did *not*. This could have simplified other matters Fisher was involved with; including the strategical roles of army and navy; and economic warfare.⁴² In short, Britain *could* have gone to war with naval tactics and policies that if not perfect would at least, not have been utterly disjointed. The limited work of the War College begun in the winter of 1906-7 was simply insufficient.⁴³ Although this was rectified, to a degree, with the formation of the Admiralty War Staff in 1912, this was not a General Staff in the accepted sense and was far more limited in scope.⁴⁴

In the antiquated and shared system of power within the Royal Navy, Fisher can be said to have been highly active. In the decision-making process of committees, he sat on and later set up many (manipulating where possible). Regarding patronage, he both sought and gained this: allowing juniors to have their ideas taken on by him. Unfortunately, he also alienated and was spiteful: making powerful enemies. This

strained loyalties and split the officer class.⁴⁵ Sometimes cunning and devious, he could nevertheless openly express opinions better left unsaid. A prime example of this was in regard to comments on a pre-emptive attack on the German fleet in 1904, echoing earlier press articles and confirming German insecurities.⁴⁶

In conclusion, for all of Fisher's efforts he was not powerful enough to carry through his dreams and I believe he let the Royal navy down in crucial respects. Perhaps this failure was just as well; bearing in mind his inherent weakness in strategic and tactical thought; and some opinions regarding types of ships.

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- ¹ Ruddock F Mackay: *Fisher of Kilverstone* (Clarendon, O.U.P., 1973) pp.32-3; and Robert Gardiner (editor): *Steam, Steel and Shellfire* (Conway Maritime Press London), pp.54-7
- ² Mackay: *Fisher of Kilverstone* pp.42-58 and p.115
- ³ Ibid pp.116-117
- ⁴ Ibid pp.174-185
- ⁵ Ibid p.190
- ⁶ Ibid pp.187-192
- ⁷ Ibid p.196
- ⁸ Jon Tetsuro Sumida: *In Defence of Naval Supremacy* (Cambridge, University Press Cambridge 1993) p12
- ⁹ Mackay: *Fisher of Kilverstone* pp.204-206
- ¹⁰ Ibid pp.207-208
- ¹¹ Sumida: *Naval Supremacy* p.41
- ¹² Mackay: *Fisher of Kilverstone* pp.225-229 and pp.233-235
N.B. I do not entirely believe this assertion, as Med Fleet warship logs of this era still show a great deal of all the usual cleaning and painting
- ¹³ Sumida: *Naval Supremacy* p.16
- ¹⁴ Ibid p.23
- ¹⁵ Holger H Herwig: *The "Luxury" Fleet* (London: George Allen & Unwin Ltd., 1980) pp.3-4 and pp.36-39
- ¹⁶ *Dictionary of National Biography, 20th Century 1912-1921* (Oxford: O.U.P., 1947) p.183
- ¹⁷ Sumida: *Naval Supremacy* pp.22-23
- ¹⁸ Mackay: *Fisher of Kilverstone* p.235, p.206 and pp.274-275
- ¹⁹ Arthur J Marder: *Fear God & Dread Nought* (London: O.U.P, 1952) volume I p243-247; and Mackay: *Fisher of Kilverstone* pp.274-280
- ²⁰ Mackay: *Fisher of Kilverstone* pp.281-282
- ²¹ Marder: *Fear God & Dread Nought* volume I p.248
- ²² Mackay: *Fisher of Kilverstone* pp.260-263
N.B. Others, such as Sir Reginald Custance, were also concerned by Germany
- ²³ Charles H Fairbanks Jr: 'The Origins of the Dreadnought Revolution' in the *International History Review* (1991) pp.255-256
- ²⁴ Sumida: *Naval Supremacy* pp.43-45; and Fairbanks Jr: *Dreadnought Revolution* pp.256-258. Also, Herwig: 'The German Reaction to the Dreadnought Revolution' in the *International History Review* (1991) p.276
- ²⁵ Sumida: *Naval Supremacy* pp.45-46 and Fairbanks Jr: 'Dreadnought Revolution' p.276; and Herwig: *"Luxury" Fleet* p.26 on German Brandenburg-class and pp.54-55 on Japanese Semi-Dreadnoughts *Satsuma* and *Aki* and American *Michigan* and *South Carolina*
- ²⁶ This is a major concept running through Sumida's: *In Defence of Naval Supremacy*; and taken up by Fairbanks Jr in 'Dreadnought Revolution'. Mackay in *Fisher of Kilverstone* almost comes to the same view, but seems to have given a certain credence to Fisher's 'confusion over "fusion-types"'. Also see D.K. Brown: *Warrior to Dreadnought* (Chatham Publishing London 1997) p.187
- ²⁷ Mackay: *Fisher of Kilverstone* p.319
- ²⁸ Herwig: *The German Reaction* pp.277-279; and Sumida: *Naval Supremacy* p.279
- ²⁹ Herwig: *"Luxury" Fleet* p.59; and Sumida: *Naval Supremacy* p.279
- ³⁰ Sumida: *Naval Supremacy* table 1 and table 3
- ³¹ Beatty, in numerous letters to his wife between 1904 and 1913, was highly critical of the unrealistic nature of exercises. These covered tactics; fleetwork and admirals' lack of practice; and of particular interest to this essay, gunnery. These can be found in Rear Admiral W S Chalmers': *The Life and Letters of David, Earl Beatty* (Hodder & Stoughton 1951) p.97, p.99, p.105, pp.118-120 and pp.125-126. See also, Sumida: *Naval Supremacy* pp.251-252
- ³² I base this not on the negative evidence of the reading list, but on viewing a fair number of midshipmen's journals and senior naval officers' papers in the Imperial War Museum library. A particularly good example is of an engineering officer R/Admiral Owen W. Phillips R.N. However, high standards of midshipmen seem not to have been uniform, see Chalmers: *The Life and Letters of David, Earl Beatty*

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- p.95
- ³³ Chalmers: *The Life and Letters of David, Earl Beatty* p.115
- ³⁴ Mackay: *Fisher of Kilverstone* pp.379-380
- ³⁵ Sumida: *Naval Supremacy* p.48
- ³⁶ The Pollen fire-control system is the major subject dealt with in Sumida's: *Naval Supremacy* but salient points regarding Fisher are on p.120 and p.135. Nevertheless, there are now other academic schools of thought, as can be seen in John Brooks: *Dreadnought Gunnery and the Battle of Jutland: The Question of Fire Control* (London: Routledge, 2005) and Norman Friedman: *Naval Weapon of World War One: Naval Weapons of World War One: Guns, Torpedoes, Mines and ASW Weapons of All Nations* (London: Seaforth Publishing, 2011)
- ³⁷ Sumida: *Naval Supremacy* pp.252-253
- ³⁸ Marder: *Fear God & Dread Nought* volume I pp.281-282; and Jonathon Crane: *Submarine* (BBC 1984) pp.123-126
N.B. I now believe that Fisher could have made his famous comment on sinking enemy transports in the wake of a translation of then French tactical thinking . See M. de Lanessan: 'The French Naval Programme of 1900-1906' in the *Journal of the Royal United Service Institution* (London: J.J. Keliher, 1903) volume XLVII p.1405
- ³⁹ Mackay: *Fisher of Kilverstone* pp.377-388
N.B. This scheme could not have been completely cancelled as there were offensive mine-laying operations from October 1914 onwards. See Frank C. Bowen's: *History of the Royal Naval Reserve* (The Corporation of Lloyd's 1926) p.94
- ⁴⁰ Fisher is known to have had a friendship with Sir Marcus Samuel, of Shell and to have spent weekends at Samuel's home. See Robert Henriques': *Marcus Samuel: First Viscount Bearstead: founder of 'Shell Transport and Trading Company'* (Barrie & Rockliff 1960). Opinions in the oil-man's massive biography (that are incorrectly stated as fact) are virtually identical to those in Winston Churchill's *The World Crisis* volume I. Highly simplistic (and obviously only part of the equation if these claims are checked in a number of technical publications held at the National Maritime Museum Greenwich), these carry all the hallmarks of Fisher's thinking. Additionally, regarding the sourcing of oil as fuel, Fisher seems not really to have understood the strategical complexities of this and it was Churchill who took it forward with the Anglo-Persian deal. Not only that, as stated in the main text Fisher was not at the Admiralty when the important decisions were taken. Having been Controller, it was not until late 1897, after Admiral 'Willie' May had taken over that the first realistic experimentation was begun. And, it would appear (especially from one document in the Selborne papers) it was under Admiral the Lord Walter Kerr, as Senior Naval Lord, that fuel oil was sanctioned for use in larger men-o-war as an 'auxiliary' source. This decision would appear to have taken place in mid July 1904 – before Fisher's return. The latter aspects have been researched by me and will be published in my main work on the First World War – in time.
- ⁴¹ Mackay: *Fisher of Kilverstone* p.233 and p.256
- ⁴² Some work on economic warfare itself and its relationship in the power struggles, regarding roles between the Admiralty and War Office, is to be found in Avner Offer's: *The First World War: An Agrarian Interpretation* (OUP 1989) chapters 15 to 21
- ⁴³ Cdr. P Kemp (editor): *The Fisher Papers* (Naval Records Society, 1964) volume II pp.316-317
- ⁴⁴ The National Archives: Public Record Office ADM 234/434 pp.52-59
- ⁴⁵ Apart from the well known feuds with Lord Charles Beresford and Sir Frederick Charles Doveton Sturdee, many other officers were perturbed by Fisher's behaviour. One example is shown in Chalmers': *The Life and Letters of David, Earl Beatty* p.96
- ⁴⁶ Mackay: *Fisher of Kilverstone* pp.319-320