

THE INCREDIBLE HULKS:

The *Fisgard* Training Establishment and its Ships

Aidan Dodson describes the after-life of a series of Victorian big ships, as homes for the Royal Navy's Mechanical Training Establishments, in particular of the *Fisgard* boy artificers' training establishment in Portsmouth harbour.

Amongst the myriad results of the whirlwinds that were Admiral Sir John ('Jackie') Fisher's tenures as Second and First Sea Lords during the early years of the twentieth century was a major overhaul of the training of the Royal Navy's technicians – the key to the increasingly-technological navy of the new century. In particular, the training of such individuals amongst new-entrant boys was to be facilitated by new Mechanical Training Establishments (MTEs) at Portsmouth, Chatham and Devonport – the first two catering for artificers, the third mechanics. HM Ships *Fisgard*, *Tenedos* and *Indus* duly commissioned on 1 January 1906 under the first Inspecting Captain of MTEs (Reginald Hall, later Director of Naval Intelligence during the First World War), who was double-hatted as the Commanding Officer of *Fisgard*. It was intended that those under instruction would also be undertaking useful repair work, especially on ships 'in commission in reserve'.

Each of these 'ships' was actually a constellation of old warships which had been reduced to stationary roles – colloquially 'hulks'. It had been a long-standing practice to employ old ships in such a way as, until well into the twentieth century, naval bases and dockyards had limited built infrastructure. Thus, a wide range of functions – for

example headquarters, accommodation, training, and even coal-storage – was carried out afloat.¹ At Portsmouth, until 1903 many the personnel of the naval depot (HMS *Victory*) were housed aboard the former ships-of-the-line *Marlborough*, *Duke of Wellington*, *Hannibal* and *Asia*. Broadside-armed vessels had expansive gun-decks that could easily be adapted for a wide range of purposes, while properly-seasoned wooden hulls could, with proper maintenance, last for decades beyond the point at which a ship had become obsolete as a fighting unit. Thus, the naval harbours of the British Empire were all home to significant numbers of hulks.

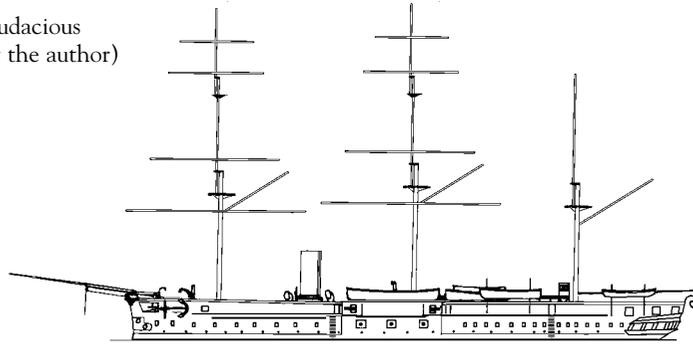
The Home Destroyer Depot Ship Programme

By the last years of the nineteenth century, such wooden vessels were being joined by the first generations of broadside-armed metal-built warships, which shared their basic internal arrangements and whose wrought-iron structures were also particularly durable. Although obsolete by the end of the 1880s, most of the early ironclad battleships still lingered on the effective list, even the venerable *Warrior* still being carried as a 'Cruiser 1st Class' in 1900.

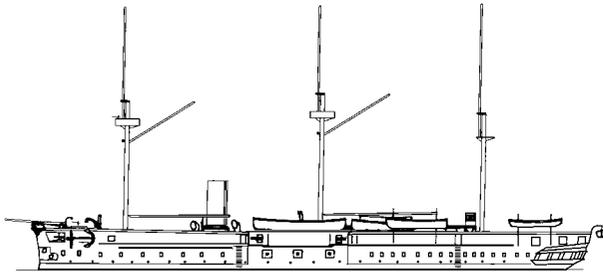


The former central battery ironclad *Invincible*, second ship of a class of four medium-sized battleships which, together with their pair of *Swiftsure*-class half-sisters, spent much of their careers on foreign stations. Here, she is shown depot ship at Portland during the summer of 1904, having been re-named *Erebus* to free her name for new construction. She could be distinguished from her sisters by her retention of the full mainmast. (World Ship Society via Richard Osborne).

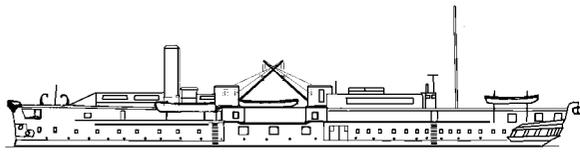
Principal modifications to Audacious and Invincible. (Drawn by the author)



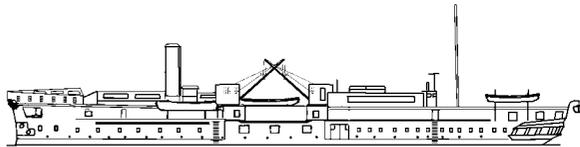
Audacious & Invincible 1870



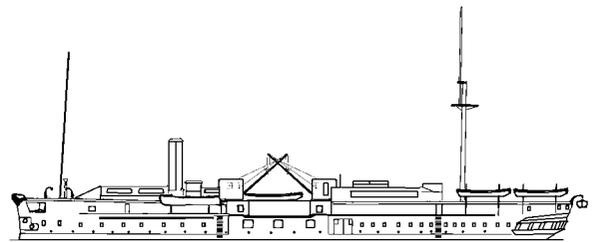
Audacious 1890



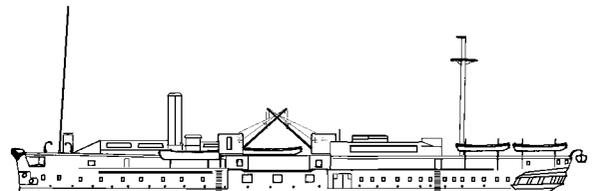
Audacious 1903



Figgard, ex-Audacious = Imperieuse 1914



Erebus, ex-Invincible 1904



Figgard II, ex-Erebus, ex-Invincible 1905

On the other hand, most had not been to sea for years and were to a greater or lesser extent dismantled.

It was at the turn of the century when it was finally recognised that such vessels would not be used as fighting ships again, but that their sturdy hulls were highly suitable for subsidiary roles, to supplement and replace the surviving 'wooden walls'. A new requirement that had recently come into being was that for depot ships for what were still termed Torpedo Boat Destroyers (TBDs). The small size of such units meant that they were unable to support the volume of stores carried by larger vessels, while their habitability was at best marginal. Accordingly, in 1902 it was directed that five old broadside and central battery ironclads were to be rebuilt as stationary depot ships for TBDs based in home waters as follows:²

Chatham: *Audacious*.³

Portsmouth: *Warrior*⁴ and *Invincible*.⁵

Devonport: *Triumph*⁶ and *Valiant*.⁷

Of these ships, *Valiant* had been formally employed as a (non-commissioned) depot for TBDs at Devonport since 1897, with *Triumph* recommissioned there as a depot ship

on 24 June 1901, albeit essentially unaltered. The others had all been laid up at their prospective duty-ports for some time, although in 1900 a proposal had already been put forward to convert *Warrior* (by now demasted) into a lay-apart store for TBDs (i.e. to hold material belonging to individual TBDs that could not be accommodated on the TBD herself). This had involved the conversion of the battery into a storage space, with further stowage provided on a roofed section of the upper deck, and a pair of derricks erected between the funnels.

It was intended that *Audacious* should be the lead-ship for the programme, funding being approved in advance of that for the other vessels. The drawings developed during her refit (at Chatham under the direction of Captain Charles G. Dicken, her interim commanding officer and also in command of all Home TBDs as of 26 February 1902) were to form the basis for that of the other ships, which were 'to be fitted as much alike as possible in the app^d principles' (while three of the vessels were sister or half-sister central battery ships, *Warrior* and *Valiant* were broadside armed, with *Warrior* significantly larger than the rest). Key features of the ships as converted were to be: distilling equipment for the production of TBD boiler

feed-water; workshops and associated artisan staff sufficient to deal with normal wear and tear and small accidental defects to TBDs; and bays for their lay-apart items. The depot ships would also provide bath, drying and recreation facilities for the occasional use of TBD crews, with the further ability to accommodate two spare TBD crews. The ships would be without their own motive power and be housed over: the view was that they would not be mobile bases as was later to be the case for depot ships, but normally be permanently moored at TBD base-ports and towed should a change of location be required.

Audacious commissioned at Chatham on 16 July 1902 under Captain Henry Tottenham, and work began on stripping her, preparatory for the installation of new equipment: this included the removal of all her existing machinery and the armoured doors from her battery. Installation of the new workshop equipment was begun in October, with work completed in August 1903. The following month she was towed to Felixtowe via Harwich by the paddle tugs *Diligent* and *Advice*,⁸ arriving on 17 September to take up duty as the parent of twenty-six TBDs.

As such, *Audacious* had a complement of fifteen officers, seventeen Petty Officers, twenty-nine seamen, eight boys, thirty-three marines and 119 engine room personnel. The latter were intended to service the attached flotilla, rather than *Audacious* herself, as her own machinery was restricted to three Belleville boilers (from the eighteen removed from the cruiser *Hermes* during her concurrent reboiling) at the fore-end of the boiler room, for running ship's services (including electric lighting) only. Her former engine room now housed a large engineers' workshop, equipped with lathes and drills and a shaping machine, while the midships bunkers and magazine housed the auxiliary machinery workshop, forward of which the after part of the boiler room housed a number of blacksmiths' and coppersmiths' forges and casting gear, plus evaporators for the production of the boiler feed-water for the TBDs.

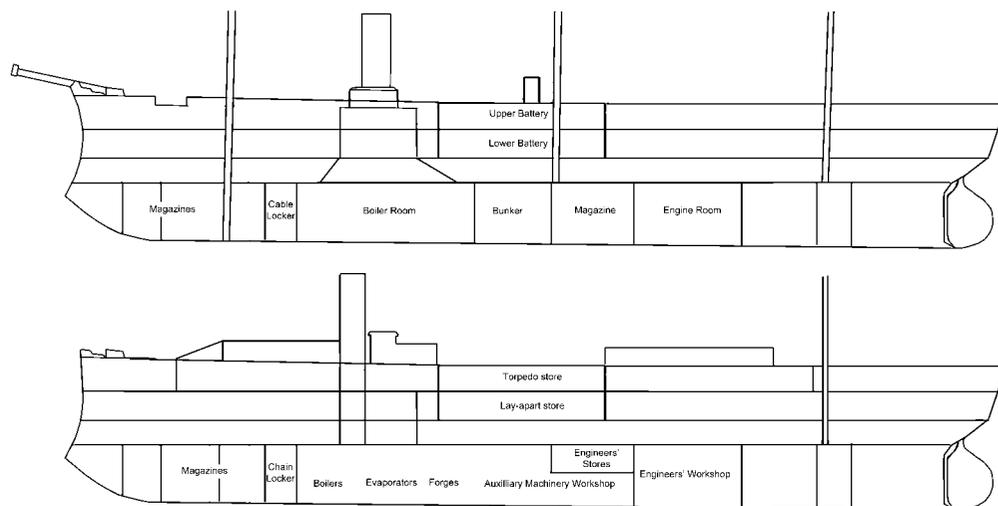
The lower deck housed extensive washing facilities and the lay-apart store bays, together with officers' cabins and offices. More of the latter and messes for WOs, POs and seamen were to be found on the main deck, whose former battery held further lay-apart store space. The upper battery was used for torpedo storage, with the upper deck

containing heads, bathrooms and reading rooms, carpenters' and armourers' workshops and offices. Much of the upper deck was roofed-in, with galvanised iron roofs with skylights, while a pair of motor cranes were installed *en echelon* atop the upper battery, of 3-ton capacity on the port side and 5-ton on the starboard, 'for easy transhipment of stores and gear'.

Warrior also commissioned on 16 July 1902, under Captain J.M. de Robeck, with a small complement of ten, as TBD parent at Portsmouth. However, no funds had yet been approved for her reconstruction, although the earlier plans making her a lay-apart store were revived before being superseded by full depot ship conversion under the 1903/04 Naval Estimates. In August 1903 planning was well underway, with *Audacious*'s electrical circuits available to form the basis of those of *Warrior*. However, money was still lacking, any substantive work being slipped to the prospective 1904/05 Estimates, although there had been hope since August 1902 that the removal of machinery could be expedited in *Warrior* (and also *Invincible*) to speed the ultimate refit.

Nevertheless, in October 1903, *Warrior* was still untouched when it was proposed that *Valiant*'s sister, *Hector*, should take her place in the depot ship conversion programme. The latter had been earmarked to relieve the old wooden frigate *Ariadne* as the workshop and power plant for the Portsmouth torpedo school HMS *Vernon* when *Ariadne* was moved to the new torpedo school at Sheerness, but the year-long timeline for *Hector*'s conversion was not coherent with the required date of *Ariadne*'s move. However, it appeared that *Warrior* could be altered within six months, and she was thus withdrawn from the depot ship programme (to be replaced by *Hector*), paying off on 31 March 1904 and becoming *Vernon III* the next day.

Triumph was also languishing unfunded, although commissioned to provide TBD support services from 1 September 1903 onwards; however, by February 1904 she had had her machinery removed, while still providing accommodation, training and office space for her TBD flotilla, ultimately being completed on the lines laid down by *Audacious* during the second half of 1904, albeit with some additional workshop machinery, provided on the



Longitudinal sections of *Audacious*, showing the modifications made during her conversion from a battleship to an unpowered depot ship. (Drawn by the author)

basis of lessons learned from the service of *Audacious* and *Invincible*.⁹ By the time *Triumph* had been completed, she and many of the other old ships had been renamed, freeing up their historic appellations for new acquisitions; thus, on 21 March 1904, she became *Tenedos*. *Audacious* was briefly to be *Ariadne* before settling down as *Fisgard* on 31 March.¹⁰ *Invincible* was renamed *Erebus*, being towed to Portland from Portsmouth to take up her TBD depot duties on 30 May 1904. However, the whole 'dumb' depot ship programme was halted in January 1905, to be replaced by a new generation of depot ships that could move without the need of tugs. As a result, *Hector*, still unconverted at Portsmouth, was sold for scrap on 11 July.

Tenedos paid off on 28 February, *Fisgard* on 14 March and *Erebus* on the 21st of the same month. *Erebus* was relieved at Portland by the 1883 armoured cruiser *Imperieuse*, under the new name *Sapphire II*, which arrived there on 8 February 1905, under the tow of the cruiser *Cumberland*. She lay alongside *Erebus* until the 14th transferring gear, after which *Erebus* was towed back to Portsmouth by *Cumberland*'s sister *Kent* to pay off. In contrast to the stripped *Audaciouses*, *Sapphire II* retained her propulsion machinery and most of her armament, only her secondary battery being removed on conversion; further replacement (mobile) depot ships were provided the following year.¹¹ On the other hand, *Valiant* for the time being continued in use at Devonport with a comple-

ment of seven, no concrete plans ever having been made for her reconstruction.¹²

The three fully-converted ships were, however, retained for further service. Their extensive workshop facilities fitted them well for redeployment in the new MTEs: *Fisgard* and *Erebus* were moved to Portsmouth, while *Tenedos* was taken from Devonport to Chatham in preparation for their new duties.

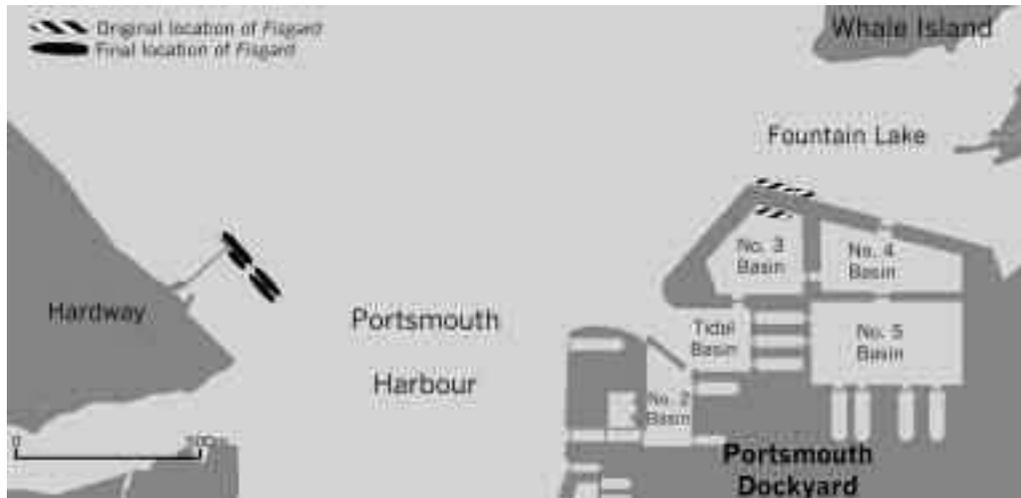
The Mechanical Training Establishments

Fisgard

Plans issued in June envisaged that the Portsmouth establishment would comprise 350 trainees plus staff. The officers, instructional staff and maintenance crew (amounting to 174) were to be housed in *Fisgard*, together with classrooms and workshops; the whole of *Erebus* was to be given over to classrooms and workshops. The trainees were to be accommodated in the old 2nd rates *Asia* (1824, since 1862 flagship of the Portsmouth Admiral Superintendent and local living ship prior to the opening of the RN Barracks in 1903) and *Hindustan* (1841 – never commissioned). The latter had been since 1862 the accommodation ship for officer cadet training establishment *Britannia* at Dartmouth, currently housed in the former 1st rate *Prince of Wales* (1860), but was soon to be

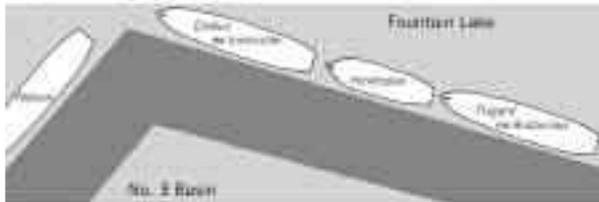


View of Portsmouth Dockyard in late September or early October 1905, showing the components of the Portsmouth Mechanical Training Establishment as originally envisaged, grouped on the northern margin of the dockyard, split between Fountain Lake and No. 3 Basin. *Erebus* and *Fisgard* are to be seen in the centre-rear of the photograph: *Erebus* in the basin, with *Fisgard* on the other side of the jetty. Forward of her is *Asia* and forward of the latter, *Hindustan*. On the far left of the shot, outside the jetty, is the housed-over former armoured cruiser *Nelson*, while on the far right, in No. 4 Basin, may be seen the bows of the brand-new scout cruisers *Forward* and *Foresight*. Adjacent to them, laid up, are the battleships *Thunderer* (front) and *Devastation*; a number of unidentified vessels are moored between them and northern edge of the basin. Out in Fountain Lake is a cruiser of the *Cressy*, *Diadem* or *Drake* class, while in the foreground, in No. 9 Dock, is *Boscowen* (ex-*Minotaur*). A former broadside ironclad, she had been in stationary training service at Portland from 1895 to September 1905 and would soon be moved to Harwich for further such service (renamed *Ganges* in 1906). (National Museum of the Royal Navy)



The locations of the Fisgard establishment in Portsmouth Harbour. (Drawn by the author)

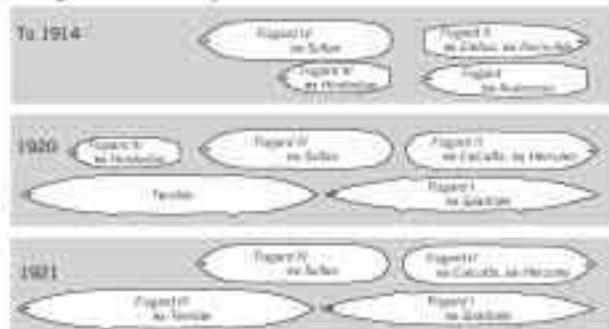
Proposed arrangement in Dockyard



Arrangement in Dockyard



Arrangements off Hardway



surplus with the opening of the on-shore college in September.¹³ Following the removal of various *Britannia*-specific fittings and the filling-in of her orlop deck ports and the temporary filling of those on the lower deck to ensure seaworthiness, she was towed to Portsmouth on 16 August.

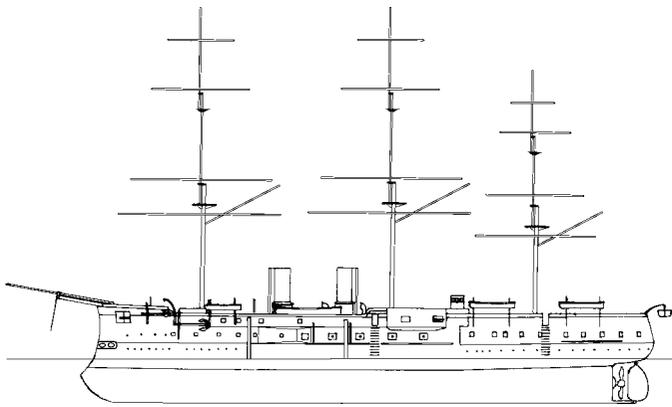
To fit them for their new roles, a number of modifications were made to the ships, work being carried out by supernumerary artisan ratings from the Portsmouth depot. *Fisgard* was further roofed-in fore and aft of her present roof, while skylights were added over the upper battery, which was being adapted to house classrooms, and a new wardroom fitted to replace the old one, which was to become a classroom. *Erebus* also received skylights in the upper battery to provide illumination for the boiler shop that was installed below, while her quarterdeck was roofed-in to serve as a gymnasium. Roofing work was nearly complete by 29 August 1905 and on 12 October *Erebus* and *Hindustan* were respectively renamed *Fisgard II* and *Fisgard III* (the ex-*Audacious* remained without an ordinal).

There was some discussion as to where the establishment should be placed, the initial plan being along the outside of Fountain Lake Jetty. It was then decided that the ex-*Erebus* should be placed inside, and finally that the ex-*Hindustan* would be adequate as living accommodation,

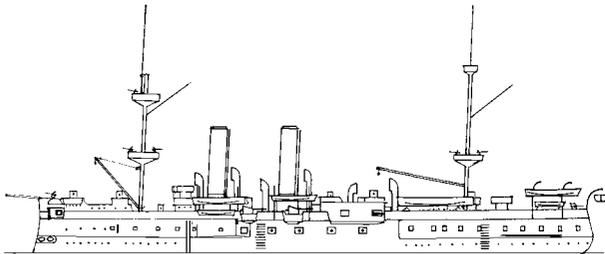
making *Asia* surplus. The latter was considered for reallocation to the Chatham MTE but, following rejection (see just below), she was sold for scrapping in April 1908. However, by 1906 the impending reconstruction of this part of the dockyard meant that the *Fisgards* were moved to moorings off Hardway, on the western side of Portsmouth Harbour.

By December, it had been decided to add a fourth vessel, the central battery ship, *Sultan*,¹⁴ which became *Fisgard IV* when the establishment commissioned. Unlike the other two ironclads, which had been largely unaltered prior to being reduced to subsidiary duties, *Sultan* had undergone comprehensive reconstruction from October 1892 to March 1896, having been wrecked off Malta in 1889 and, although still carrying her old obsolete muzzle-loading main battery, had been equipped with modern boilers and triple expansion engines. Her addition allowed the trainees to gain experience with machinery of current design (which was also almost 'as new', *Sultan* having spent almost her entire career since 1896 laid up in reserve).

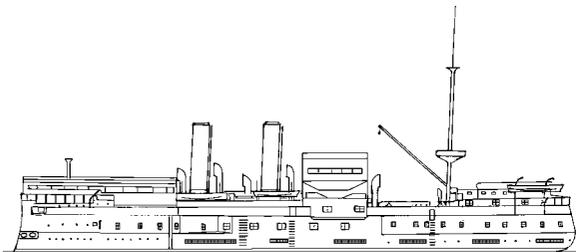
During late 1906 and January 1907 a number of alterations were made to the ex-*Sultan*, her foremast being removed and the forepart of the ship roofed-in. The erection of a workshop atop her upper battery was planned for funding under the 1908–09 estimates. Work was also undertaken on other ships of the constellation, the roof of the pattern-makers' shop in *Fisgard II* being extended forward in October 1908. By the following autumn, the head (lavatory) accommodation in *Fisgard I* was being found inadequate for the number of men using the ship.



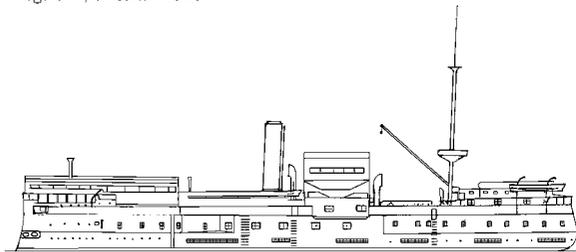
Sultan 1870



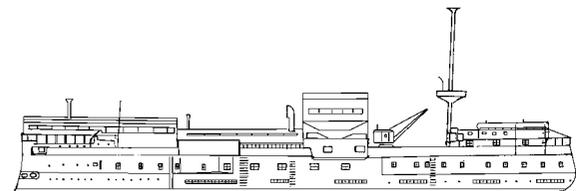
Sultan 1896



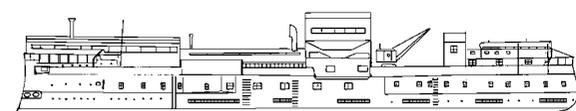
Fisgard IV, ex-Sultan 1910



Fisgard IV, ex-Sultan 1920



Fisgard IV, ex-Sultan 1930



Sultan, ex-Fisgard IV, ex-Sultan 1936

Principal modifications to Sultan. (Drawn by the author)

Wholly-new heads with forty seats plus two urinals were added on the forecastle, replacing the sixteen seats on the upper deck under the forecastle, the starboard ones being removed, with the port set left in place against emergencies.

Indus

At Devonport, the existing constellation of ships named *Indus*, previously providing local workshop facilities, was decommissioned on 31 December 1905, to recommission as a Commander's billet the following day as the base's MTE, although continuing to provide workshops for local supernumerary artificers. The establishment¹⁵ comprised *Indus* (ex-*Defence*),¹⁶ *Indus II* (ex-*Temeraire*)¹⁷ and *Indus III* (ex-*Bellerophon*),¹⁸ the latter two vessels having been converted for their roles by Palmer's at Jarrow, arriving respectively on 10 April and 1 April 1904 (towed respectively by the *Orlando*-class cruisers *Immortalité* and *Undaunted*).¹⁹ *Indus II* was intended to provide electricity to the other two ships, losing her engines (but retaining her boilers) and gaining two 100-kilowatt dynamos. Her former engine room became a carpenters' shop, while she was also equipped to act as store-ship for the port's part of the Reserve Fleet. Work on *Indus III* included the removal of her after four boilers (leaving three) and the dismantling of much of her machinery (generally left in position, however), rearranging the interior for accommodation purposes and the erection of a large corrugated-iron workshop on the upper deck to house the principal instructional facilities, including machinery, a drawing office, a model room, and a gymnasium.

Tenedos

Meanwhile at Chatham, the *Tenedos* establishment also commissioned under a Commander, the former *Triumph* becoming *Tenedos I*, the existing station depot, *Pembroke* (ex-*Duncan*, 1st rate, 1859), becoming *Tenedos II* to accommodate both the trainees and the officers and ship's company (121 men). To provide the latter with electrically-lit facilities, it was proposed to move *Asia* from Portsmouth following her rejection from *Fisgard*. However, the previous September, the opening of the new Royal Naval Barracks at Shotley had released as surplus the 2nd rate *Ganges* (1821); she proved suitable and, as much closer to Chatham than *Asia*, became *Tenedos III* in June, allowing *Tenedos II* to become primarily an accommodation ship for trainees.

The life of *Tenedos* was short, as in 1910 it was decided that the ships were taking up so much space in the Chatham basin that the establishment should be moved to Devonport and merged organisationally with *Indus*. Thus, *Tenedos I* and *III* were towed round to Plymouth, where they became *Indus IV* and *Indus V* (*Indus* herself [ex-*Defence*] then being renamed *Indus I*). *Tenedos II* was left behind, the ship being sold for scrap in October.

War

The remaining two MTEs went about their business until the outbreak of war in August 1914. Then, the deployment of the Grand Fleet to Scapa Flow brought about a



Sultan as Figsard IV in 1912, showing her initial modifications, in particular the removal of her foremast and the erection of a number of large deckhouses. (World Ship Society via Richard Osborne)



Above: The Figsard establishment in its first Hardway configuration, shown in 1912. On the right are Figsard (front) and Figsard II (rear), while on the left are Figsard III, and behind her Figsard IV.

Left: Figsard III and IV in 1912. (World Ship Society via Richard Osborne)

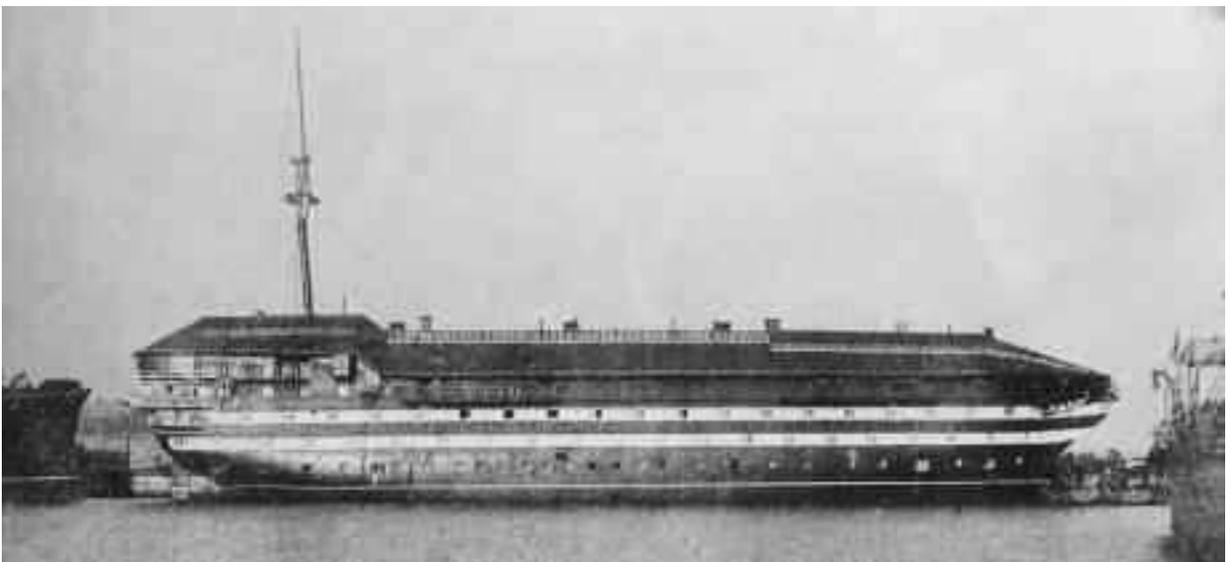


The Devonport counterpart of *Fisgard* was HMS *Indus*. Here, in a view taken between 1910 and 1914, we see in the foreground *Indus V* (ex-Tenedos III, ex-Ganges), with behind her *Indus II* (ex-Temeraire), *Indus I* (ex-Defence) and *Indus IV* (ex-Triumph). The mast behind *Indus II* is that of *Indus III* (ex-Bellerophon). (Abrahams, courtesy World Ship Society via Richard Osborne)

demand for workshop and accommodation facilities in that barren location. The *Audacious* type ex-depot ships, with their extensive workshops and accommodation, were judged ideal for providing such support. Accordingly, on 16 September, *Fisgard* and *Fisgard II* were towed from Portsmouth Harbour en route to the Orkneys. However, the following day the ships and their tugs ran into heavy weather five miles off Portland, and although *Fisgard* was safely brought to refuge in Plymouth, *Fisgard II* began to ship water through her hawse pipes. Although attempts were made to correct her trim by shifting machinery, and by her tugs, *Danube II* and *Southampton*, to tow her toward Portland, the ship capsized around 1620 at position 50.25N, 02.30W. Six ratings, eleven dockyard personnel and four (or six – sources differ) civilian contractors lost their lives out of the sixty-four men aboard for the voyage. Her wreck lies upside down in some 65 metres of water, and was Designated in 2009 under the Protection of Military Remains Act 1986.

Fisgard continued her interrupted voyage north,

arriving at Scapa on 1 October; two weeks later, she was renamed *Imperieuse*. In the event, her workshops were little used; instead she acted primarily as headquarters ship for the naval base, accommodating various heads of function and, perhaps most importantly for the officers and men of the Grand Fleet, the local post-office.²⁰ The loss of *Fisgard II* resulted in her being significantly overcrowded, and a replacement for the former *Invincible* was fitted out at Liverpool as an accommodation ship during June/September 1915. Unfortunately this vessel, the former armed merchant cruiser *Caribbean* (ex-*Dunottar Castle*),²¹ also foundered en route to the Orkneys, in heavy weather off Cape Wrath on 27 September 1915, with the loss of fifteen men.²² In the event, however, the disarmed *Majestic*-class battleship *Victorious* arrived in March 1916, following a six-month refit at Palmer's, Jarrow that gave her workshop and accommodation facilities. *Victorious* was originally due to leave the Flow in September 1919, with the ex-*Audacious* (which had paid off in her own role in July) taking her name and duties



Photographs of the short-lived Tenedos establishment at Chatham are rare. This shows Tenedos II (ex-Duncan), with the bow of Tenedos (ex-Triumph) just visible on the left. (Author's collection)

(possibly as *Victorious III*), but as the former pre-dreadnought did not actually depart until the following March, the change was cancelled. *Imperieuse* also remained at Scapa until the end of March 1920, when she was moved to Rosyth as a store hulk until sold for scrap to T.W. Ward on 15 March 1927; she was broken up only a few miles away at Inverkeithing.

The Devonport constellation also gave up ships for the wider war effort, *Indus IV* being transferred from Devonport to Invergordon under the name *Algiers* in October 1914 to serve as a store hulk. She was joined by *Akbar* (ex-*Indus II*) the following January, which had spent a few months as a reformatory ship at Liverpool after also being removed from Devonport the previous autumn. The former *Triumph* and *Temeraire* were sold for scrap in January and May 1921, respectively.

Fisgard Renewed

The Portsmouth establishment had now been reduced to the accommodation ship *Fisgard III* and the limited instructional facilities available on *Fisgard IV*. As continued artificer training was naturally vital for the war effort, replacements were brought forward for the 'missing' hulks during 1915. First, the central battery ironclad *Calcutta* (ex-*Hercules*, renamed in 1909, to free the name for the new dreadnought laid down that year)²³ was allocated to *Fisgard* in October 1914 and towed to Portsmouth from Shotley, where she had been in use as a boys' training ship since April 1914. She became the new *Fisgard II* in April 1915.

The elder half-sister of *Sultan*, *Hercules* had undergone a similar reconstruction in 1892/93 with new machinery, but had seen no sea service, spending her last commissioned year from 1904 to 1905 as a signal school and administrative flagship of Commander-in-Chief Portsmouth. When paid off in this role, she had been steamed to Gibraltar in 1906 to serve as a barracks for



Base, depot and repair ships at Long Hope in Scapa Flow in 1916/17. From the left: *Victorious*; the repair ship *Assistance*; *Imperieuse* (ex-*Fisgard*, ex-*Audacious*). (C.W. Burrows, *Scapa and a Camera* [London, 1921])

dockyard employees, moored on the inner side of the breakwater. Although externally apparently unchanged, she was disarmed and extensively refitted. The fore part of the lower deck had had eighteen cabins added, while on the main deck a recreation room and canteen had replaced the aftermost 9in gun, together with the captain's cabin and admiral's staff accommodation. Various additional openings were cut in the hull to provide windows for these cabins. Bathrooms and a large kitchen replaced the old marines' mess, the former central battery being divided into cabins, more of which occupied the seamen's messes between the battery and the bow. Finally, on the upper deck, the admiral's apartments made way for cabins, which also filled most of the available space on the deck itself as far forward as the bridge. The forecabin, formerly housing two 7in chase guns, was adapted as the new crew space. The ship had been towed back to Britain in 1914 by the cruiser *Sutlej*.

To fit out the former *Calcutta*, which formally became *Fisgard II* on 17 July 1915, consideration was given to obtaining the requisite machinery from the MTE at Chatham, but in view of the potential disruption in time of war, it was decided to order new equipment for installation; the work on this took a number of years, and was not fully complete in 1920. Structurally, as completed, she was housed over fore and aft, losing both masts and the fore-funnel²⁴ and gaining two Mirrlees diesel generators and a heavy crane on the port side amidships. As with the



The ex-*Temeraire* was withdrawn from *Indus* in 1914, and was replaced by the *Astraea*-class protected cruiser *Flora*; the ex-*Triumph* was also withdrawn at the same time, without replacement. In this 1919-22 photograph we see, from the left: *Indus II* (ex-*Flora*), *Indus I* (ex-*Defence*) and *Indus V* (ex-*Tenedos III*, ex-*Ganges*), with the mast of *Indus III* (ex-*Bellerophon*) behind. (Abrahams)



The two vessels withdrawn from Indus both ended up as store hulks at Invergordon. They are shown here in 1918/19 moored outboard of the disarmed Majestic-class battleship Mars, which served as a depot ship there from September 1916. The inner ship is Akbar, the former Indus II (ex-Temeraire), the outer one Algiers (ex-Indus IV, ex-Triumph). Akbar still shows the barbette on her aft deck that made her unique amongst British central battery ironclads, while Algiers retains all the key external features of the unpowered TBD depot ship conversions, including the motor cranes atop the former upper battery. (Author's collection)

previous *Fisgard II*, she was primarily intended as a floating workshop, with few resident staff – ironically given her previous extensive refitting as a dedicated accommodation vessel!

Second, to replace the former *Audacious*, the protected cruiser *Spartiate*²⁵ was brought forward from her role as a Portsmouth stokers' training ship (which she had performed since 1913), and became *Fisgard I* (with ordinal) on the same day that *Calcutta* was renamed. Unlike the ex-*Audacious*, she was not equipped with workshops (which were from now on restricted to *Fisgard II* and IV), and was essentially an accommodation vessel, the principal early alteration being the addition of an oil-fired galley on the upper deck.

The old *Fisgard III* was now a decidedly-archaic means of housing the trainees, and in 1919 a much more modern facility was allocated in the form of the former large protected cruiser *Terrible*.²⁶ Together with her sister, *Powerful*, she had been earmarked for subsidiary duties before the war, with *Powerful* having been stripped of propelling machinery and housed over as a boys' training establishment at Devonport, and commissioned as such on 23 September 1913.

Terrible on the other hand had been under consideration for conversion to a coal hulk, the removal of her guns having been approved on 14 July 1914 while she lay in Reserve at Pembroke. It had been estimated that she could hold some 12,000 tons of coal, although not suited for the storage of oil. Plans and costings were being prepared on the basis of those for the broadside ironclad *Agincourt* (C109, launched 1865, converted 1908–10) and the troopship *Jumna* (C110, launched 1866,

converted 1905), and stability calculations being made on the basis of the removal of her armoured deck and other fittings. However, with the outbreak of war, was brought forward and used as a transport and troopship to the eastern Mediterranean with her main battery left intact but her secondary armament reduced to four guns. On her final voyage she left Mudros on 11 December 1915, calling at Malta from 14 December to 6 January 1916 and arriving at Portsmouth on the 16th, to pay off on the 26th.

It had now been decided that she should be converted into an accommodation hulk along the lines of her sister, and dismantling was begun soon afterwards.²⁷ Her 9.2in



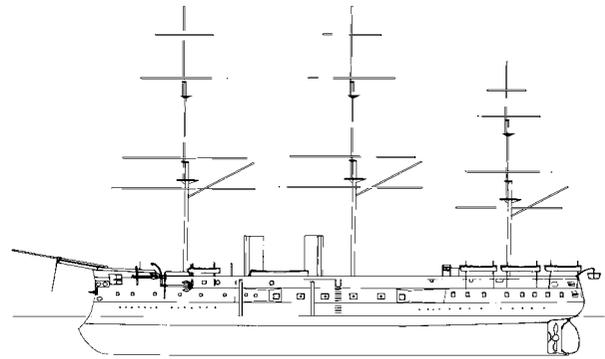
A view of Gibraltar Dockyard, sometime between 1906 and 1914. Hercules is to be seen moored against the breakwater, serving as an accommodation ship, The ship in dry dock in the foreground is an armoured cruiser of the Devonshire class. (Author's collection)

guns were allocated for the re-arming of the monitors *Marshal Ney* and *Marshal Sault* (although only *Ney* was actually so modified), with her four remaining 6in also going to *Ney*.²⁸ In March she was first allocated as to replace the former 1st rate *Marlborough* (1855) as *Vernon II*, but in the event she recommissioned on 28 January 1918 as a tender to *Victory*, while work on converting her into a stationary accommodation vessel was still ongoing. As such she hosted training courses as well as victualling large numbers of ratings and officers – sometimes 1,500 a day; she also provided personnel for special tasks and to ships. The first work to complete was the commanding officer's accommodation, but extensive plumbing (mainly heating) and wiring work, including installing new generators, ran until November, punctuated by other structural work such as work in the boiler rooms and cutting deckheads to allow the installation of new ventilation trunks.

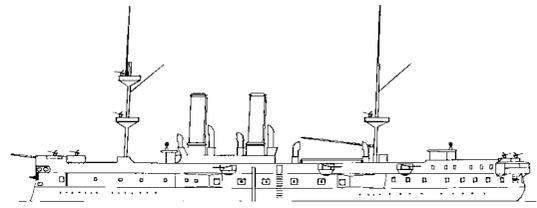
Terrible continued her duties into 1919, although the numbers of men being fed and managed dropped off rapidly, rarely exceeding 600 a day. Allocated to *Fisgard* in April 1919, *Terrible* continued in her role in the dockyard until 1 September, when she paid off into Care and Maintenance. She finally joined *Fisgard* in November, but did not formally become *Fisgard III* until August 1920. At this point, *Hindustan* reverted to her original name, preparatory for sale; she was sold on 10 May 1921 to J.B. Garnham, Charlton, the ship being broken up by Castle's at Long's Wharf, Woolwich.²⁹

The Final Phase

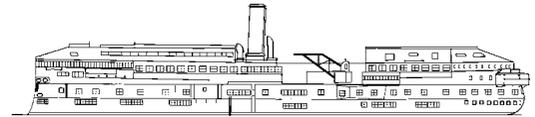
By the time she joined the three other *Fisgards*, the former *Terrible's* armament and upper deck casemate armour (but not that on the main deck) had been removed, as had her copper sheathing (but not its wood backing). The boat deck had been roofed over to provide a church and ten teaching rooms and a roofed structure had been added



Hercules 1868



Hercules 1893



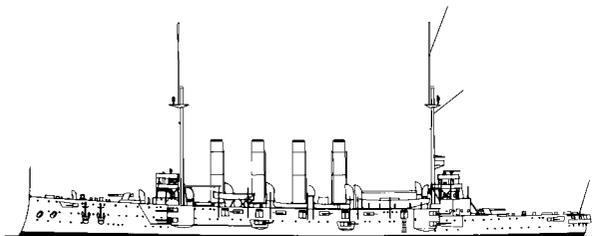
Fisgard IV, ex-Calcutta, ex-Hercules 1930

Principal modifications to Hercules, ultimately *Fisgard II*.
(Drawn by the author)

over the forecastle, housing the heads; the ship also had a gymnasium. The main deck had been adapted as a sleeping and chest stowage flat. In her aft boiler room, all sixteen original boilers (Belleville water-tube units) had been removed, the rear group being replaced by cylindrical boilers for domestic purposes, exhausting through a new funnel, the others by two 200kW steam dynamos and a further dynamo driven by a MAN diesel



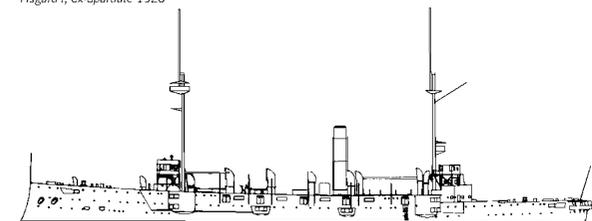
Fisgard II (ex-Hercules) in 1920, showing her extensive housing-in, opening up of the hull to provide interior illumination and heavy crane amidships. Her diesel generator was the main source of power for the establishment.



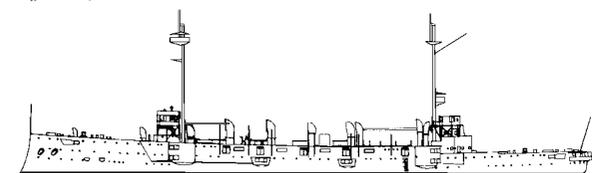
Spartiate 1904



Figgard I, ex-Spartiate 1920



Figgard I, ex-Spartiate 1927

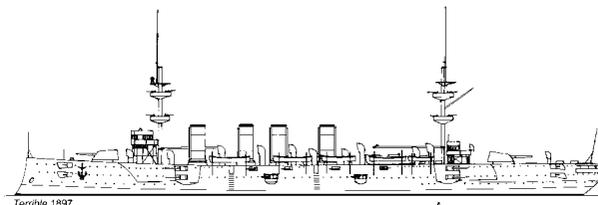


Figgard I, ex-Spartiate 1930

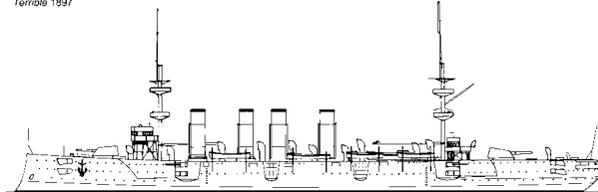
Principal modifications to Spartiate, ultimately Figgard I.
(Drawn by the author)

(presumably salvaged from a German submarine). Three further boilers had been taken out of the next-forward boiler room, leaving thirteen in place, partly dismantled and with the uptakes removed; the same was true of the forward two boiler rooms (eight Bellevilles each). The main and auxiliary machinery remained intact except for the main engine connecting rods, although tailshafts, propellers and rudders had all been removed. The only bunkers left in use were those abreast the after boiler room, the upper bunkers having been adapted as wash-places. As refitted, the former *Terrible* is reported as drawing 17ft 3in forward and 24ft aft.

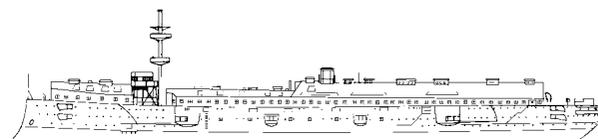
Following the loss of the workshop spaces when the ex-*Audacious* and ex-*Invincible* were allocated to Scapa Flow, work had begun on making *Figgard IV* into a workshop, particularly since her cylindrical boiler/triple expansion machinery was becoming increasingly irrelevant as a training aid in an era of watertube boilers and geared turbines. The last time that her main machinery was recorded as used for training was in December 1918, the engines being removed from the ship (together with the propeller) in the autumn of 1919, leaving behind just the engine room feed tank, bilge pump and donkey engine. The aft four boilers (and their funnel) were removed at the same time, the remaining boilers and funnel having been taken out by November 1924. As inclined in April



Terrible 1897



Terrible 1915



Figgard III, ex-Terrible 1920

Principal modifications to Terrible, ultimately Figgard III.
(Drawn by the author)

1920, she displaced 7,900 tons, with a draught of 21ft 6in forward and 24ft 6in aft (compared with 9,290 tons and 25ft 6in light / 28ft 9in in her heyday). A 5-ton electric crane was added around this time. *Figgard I* was reduced to a single funnel by 1927, itself gone by 1930.

Although few boilers were thus left in use on the ships, and then only for local domestic purposes, they were old, second-hand or both, and in 1926 it was pointed out that all would be life-expired by 1930. To be able to continue to use the hulks, new boilers would have to be provided, but the cost-effectiveness of this was judged doubtful.³⁰ No space was available at Portsmouth to enable a move ashore, but the former Naval Detention Barracks at Chatham was identified as suitable as an alternative location, and it was consequently determined that the establishment would indeed move not only ashore but also to Kent. As a result, the post of Inspecting Captain, MTEs was to be abolished on 1 January 1932: *Figgard* apprentices would leave Portsmouth on Christmas leave on 23 December 1931, to return to what was now Figgard Block at Chatham on 6 January, where the new entry of boy artificers would have reported two days previously.

As part of the planning process, it was suggested that *Figgard III* might be towed to Chatham to provide accommodation for 800 boys, but it was decided that towage and conversion costs made this non-viable. Then, it was then proposed that she remain at Portsmouth with *Figgard II* to run residual courses in (amongst other things) turbines, internal combustion engines and oil fuel for engineer officers, and provide accommodation for supernumerary engine room artificer and artisan ratings.

However, in the event, only *Figgard IV* would have a future role, reverting to her old name of *Sultan* and taking on the ongoing residual training roles, the three other ships being sold for scrap in July 1932. *Figgard I* and *II* went to T.W. Ward, respectively at Pembroke and Morecambe (with *Figgard II*'s final demolition at Preston) and *Figgard III* to Cashmore at Newport. On the other hand *Sultan*



The Figsard establishment in 1920; the large light cruiser Courageous is visible in the background.

continued in service until 1946, as a minesweeping depot ship between 1940 and 1945. Paid off on 16 July 1946, there was brief consideration as to whether she might have yet a further role; however, she was handed over to the British Iron and Steel Corporation and allocated to Arnott Young for demolition on 13 August, arriving at Dalmuir on 8 October. *Sultan's* name survives as that of the Defence School of Marine Engineering and the Royal Naval Air Engineering and Survival School at Gosport (commissioned in 1956), where one of her anchors is still preserved. The name *Figsard* was also resurrected in 1946 when the artificer training school at Torpoint was commissioned with the name (artificer training had moved from Chatham in 1940); it paid off in 1983.

The *Indus* establishment had been paid off on 15 August 1922, by which time it comprised three survivors from the pre-war constellation, *Indus I*, *III* and *V*, plus *Indus II*, the former protected cruiser *Flora*, which had replaced the ex-*Temeraire* in 1915. The intent had been that the ex-*Flora* should be replaced post-war by *Victorious*, brought back down from Scapa, but although she arrived at Devonport in March to refit for the role and was given the name *Indus II*, this refit never took place, as it had now been decided to close the establishment. Given her workshop facilities it was then planned to refit *Victorious* as a harbour depot ship, but this work was never completed, the old battleship being broken up at Dover in 1923. *Indus I* (with her ordinal removed) lingered as a



By the time this photograph was taken around 1923, Figsard I and IV had each been reduced to a single funnel; the ship in the background is again Courageous, which was then serving as flagship of the Portsmouth Reserve, as well as a turret drill ship. (National Museum of the Royal Navy)

floating workshop until sold for scrap in August 1935 – although she remained on the Navy List until 1946! – and *Indus V* became a boys' training ship under the name *Impregnable III* (her fourth) until sold for scrap in 1929; the other two ships were sold for scrap in December 1922.

Footnotes:

- For a review of the 19th century use of hulks at British naval bases, see G.A. Ballard, 'Victorian Hulks under the White Ensign', *Mariner's Mirror* 31 (1945), pp.23-32.
- This article has been pieced together from various primary sources held at The National Archives, Kew, and the National Maritime Museum's outpost at the Brass Foundry at Woolwich: I am particularly indebted to Andrew Choong Han Lin for all his help at the latter. Principal sources consulted have been Ships Cover 195 (Depot Ships), plus the Covers, 'As Fitted' drawings and logs of individual vessels, together with published Navy Lists. There are, however, large holes in the surviving documentation: some Ship's Covers are missing, and the Covers that survive rarely include documentation relating to the period following a ship's departure from front-line service. It should be noted that many published sources contain detail errors regarding the careers of the vessels covered here, including even the admirable B. Warlow, *Shore Establishments of the Royal Navy*, revised and enlarged edition (Liskeard: Maritime Books, 2000).
- Central battery ironclad, by then classified as a 3rd class battle ship; launched 1869; 6,000 tons, armed with ten 9in and four 6in when in active service.
- 1st class cruiser (broadside ironclad – 1860; 9,137 tons; four 8in, twenty-eight 7in).
- Sister of *Audacious*.
- 3rd class battle ship (1873; 6,640 tons; ten 9in, four 6in); she was a half-sister of *Audacious* and *Invincible*.
- Screw iron ship (broadside ironclad – 1863; 6,710 tons; two 8in, sixteen 7in).
- 1898 and 1899; 700 tons.
- No records appear to survive of the core refitting dates of *Invincible* and *Triumph*; that they did actually receive the same full reconstruction as *Audacious* is made abundantly clear by photographic evidence.
- Similarly, *Black Prince* was to be *Nankin* for ten days before becoming *Emerald*.
- Sapphire II* remained at Portland, the ex-torpedo boat carrier

TABLE 1: SHIPS COMPRISING THE MECHANICAL TRAINING ESTABLISHMENTS, 1906–1932

Name	1906–1914	1915–1920	1920–1932
<i>Fisgard</i>	ex- <i>Audacious</i>	–	–
<i>Fisgard I</i>	–	ex- <i>Spartiate</i>	ex- <i>Spartiate</i>
<i>Fisgard II</i>	ex- <i>Invincible</i>	ex- <i>Hercules</i>	ex- <i>Hercules</i>
<i>Fisgard III</i>	ex- <i>Hindustan</i>	ex- <i>Hindustan</i>	ex- <i>Terrible</i>
<i>Fisgard IV</i>	ex- <i>Sultan</i>	ex- <i>Sultan</i>	ex- <i>Sultan</i>
Name	1906–1910	1910–1914	1915–1922
<i>Indus</i>	ex- <i>Defence</i>	–	–
<i>Indus I</i>	–	ex- <i>Defence</i>	ex- <i>Defence</i>
<i>Indus II</i>	ex- <i>Temeraire</i>	ex- <i>Temeraire</i>	ex- <i>Flora</i>
<i>Indus III</i>	ex- <i>Bellerophon</i>	ex- <i>Bellerophon</i>	ex- <i>Bellerophon</i>
<i>Indus IV</i>	–	ex- <i>Triumph</i>	–
<i>Indus V</i>	–	ex- <i>Ganges</i>	ex- <i>Ganges</i>
Name	1906–1910		
<i>Tenedos</i>	ex- <i>Triumph</i>		
<i>Tenedos II</i>	ex- <i>Duncan</i>		
<i>Tenedos III</i>	ex- <i>Ganges</i>		

Hecla (1878) served at Portsmouth, with the converted cruisers *Leander* (1882) at Chatham, *Blake* (1889) at Devonport and *Blenheim* (1890) servicing a special detached flotilla of eight 27-knotter TBDs.

- Although it has often been stated in print that she was renamed *Indus IV* in 1904, the Navy List gives no indication of this; rather, she remained under her own name 'for duties in connection with Torpedo Boats and Torpedo Boat Destroyers' until she became *Valiant (Old)* before April 1914 (not 1916 as usually stated), when she is listed as a lay-apart store for the 7th Flotilla at Devonport. She became *Valiant III* in January 1918 and was converted to a floating oil tank in 1924; she was sold in December 1956 and was broken up in Belgium.
- The former *Prince of Wales* was then hulked and eventually sold for scrap in 1914 (broken up 1916); afloat facilities for the college were provided successively by the sloop *Espiegle* (1900) and the cruiser *Pomone* (1897). Today, what is now the Britannia Royal Naval College has the former mine-hunter *Hindustan* (ex-*Cromer*, 1990).
- 3rd class battle ship (central battery ironclad – 1870; 9,290



The Fisgard establishment in the twilight of its existence, on 11 September 1930. Only Fisgard II and III retain any funnels.

TABLE 2: CHANGES OF NAME OF PRINCIPAL COMPONENTS OF THE MECHANICAL TRAINING ESTABLISHMENTS

	1890	1898	1904	1905/6	1910	1914	1915	1920	1922	1932	Fate
<i>Audacious</i>	>	>	<i>Fisgard</i>	>	>	<i>Imperieuse</i>	>	>	–	–	BU 1927
<i>Bellerophon</i>	>	>	<i>Indus III</i>	>	>	>	>	>	–	–	BU 1922
<i>Defence</i>	>	<i>Indus</i>	>	<i>Indus I</i>	>	>	>	>	<i>Indus</i>	>	BU 1935
<i>Duncan</i>	<i>Pembroke</i>	>	<i>Tenedos II</i>	>	–						BU 1910
<i>Ganges</i>	>	>	>	>	<i>Tenedos III</i>	<i>Indus V</i>	>	>	<i>Impregnable III</i>	–	BU 1929
<i>Hercules</i>	>	>	<i>Calcutta</i>	>	>	>	<i>Fisgard II</i>	>	>	>	BU 1932
<i>Hindustan</i>	>	>	>	<i>Fisgard III</i>	>	>	>	<i>Hindustan</i>	–	–	BU 1921
<i>Invincible</i>	>	>	<i>Erebus</i>	<i>Fisgard II</i>	>	–	–	–	–	–	Lost 1914
<i>Spartiate</i>	>	>	>	>	>	>	<i>Fisgard I</i>	>	>	>	BU 1932
<i>Sultan</i>	>	>	>	<i>Fisgard IV</i>	>	>	>	>	>	<i>Sultan</i>	BU 1946
<i>Temeraire</i>	>	>	<i>Indus II</i>	>	>	>	<i>Akbar</i>	>	–	–	BU 1921
<i>Terrible</i>	>	>	>	>	>	>	>	<i>Fisgard III</i>	>	–	BU 1932
<i>Triumph</i>	>	>	<i>Tenedos</i>	>	>	<i>Indus IV</i>	<i>Algiers</i>	>	–	–	BU 1921

tons; eight 10in; four 9in; four 4.7in).

15. Inscribed on the Navy List as a single entity, with the component ships not formally named.
16. Screw iron ship, armour-plated (broadside ironclad – 1861; 6,150 tons; two 8in, fourteen 7in).
17. 2nd class battle ship (central battery/barbette ironclad – 1876; 8,540 tons; four 11in, four 10in, six 4in). She had had a pair of Belleville boilers added for training purposes, separate from the one retained original boiler, when commissioned as depot ship for the Fleet Reserve at Devonport in July 1902.
18. 3rd class battle ship (central battery ironclad – 1865; 7,550 tons; ten 8in, four 6in, six 4in).
19. Information on their conversions (unfortunately unreferenced) is available at <http://www.plymouthdata.info/Royal%20Navy%20Estabs-RN%20Artificers%20Training%20School-Indus.htm>.
20. See C.W. Burrows, *Scapa and a Camera* (London: Country Life, 1921), 10-13.
21. Former Royal Mail Steam Packet (ex-*Union Castle*) passenger liner (1890; 5,625 tons).
22. The Board of Enquiry blamed her loss on the unfamiliarity of the ship's carpenter with the vessel, in particular for failing to ensure that all scuttles were closed before going to sea.
23. 3rd class battle ship (central battery ironclad – 1868; 9,300 tons; ten 10in, two 9in, three 7in, two 6in, six 4.7in).
24. No documentation survives regarding the treatment of her machinery, although some boilers were retained and used for ship's services purposes. In parallel with other ships that were adapted for duty in *Fisgard* (see below), it is likely that the remaining boilers and main engines were dismantled to a greater or lesser degree, and possibly removed.
25. *Diadem*-class protected cruiser (1898; 11,000 tons; sixteen 6in, fourteen 12pdr).
26. *Powerful*-class protected cruiser (1895; 14,200 tons; two 9.2in, twelve 6in, sixteen 12pdr).
27. *Terrible* may be seen with her guns, funnels and mainmast removed in the background to the lower photograph on p. 50 of J.J. Tall and P. Kemp, *HM Submarines in Camera 1901–1996* (Stroud: Sutton Publishing, 1996), showing the submarine *J1* soon after commissioning (which occurred on 15 March 1916).
28. This rearming was the result of the failure of *Ney's* diesel engines, the intent being to transfer the monitors' 15in guns

to new ships; in the event, *Soult's* engines proved satisfactory and she retained her original guns. When *Ney* was re-armed again in 1916/17, the 9.2in was removed and sent to join the other ex-*Terrible* piece ashore in France (I.M. Buxton, *Big Gun Monitors: Design, Construction and Operations 1914–1945* [Barnsley: Seaforth Publishing, 2008], 88).

29. Some of her teak timbers were used in the construction of Liberty's department store in London, as was oak from the 1st rate *Bulwark* (ex-*Impregnable*, ex-*Bulwark*, ex-*Howe* – 1860; 4,236 tons), formerly part of the *Impregnable* boys' training establishment at Devonport (R. and L. Tait, *History of Castles shipbreaking*, <http://www.castleshipbreaking.co.uk/ebook/ebook.htm>, [88], [103]).
30. ADM 116/2528 – FISGARD – Transfer of Mechanical Training Establishment to Chatham.



The stripped hull of *Fisgard II* (ex-*Calcutta*, ex-*Hercules*) soon after arriving at T.W. Ward's scrapyards at Preston in December 1932, following stripping at Morecambe. (World Ship Society via Richard Osborne)