

WRITTEN EVIDENCE SUBMITTED BY HARLAND & WOLFF

THE NAVY: PURPOSE AND PROCUREMENT: *Part 2 - Are naval procurement and support plans delivering the capabilities required for this role?*

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1. Introduction

1.1 Harland & Wolff is a multisite fabrication company, operating in the maritime and offshore industry in five key markets: commercial, cruise and ferry, defence, oil & gas and renewables and six services: technical services, fabrication and construction, decommissioning, repair and maintenance, in-service support and conversion.

1.2 Its Belfast yard is one of Europe's largest heavy engineering facilities, with deep water access, two of Europe's largest drydocks, ample quayside and vast fabrication halls.

1.3 As a result of the acquisition of Harland & Wolff (Appledore) in August 2020, the company has been able to capitalise on opportunities at both ends of the ship-repair and shipbuilding markets where there will be significant demand for ship-repair and shipbuilding capabilities and capacity in the months and years to come.

1.4 In February 2021, the company acquired the assets of two Scottish based yards along the east and west coasts. Now known as Harland & Wolff (Methil) and Harland & Wolff (Arnish), these facilities will focus on fabrication work within the renewables, oil and gas and defence sectors.

1.5 Since its Scottish acquisition, it now boasts the largest fabrication footprint in the UK.

1.6 Harland & Wolff is a wholly-owned subsidiary of InfraStrata plc (AIM: INFA), a London Stock Exchange-listed firm focused on strategic infrastructure projects and physical asset life-cycle management.

2. Concerns have been raised over some core equipment and enabling capabilities for the carrier strike program: the withdrawal and removal of partners from the F-35 program has led to speculation that the UK will cut its order; the Public Accounts Committee reported in November that the Crowsnest radar system had been delayed by 18 months because of poor contractor performance and inadequate departmental oversight; and the tendering process for the Fleet Solid Support Ships (FSS) has been delayed multiple times with the current Solid Support Ships expected to retire between 2023-2025. How will this affect plans for Carrier Enabled Power Projection?

2.1 Inertia in naval procurement will cause severe delays to the delivery of Carrier Enabled Power Projection (CEPP). There is an urgent need to accelerate the FSS Warship programme to enable the first vessel to be delivered by 2028. The high concentration ratio in the naval shipbuilding market causes delays in the delivery of vessels of all classes. Therefore, it is imperative that Government must fast-track the current FSS Warship procurement process, which is a path-finder project within the UK National Shipbuilding Strategy. Furthermore, this will also enable the commercial shipbuilding sector to be able to compete in the export market, whilst providing significant cost and time reductions and enhancing quality assurances to the Defence sector.

2.2 FSS Warship procurement delays increasingly impact the ability of the Submarine Enterprise to deliver Continuous At Sea Deterrent (CASD) which results in escalating project costs for the MoD due to the ever-increasing running costs of these vessels as they approach the end of their respective planned lifespan. The simplest solution to this significant issue is to ensure that the build programme for new replacement Surface and Sub-Surface Platforms is guaranteed and by de-risking the build programme through greater outsourcing. Outsourcing is the best mechanism to improve the delivery time of the new submarines, generating cost-savings for the MoD and, in so doing, enhancing UK shipbuilding capacity and efficiency across the UK Enterprise, in-line with the National Shipbuilding Strategy.

3. Delays to the Astute class submarine program have been a longstanding area of concern, with the late hand over of HMS Audacious likely to have extended delays further down the tranche. How will these delays affect the replacement timeline for the Trafalgar class and the cost of the program?

- **What impact will delays to Astute have on the Dreadnought program, as some of the same production facilities are required for both models?**

3.1 With respect to the Astute Class submarine programme, there is an urgent need to increase the diversity of suppliers and the level of outsourcing to deliver to schedule and budget for these sovereign protection programmes.

3.2 Delivery of the follow-on classes of Dreadnought and MUFC submarines in due course will be particularly impacted by these delays. This will be further exasperated due to the sheer size of the Dreadnought boats where even more outsourcing to the UK commercial shipyards and UK supply chain enterprise will be required to maintain the certainty of delivery that these programmes demand.

3.3 Whilst certain tier one primes in the defence sector specialise in complex submarine build and integration, these programmes are complex and consistently delayed due to minimal use of outsourcing and probable capacity shortfalls at one North-West facility. Specialising in smaller submarines, BAES Barrow-in-Furness may struggle to sustain high-tempo delivery to schedule and as a result, smaller vessel deliveries will be delayed. Harland & Wolff (Belfast) has the facility and immediate capacity to contribute to significant fabrication scope for these programmes and would welcome the opportunity to assist BAES Barrow-in-Furness. Harland & Wolff would also collaborate with the Cammell Laird shipyard to enable certainty of delivery for MoD and BAES, however, current inertia is causing capacity to go to waste to the detriment of CEPP, FSS Warships and naval shipbuilding overall.

4. The UK is likely to face a “frigate gap” until at least the early 2030s. The current Type 23 frigates will begin to leave service on an annual basis from 2023. There are concerns over the extended retirement dates, especially with regards to the integrity of certain hulls and lack of spare part packages across the board. The first replacement Type 26s and Type 31s are not expected to be in service until at least four years later. What capabilities will the Navy lose or need to deliver through other means as a result? How realistic are production plans for the Type 31s (already described as “aggressive” and including an ambitious delivery rate of one every 8-12 months, compared to 18 months for comparable European programmes for similar vessels)?

4.1 The focus on high-end warship platforms has resulted in the UK’s ‘frigate gap’, whereby the T23 anti-submarine warfare fleet is becoming almost inoperative due to the extent of

wear and tear on ageing hulls, resulting from service-life extensions beyond their original planned design life. It is accepted that this is being addressed through the progressive T31 – T32 programme where smaller batches of new tonnage are being procured and the future of the Royal Navy is continuing to enable complex warships to demand frequent maintenance periods.

4.2 Contrary to the dominant view amongst UK shipbuilders that 12 months is an aggressive schedule to deliver projects of this nature, 12-month is the world-class standard. When you scan the international shipbuilding landscape, you see many examples of successful and competitive project management. Navantia, Fincantieri and Damen regularly deliver concurrent projects to aggressive timescales; Damen corvette was outsourced to the Indonesian navy and Navantia successfully delivered 40 ships in a five-year period, all of which were delivered on time.

4.3 Due to systemic inertia, lack of diversification and outsourcing along the UK supply chain, sluggish delivery times have become the norm - driving up delivery costs for the Client. Although some tier one primes, such as Babcock International Group, have adopted a strategy of non-ship build outsourcing to retain fabrication in-house, this strategy will simply not produce the desired result for the Navy, particularly for the T31e programme which is a National Shipbuilding Strategy pathfinder to deliver to time and to a fixed budget. Increased outsourcing along the UK supply chain would enable UK shipbuilders such as Harland & Wolff to make efficiency gains through an increased market size, making the UK shipbuilding enterprise more competitive internationally and increasing export opportunities.

5. The Navy's Hunt and Sandown Mine Counter Measure Vessels will be replaced by an Autonomous Mine Hunting Capability currently under development. How likely is this to be able to replicate the vessels' full contribution, including to partnerships with allies through deployments like Op KIPION, by the time they reach retirement in the early 2030s and what are the implications if it does not?

- **What other progress is being made on integrating UAVs into the Navy?**

5.1 Without significant increases in capacity for autonomous minehunter vessels, it is unlikely that the same capacity will be replicated to time and schedule. There is a severe lack of joined-up thinking, collaboration and macro-level vision in this respect. For example, a collaboration between THALES Plymouth and Harland & Wolff Appledore in the South West of England has the capacity, expertise and experience to become a centre of excellence and ECO-hub for small and fast attack craft, surface and sub-surface amphibious and autonomous submarine design and delivery. Harland & Wolff's Appledore drydock facility at c.120m in length perfectly enables a Multi-Role Oceanographic Survey Vessel and Multi-Role Surveillance (mine-hunter mother ship) variants for MoD and Industry.

5.2 The implication of this delay is a lack of capability and readiness with respect to mine-counter measures and higher costs for the Navy due to strain on the existing fleet. Notwithstanding the importance of these particular vessels, we must acknowledge that ships are moving away from traditional single roles and towards multi-purpose vessels. Thus, as we move into the era of integration across diplomacy, development and defence activity, it is vital that the design and delivery of new vessels abandons silo-thinking and embraces multiple roles for one vessel.

5.3 These vessels will not fit with the traditional higher capability warships suited to the current two tier one primes. Rather, they will be more akin to commercial vessels with a military component so that the UK commercial shipbuilding sector has the capability and efficiencies to undertake this work at a significantly reduced cost to the taxpayer.

5.4 The MoD and its partners must encourage, facilitate, and where necessary, enforce collaboration and partnerships between UK shipbuilders in this emergent yet critically important sphere. Harland & Wolff's Appledore shipyard is well-positioned to serve as a centre of excellence for the smaller patrol craft, autonomous vessels and specialist vessels for which it has a long heritage (HMS Scott, and the Echo class Ocean Survey Vessels), while its commercial acumen allows it to understand the complementary roles assigned to each such vessel.

6. Is the UK's domestic shipbuilding industry able to fulfil its role in delivering the country's naval capabilities? What has been the effect of the National Shipbuilding Strategy? Does the government's decision in the Defence Industrial Strategy to determine whether to invite foreign competition on a case-by-case basis (rather than just for warships) increase or decrease the opportunities for UK shipbuilding? What will industry need to see in the government's forthcoming update to the National Shipbuilding Strategy and 30-year plan for Naval and other government-owned vessels?
6.1 The UK shipbuilding industry has the capacity and expertise to deliver the country's naval capabilities for decades to come. The National Shipbuilding Strategy has resulted in a more sustainable stream of activity to the UK's shipbuilding enterprise but more leadership and vision from government is needed.

6.2 Rather than inviting international competition on a case-by-case basis, a much deeper thought process is required which allows for a more strategic approach to international collaboration. The concentration ratio in the naval shipbuilding market is too high, with the bulk of large contracts being given to two large Primes and not enough outsourcing to other UK shipyards taking place. The UK shipbuilding enterprise will benefit from the economic incentives and innovative environment that stem from robust international competition but only when contract-awards and capability are more evenly distributed across the domestic market. Otherwise, the introduction of foreign competition without any predictability will reinforce existing weaknesses in the UK Enterprise.

6.3 Industry needs to see a continuous, predictable stream of naval and commercial activity over a 30-year period to sustain the critical naval and commercial shipyards, aiming to achieve repeatable world-class delivery. A longer programme of work will enable firms to make human capital and physical capital investments, make efficiency gains, become internationally competitive and create a virtuous cycle in their order books.

6.4 Having said this, it is important that the Strategy refresh sees a move away from the reliance of UK shipbuilding enterprise on Defence work alone and encourages industry when it finds new ways to sustain its business and workforce during Defence lulls. For example, Harland & Wolff has spread its pipeline across five markets - renewable, cruise and ferry, oil and gas, commercial and defence – and six sectors – technical services, fabrication & construction, repair and maintenance, in-service support, conversion and decommissioning. This spread ensures that UK Defence is not left carrying the burden of ensuring enough work is available to maintain overheads and jobs for what should be a commercially viable business in its own right and will ensure capability and capacity remains ready and intact for when UK Defence has a requirement.

6.5 As we enter a new era in UK shipbuilding, the government must seek to spread business throughout the UK supply chain, rather than continuing to concentrate activity amongst a few large players in the market. Gifting contracts to large players stifles competition which pushes up cost. It has also resulted in the awarding of further contracts regardless of poor performance on previously awarded contracts to a select few businesses. By increasing competition, Government will see an uptick in value for taxpayer money.

6.6 The refresh must scan the international shipbuilding landscape to identify what the international standard for the industry is, especially in terms of cost, project planning, management and delivery. At the moment UK shipbuilding falls far short of this, often leaving it uncompetitive in the global market. If UK Government is serious about restoring UK shipbuilding, it must support technology transfer through international collaboration and investment in skills and facilities to drive up efficiency, in doing so, UK shipyards will be able to win work from overseas and significantly enhance their export opportunities.

6.7 With these export opportunities in mind, it is also important that UK Government funding and financing mechanisms are significantly more agile. We have seen examples of international governments providing support for ship-builds in their respective country within 48 hours of receiving a request. However, after weeks of attempting to engage with UK Government, we have seen clients unable to gain the support they need in order to instigate a UK ship-build. Unless Government finds a way to move at pace when these opportunities arise, UK shipyards will miss out on significant contracts due to inertia.

6.8 Environmental considerations are inevitably going to play a larger role in shipping, and it is important that the Government helps UK shipyards to make that “green” transition by integrating sustainability into all facets of UK government support for shipbuilding, including both vessels and supporting infrastructure. Maritime engineering has a significant role to play in the UK’s transition to net zero, but this can only be achieved with vision, forward guidance and support from government. With early support, the UK can be world-leading in green shipping but in the absence of appropriate technologies, skills, infrastructure and demand, the UK is unable to claim its place at the helm of this inevitable market that will secure the future of UK ship-building for generations to come.

7. How realistic are proposed exports of Type 26 and Type 31 frigate designs and what effect would they have on costs of the frigates for the UK? Since most foreign buyers will seek to produce ships domestically, how much value are these export deals likely to deliver to UK shipbuilding?

7.1 There is significant untapped export potential in the frigate market. However, there is a significant capability and efficiency gap preventing UK shipbuilders from being viable in international markets. A constant stream of work gives firms the certainty they need to make long-term investments in the knowledge that projected demand can be relied upon.

7.2 The government must take action to develop UK businesses specialised in systems and subsystems which provide pathways to global markets. Not only does this enhance the viability and size of the UK shipbuilding industry, but it also enhances the UK’s balance of trade and allows profits and technologies to remain in the UK.

8. The government’s Defence Industrial Strategy promises up to five Type 32 frigates and a new class Type 83 destroyer but no further details on these ships’ designs and roles have been provided: how can the government learn from previous programs in designing and delivering these two ships ?

8.1 As we enter a new era in UK shipbuilding, the government must seek to spread business throughout the UK supply chain, rather than continuing to concentrate activity among a few large players in the market. Gifting contracts to large players stifles competition which pushes up cost.

8.2 The government must also recognise that there is not a global market for Type 31 and 32 ships, so to pursue these vessels as an export strategy would be misguided.

9. Recommendations

9.1 Encourage and enforce fair competition in UK shipbuilding

The Government must seek to increase competition in the UK shipbuilding market. This should be done by awarding contracts to smaller firms in the industry and insisting on outsourcing, subcontracting and partnerships between domestic firms when bidding for contracts.

9. Use outsourcing to drive up performance

There is significant capacity in the UK shipbuilding industry going to waste, whilst the large players in the market struggle to deliver vessels to schedule. Encouraging these large players to outsource some delivery would unlock sustainable employment around UK shipyards and benefit delivery times for the Navy.

9. 2 Provide a long term pipeline

Efficiency comes from a steady stream of work in the pipeline enabling investment in infrastructure and truly ensuring an export capable industry. The government must provide certainty to industry by indicating clearly the nature of contracts in the pipeline over the next two decades.

9. Move away from over-reliance on UK Defence contracts

Whilst it is important to have a steady stream of Government contracts for the industry as a whole, it is imperative that we move away from a reliance on taxpayer money to keep some shipyards in business. This comes from sustainable business models and supporting UK shipyard to become more efficient in order to sharpen their competitive-edge and allow them to win international contracts.

9. Welcome international collaboration

International collaboration with smaller UK shipyards will enable technology and skills transfer to occur, allowing UK shipbuilders to learn from globally competitive shipbuilders and improve project management, efficiency and ultimately serve to drive down cost and drive up quality for UK taxpayers.

9. Help UK shipyards to prepare for the transition to green shipping

By investing now in the facilities, infrastructure and skills, UK shipyards need to start building greener ships. We can position UK shipbuilding at the forefront of the green shipping boom that is inevitably coming, securing a long term future for UK shipyards for generations to come.

30 May 2021