

HCDC Inquiry - *The Navy: Purpose and Procurement* MOD written evidence

Executive Summary

- 1.1. The Integrated Review¹, Defence Command Paper² and Integrated Operating Concept³ set out a darkening strategic environment, the increasing threats to the UK and how the UK's armed forces will operate, fight and win in an increasingly competitive age. Within this context, the Royal Navy is receiving significant investment to accelerate a drive to be more lethal, more available and more sustainable: **A Global, Modern and Ready Navy**.
- 1.2. The Royal Navy's first duty will remain **protecting the homeland and UK Overseas Territories** and it will continue to be the foremost navy in Europe, contributing to NATO – among other capabilities – the nuclear deterrent, a fifth generation Carrier Strike Group (CSG) and Commando Forces launched from Littoral Strike platforms.
- 1.3. The Royal Navy will maintain its **operational advantage in the North Atlantic** (particularly under water), underpinned by deep interoperability with allies. Operational advantage in the future will be achieved by exploiting a network of autonomous, un-crewed and crewed platforms to provide enhanced sensing and rapid understanding, and, when necessary, to take decisive action.
- 1.4. The delivery of **Carrier Strike** marks a strategic shift in national Defence capability. The CSG projects the UK's global reach and influence – reassuring allies and partners and deterring those who seek to undermine global security.
- 1.5. The advent of **Littoral Strike** and the transformation of the Royal Marines into the **UK Commando Force** will provide new options in an era of sub-threshold competition. Returning to their commando roots, marines will be more threat-focused, more disruptive and more lethal. As a special operations capable force, they will operate beyond the remit of conventional forces, employ unconventional techniques and operate in extreme climates.
- 1.6. The Royal Navy will be **forward deployed** and more **persistently present** in areas of strategic interest. Integrated with elements of the joint force from across the MOD and the agencies, this will improve understanding of the operational environment and enable a greater range of choices to engage, constrain and operate.
- 1.7. The Royal Navy's forward presence will build on longstanding commitments in the Caribbean, South Atlantic and the Gulf. From summer 2021, the Royal Navy plan to enhance forward presence in Gibraltar, for the Western

¹ <https://www.gov.uk/government/publications/global-britain-in-a-competitive-age-the-integrated-review-of-security-defence-development-and-foreign-policy>

² <https://www.gov.uk/government/publications/defence-in-a-competitive-age>

³ <https://www.gov.uk/government/publications/the-integrated-operating-concept-2025>

Mediterranean and Gulf of Guinea, and in the Indo-Pacific, with permanently deployed Batch II Offshore Patrol Vessels (and a current planning assumption that this will subsequently be replaced by Type 31 frigates). In addition, more commandos will be persistently deployed, with a permanent presence East of Suez from 2023 through the Littoral Response Group (South).

- 1.8. The Royal Navy will exploit the latest **technological advances** to maintain and gain advantage over the UK's adversaries. It will accelerate its drive towards un-crewed and fully autonomous capabilities. Investing in new technologies, the Royal Navy is developing drones and underwater gliders to undertake roles as varied as mine warfare and providing logistical support to commandos ashore.
- 1.9. **Investment in Royal Navy shipbuilding** will double over the life of this Parliament to more than £1.7 billion a year. This investment will contribute to the Government's 2030 vision of a sustainable UK shipbuilding enterprise at the cutting edge of technological and environmental innovation – including the design, build, integration, test and evaluation, and repair of naval vessels.
- 1.10. The modernisation and transformation of platforms will be matched by a more modern approach to the **Royal Navy's finest asset – its people**. To attract and retain a talented and diverse workforce, a new People Strategy and operating model places the employee experience at the heart of its outputs. From apprenticeships to the latest digital skills, the Royal Navy will equip and train its military and civilian personnel with the tools and cutting-edge technology they need.

Part One:

What is the UK's ambition for the Navy's role over the next 20 years?

Q1. *What naval threats is the UK likely to face and what standing commitments, including for NATO and UK Overseas Territories, does the government intend the Navy to undertake?*

Threats

- 2.1. The Integrated Review sets out that the UK is facing a deteriorating global security environment. The blending of short-term threats and longer-term strategic risks present an enduring systemic challenge. In the maritime domain, this is characterised by a diversification and deepening of naval threats, marked by increasingly assertive states, expanding sub-threshold activity and the proliferation of technology, including autonomy and artificial intelligence.
- 2.2. The Defence Command Paper highlights Russia as a primary state-based threat, particularly in relation to the underwater battle space and capabilities that could disrupt deep-sea cables and critical national infrastructure. Russia is also developing maritime strike capabilities, including a nuclear capable torpedo that could threaten coastal regions. As global warming opens the Arctic Northern Sea routes, the High North will become increasingly militarised. China's significant investment in maritime capabilities with global reach indicates that larger deployments outside of its near abroad can be expected over the next decade.

Commitments

- 2.3. The Royal Navy will continue to provide high readiness naval assets to deter and respond to threats across a range of enduring tasks to protect the UK homeland and Overseas Territories, including: operating and protecting the Continuous At-Sea Deterrent (CASD); escorting foreign warships through UK waters; protecting the UK's underwater critical national infrastructure; protecting the UK's Exclusive Economic Zone; safeguarding Overseas Territories; and, collaborating with security and intelligence agencies to protect the UK and the Overseas Territories from illegal and dangerous activity, including serious and organised crime and terrorism. The Royal Navy will also play its part in securing key maritime choke points to support the flow of trade, and to uphold international norms.
- 2.4. NATO remains pivotal in countering state-based threats and the Royal Navy is integrated by design to operate with NATO allies and partners. This approach is being demonstrated by the CSG21 deployment made up of ships, aircraft and people from the Royal Navy, United States Navy, United States Marine Corps and Royal Netherlands Navy. In addition to the nuclear deterrent, the UK will also attribute to NATO – among other capabilities – a fifth generation Carrier Strike Group and Commando Forces launched from Littoral Strike platforms.

In particular, what is the implication of a tilt to the Indo-Pacific?

2.5. The Royal Navy's approach to persistent presence in the Indo-Pacific region will help build new alliances and reaffirm existing ones; integration with allies is fundamental to retaining strategic advantage. The Royal Navy will maintain Batch II Offshore Patrol Vessels (OPVs) in the region (with a current planning assumption that they will be replaced by Type 31 frigates when they enter service towards the end of this decade). From 2023, the Littoral Response Group (South) will be persistently present in the region, centred around embarked UK Commando Forces. CSG21 will be the first of a regular drumbeat of CSG deployments to the Indo-Pacific region.

Q2. What naval forces (vessels, capabilities and bases) are required to combat these threats and to deliver these standing commitments?

2.6. The Royal Navy is developing capabilities to meet the emerging threats that the UK faces as part of an integrated UK Defence capability. Effective multi-domain integration⁴ is essential to meeting and dealing with these threats.

2.7. Seven new classes of Royal Navy ships and submarines⁵ will be in build this decade. These ships and submarines will be more lethal and more flexible than their predecessors. Equipped with advanced sensors and weapons, they will embrace modularisation to allow rapid adoption of emerging technologies throughout their service life and to switch role as the threat changes. Major investments will also be made into the existing fleet, including upgrading the air defence capability of Type 45 destroyers. The Royal Navy will consider opportunities to introduce land attack and supersonic missiles into the surface fleet.

2.8. Persistently present units, in key regions across the globe, will offer choices in dealing with threats to the UK's national interests. Alongside these forces, Carrier and Littoral Strike Task Groups will provide flexibility, reach and high-end military capability, that can pulse into areas of increased tension. Strategic hubs, such as Cyprus, Gibraltar, Duqm (Oman), Bahrain and the British Indian Ocean Territory, along with logistic nodes such as Singapore, will be important in supporting both persistent presence and task group deployments.

What are the implications of cooperation with vessels from allied nations, for example allied vessels participating in carrier strike groups?

2.9. The Royal Navy has a long tradition of working closely with NATO, Five Eyes allies⁶, Joint Expeditionary Force partners⁷ and other key maritime nations. Allies operating as an integral part of a Royal Navy led Maritime Task Group is

⁴ The five domains being sea, land, air, space and cyberspace.

⁵ Type 31, Type 26, Type 32, Fleet Solid Support, Multi-Role Ocean Surveillance, Dreadnought & Astute.

⁶ Five Eyes allies are: Australia, Canada, New Zealand and the United States of America.

⁷ Joint Expeditionary Force partners are: Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, the Netherlands, Norway and Sweden.

a strength. Allies provide enhanced capabilities, diversity of thought and opportunities for tactical development, and a visible sign of solidarity against common threats and challenges. Any UK task group will always have a sovereign core to ensure its freedom of action.

Part Two:
Are naval procurement and support plans delivering the capabilities required for this role?

There are several expected pinch points in equipment that pose a risk to the Navy's ability to deliver planned capabilities. The inquiry will examine where risks to specific programmes could threaten the Navy's overall effectiveness, with particular focus on the following areas:

Q1. Concerns have been raised over some core equipment and enabling capabilities for the carrier strike programme: the withdrawal and removal of partners from the F-35 programme 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?

Route to Full Operating Capability

- 3.1. Carrier Enabled Power Projection (CEPP) Initial Operating Capability was delivered on-time in 2020, with the Crowsnest programme fielding a baseline credible capability for CSG21.
- 3.2. The core CEPP capabilities (the carriers, Lightning and Crowsnest) have been split up for the purposes of programme delivery. The carrier strike elements will meet the criteria for Full Operating Capability in 2023, noting there are documented challenges to achieving this declaration.⁸ These include: maintenance of Lightning and Crowsnest force growth (aircraft, aircrew and groundcrew) and delivering the capability uplifts for the carriers. Action plans are in place to address risks to delivery. The full CEPP programme is due to achieve Full Operating Capability in 2026.

Carriers

- 3.3. HMS QUEEN ELIZABETH is at Very High Readiness (VHR) for operations now.
- 3.4. HMS PRINCE OF WALES is completing trials and training serials. The plan is to undertake operational commitments in 2022 prior to a scheduled maintenance period in 2023 to receive the final capability uplifts required to assume VHR duties.

⁸ See: National Audit Office 'Carrier Strike – Preparing for deployment' June 2020 report and the Public Accounts Committee 'Delivering carrier strike' November 2020 report.

F-35 Lightning

- 3.5. The F-35 Lightning programme declared Initial Operating Capability in the maritime environment in December 2020 and remains within cost approval. The UK-based fleet consists of 21 aircraft, with a further six to be delivered during 2021 as the Lightning Force element grows to Full Operating Capability in December 2023. Forty-eight F-35B Lightning aircraft will be delivered by 2025.
- 3.6. The Integrated Review confirmed that the Lightning Force fleet size will grow beyond 48 aircraft. The future procurement of Lightning aircraft will be driven by the needs of the UK and not influenced by the removal or withdrawal of F-35 partner nations from the programme. The MOD plans to continue upgrading these aircraft in line with the wider programme and to equip them with UK-developed weapons, including Spear Cap 3⁹ and Meteor.¹⁰

Crowsnest

- 3.7. Through increased departmental oversight of industry performance and a significant enterprise effort across Defence Equipment and Support (DE&S), industry partners and frontline elements, Merlin helicopters with the Crowsnest capability have embarked on CSG21. The Crowsnest capability will be expanded incrementally through subsequent software releases. Operational feedback during CSG21 will shape these upgrades. There is also a sharp focus to improve industry performance on other lines of capability development, such as provision of training equipment for efficient aircrew generation. Crowsnest is due to reach Full Operating Capability in 2023.

Fleet Solid Support (FSS)

- 3.8. The early retirement of two of the Royal Fleet Auxiliary's three solid support ships (RFA FORT ROSALIE and RFA FORT AUSTIN) will not impact the CEPP programme. These two ships cannot offer the required abeam replenishment capability for the carriers. The third solid support ship, RFA FORT VICTORIA, has had one of its abeam replenishment rigs modified to interface with the carriers and will remain in service until 2028. The capacity and capability of FORT VICTORIA is sufficient while the Carrier Strike capability is maturing.
- 3.9. A contract notice, signalling the start of the new FSS competition was issued on 21 May; the manufacturer contract award is due within two years. A detailed review of the FSS requirement, operating concept and procurement approach took place following the cancellation of the previous competition in November 2019, with the aim of widening the market appetite, encouraging innovation and getting the best value capability solution.

⁹ The Select Precision Effects at Range Capability 3 is a future British air-to-ground and possibly anti-ship missile.

¹⁰ Meteor is an active radar guided beyond visual range air-to-air missile.

Q2. Delays to the Astute class submarine programme 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 programme?

- 3.10. The Astute programme will deliver seven nuclear attack submarines by the end of 2026, replacing the Trafalgar class submarines. HMS TALENT and HMS TRIUMPH have been extended beyond their previously planned out of service dates. This will ensure a seamless transition to the Astute class.
- 3.11. Three boats are in service (HMS ASTUTE, HMS AMBUSH and HMS ARTFUL); four boats are contracted under a commercially sensitive Target Cost Incentive Fee basis (HMS AUDACIOUS, HMS ANSON, HMS AGAMEMNON and HMS AGINCOURT). Some work on ANSON was paused in 2020 to deploy extra resource to address technical issues on AUDACIOUS. ANSON is now in the water.
- 3.12. The delays in the Astute programme build have not currently caused the programme to overrun in cost terms. However, the Royal Navy are currently undertaking work to assess the effect of COVID-19 on the ASTUTE programme. Financial approval is at the programme level (rather than by individual submarine) and includes contingency.
- 3.13. The planned in-service dates and out of service dates for the Royal Navy's submarines are withheld as disclosure could prejudice the capability, effectiveness or security of the UK Armed Forces. The Royal Navy's attack submarines continue to meet their operational tasking and will continue to do so in the future.

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

- 3.14. The Dreadnought programme has not been affected. BAE Systems can build the Astute and Dreadnought classes concurrently. The first of the Dreadnought class will enter service in the early 2030s.

Q3. The time at sea for the Type 45 destroyers has been limited in previous years due to long-term difficulties with cooling, propulsion and manpower. What is the status of efforts to address this, like the Power Improvement Programme, and what impact will the Type 45's readiness levels have on Navy capabilities over this period?

- 3.15. Type 45 availability will improve from 2023. It is expected that four from six hulls will be available from 2024. Type 45 availability (and therefore days at sea) has been most affected by propulsion unreliability and a lack of sustainable support solutions.

- 3.16. The NAPIER programme was established in 2018 to address issues with the power and propulsion of the government and MOD-preferred system (Rolls-Royce WR-21) that was procured. This programme consists of two key strands:
- i. An Equipment Improvement Plan to enhance system reliability. This work is nearing completion and delivering positive results.
 - ii. A Power Improvement Project (PIP) to improve resilience in the propulsion system. The first PIP conversion is underway on HMS DAUNTLESS; she is due to return to sea later this year to conduct first of class sea trials. All Type 45s are due to be converted by the mid-2020s.
- 3.17. Royal Navy personnel recovery initiatives are addressing challenges faced in key operational pinch points; workforce issues are not significantly affecting platform availability. A more sustainable workforce position for Type 45s is delivering crews to four ships, meeting availability targets now and those planned from 2023 onwards.
- 3.18. The Royal Navy will be able to maintain its Type 45 commitment to the Maritime Task Group with some redundancy to meet routine force generation certifications, training and limited support to UK contingent tasking. The Fleet Ready Escort¹¹ responsibility will largely be fulfilled by frigates and offshore patrol vessels. As Type 45 availability improves from 2023, the Royal Navy expects to have capacity to meet other national and international commitments.

Q4. 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?

- 3.19. There is no forecast ‘frigate gap’ and the Royal Navy does not expect to need to deliver associated capabilities through other means.
- 3.20. Forecast frigate availability remains the same until 2023, when it increases by one until 2025. The retirement of two General Purpose Type 23s between 2021-2023 (HMS MONMOUTH and HMS MONTROSE) will not impact availability as they had been due to enter planned maintenance cycles from 2023. Availability will be maintained through the extension of three General Purpose Type 23s.

¹¹ The Fleet Ready Escort is a warship held at short notice in home waters that is ready to react when required in support of homeland defence and other maritime security duties.

- 3.21. There will also be no gap in Anti-Submarine Warfare (ASW) frigate capability. The first of class Type 26 (HMS GLASGOW) is expected into service in 2027 and the first ASW Type 23 to leave service (HMS WESTMINSTER) will do so after 2027.
- 3.22. As the Type 31 and Type 26 come into service, available frigate numbers will increase through to the end of the decade. The Royal Navy will start to take delivery of Type 31s from 2025, with all delivered by the end of 2028.

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)?

- 3.23. Babcock is contractually obligated to deliver five Type 31 frigates by the end of 2028. Babcock has signed a firm-fixed price contract and has high confidence in their build strategy and deliverability; they have invested in manufacturing technique upgrades, which will modernise and streamline production processes. The Type 31 is based on a proven design already built in a Danish commercial shipyard and operational with the Danish Navy.¹² Babcock is engaging with the original ship designer to support learning and de-risk the UK build programme.

Q5. 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?

- 3.24. The Mine Hunting Capability (MHC) programme is at the forefront of future maritime autonomous systems and is being developed in two blocks. MHC Block 1 consists of three operational demonstrator systems, including a collaborative UK-France Maritime Mine Counter Measures (MMCM) programme, and is aligned with the Sandown class drawdown between 2021-2025. MHC Block 2 is the mainstay of the full replacement MCM capability, with the investment decision point planned for 2024. This more agile and incremental approach allows the Royal Navy to adjust the procurement plan as it builds operational analysis and experience alongside allies and industry.
- 3.25. Assuring the programme pathway, initial MHC trials have outperformed the existing mine counter measure vessel (MCMV) capabilities. MCM survey operations will be conducted on the Clyde in early 2022 and delivery of a

¹² The Iver Huitfeldt class frigate.

Block 1 system has been accelerated for deployment into the Gulf region (Op KIPION) from 2022. A phased approach will evaluate MHC performance in the Gulf against MCMV capabilities to inform the future transition timeframe.

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

- 3.26. Cutting-edge technologies from industry and academia are being developed through operational experimentation, alongside conventional Royal Navy platforms, to accelerate and de-risk Un-crewed Autonomous Vehicle (UAV) opportunities in the above water, underwater and air environments. This approach has demonstrated benefit on exercises and trials; informing future capability planning and concept development. In addition to MHC in the underwater environment, Project HECLA will deliver autonomous oceanographic surveillance systems of increasing complexity over the next three years.
- 3.27. 700X Naval Air Squadron has been established to progress the Future Maritime Air/Aviation Force (FMAF). Fixed and rotary wing un-crewed air systems are being developed and tested to build the evidence base for their future part in Carrier Strike and Littoral Strike forces. They are expected to increase the mass and lethality of Carrier Strike (and provide new operational capabilities); Commando Forces ashore will benefit from increased strike, surveillance and logistical options, increasing the lethality, survivability and sustainability of deployed commandos.

Q6. Is the UK's domestic shipbuilding industry able to fulfil its role in delivering the country's naval capabilities?

- 3.28. As set out in the Defence and Security Industrial Strategy (DSIS),¹³ the UK needs a thriving shipbuilding enterprise that can adapt to technological developments to ensure the UK has the maritime capabilities to stay ahead of its adversaries.
- 3.29. The UK shipbuilding industry is already delivering a significant programme of work, with Type 26 frigates being built on the Clyde by BAE Systems and investment in the infrastructure and workforce at Rosyth by Babcock ahead of work beginning soon on Type 31 frigates. This will mark the first time in 30 years that there have been two classes of frigate simultaneously under construction.
- 3.30. The MOD recognises that it will need to encourage growth within the shipbuilding industry to help deliver the ambitious shipbuilding pipeline set out in the Defence Command Paper, alongside commercial and export orders. The Fleet Solid Support ship programme aims to sustainably grow the industry, creating a third shipbuilding pipeline. Re-capitalising UK industry will feature prominently in the programme, focusing on growing capacity and

¹³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/971983/Defence_and_Security_Industrial_Strategy_-_FINAL.pdf

capability. International partners will be encouraged to work with UK firms to share learning, experience and technology to help improve performance across both civilian and naval programmes.

- 3.31. The MOD recognises that peaks and troughs of naval shipbuilding can be damaging for UK industry, leading to inefficiency and loss of skills. Therefore, the naval shipbuilding pipeline is being actively managed, and the National Shipbuilding Strategy refresh will set out a continuous shipbuilding programme. This clear demand signal will provide the certainty industry requires to invest in its skills, facilities and productivity. To maintain the pipeline, the MOD needs industry to demonstrate programmes can be delivered to time and budget. As confidence grows, industry is expected to invest further in innovation, technology, skills and the supply chain.

What has been the effect of the National Shipbuilding Strategy?

- 3.32. There have been several successes since the 2017 National Shipbuilding Strategy, including the rapid placing of the Type 31 contract and the exports success of Type 26. The Type 31 procurement is remarkable for its speed and innovation, including the valuing of prosperity and exportability. This gave industrial partners confidence to invest in new facilities, processes and skills in Rosyth, underpinning the value of this approach.
- 3.33. The 2017 National Shipbuilding Strategy established a Sponsor Group and Client Board for shipbuilding, which have provided the oversight and clear governance to deliver the naval shipbuilding portfolio. Between 2015/16 and 2019/20, the MOD's spend on shipbuilding and repair has increased by over 50% to £3.8 billion and led to a 25% increase in direct jobs supported to 25,200. The benefits of this increase in spend have been particularly felt across Scotland, with MOD-supported jobs increasing 22% to 7000 between 2018/19 and 2019/20.

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?

- 3.34. The shipbuilding policy set out in the DSIS aims to increase opportunities for the UK shipbuilding industry. In relation to foreign competition, this policy will allow consideration of a broader range of factors when making procurement decisions, including industrial impact. National security considerations will still be an important part of decision-making. The UK will maintain a maritime enterprise with the industrial capabilities to design, manufacture, integrate, modify and support current and future naval ships – assuring operational independence.

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?

- 3.35. The MOD has worked closely with industry as the National Shipbuilding Strategy refresh is developed, including the Maritime Enterprise Working Group which was established through the 2017 National Shipbuilding Strategy. A shared vision has been agreed with industry to create a globally successful, innovative and sustainable UK shipbuilding enterprise. The strategy refresh will set the conditions needed to achieve this vision and articulate what is expected from industry in return.
- 3.36. The refresh will set out a pipeline of all UK Government future vessel requirements (over 150 tonnes) for the next 30 years, subject to future Spending Reviews. To ensure the UK shipbuilding industry and supply chain is best placed to deliver this pipeline and to win commercial and export orders, the strategy refresh will also address the key enablers to success, including: technology and innovation, skills, exports, governance and organisation.

Q7. 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?

- 3.37. Building on the success of the Global Combat Ship (GCS) Type 26 design in Australia's SEA 5000 and Canada's Surface Combatant competitions, the MOD continues to work with BAE Systems on Type 26/GCS exports to understand the opportunities that may materialise as these shipbuilding programmes mature. The MOD is also working with the Department for International Trade and Babcock on Type 31 export opportunities.
- 3.38. Through sharing the GCS Type 26 design, the UK can extend further defence and trading relationships, and even closer cooperation between the Royal Navy, Royal Canadian Navy and the Royal Australian Navy – enhancing operational capability and interoperability; jointly driving value for money in the respective supply chains; increased data and information sharing; high-end technology transfer; and, collaboration at the cutting-edge of maritime expertise. A successful Type 31 export campaign could deliver similar economies of scale and benefits.

Since most foreign buyers will seek to produce ships domestically, how much value are these export deals likely to deliver to UK shipbuilding?

- 3.39. The export of these capabilities will help make the UK a global exporting nation as recently set out in DSIS, but their value cannot be quantified. There are numerous factors to account for beyond the sale of the ship. These include: the sale of the ship design, systems and sub-systems, through-life support, and training. The price of the ship is also a negotiable element, which prevents accurate value estimations. Exports will generate an (as yet)

unquantifiable value in the supply chain and job creation across the maritime enterprise.

Q8. 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 programmes in designing and delivering these two ships?

Type 32 & Type 83

- 3.40. The Type 32 will increase the total size of the Royal Navy's fleet of frigates. The early concept phase has been initiated; work is underway to develop the operational concept. The Royal Navy is scoping opportunities to integrate autonomous offboard capabilities such as anti-submarine warfare, mine countermeasures and tactical precision strike, by using modular pods to improve operational flexibility.
- 3.41. With a focus on wide area anti-air warfare, the Type 83 is the replacement programme for the Type 45. The early concept phase has yet to be formally initiated.

Learning from previous programmes

- 3.42. Effective development of the build requirement for Type 32 and Type 83 is essential to ensure that the capability requirement and the shipbuilding programme are efficiently and effectively aligned. The National Shipbuilding Strategy sets out the demand signal for the naval warship sector and provides clear guidance on warship procurement.
- 3.43. Lessons captured from the Type 31 procurement approach tested what industry could deliver against a high-level requirement, price point and target schedule. This was followed by a funded Competitive Design Phase which allowed industry to develop their design proposals iteratively, trading capabilities to develop the best offers against the agreed evaluation criteria (i.e. ships that were capable and adaptable for their intended purposes, without incentivising the pursuit of exquisite capability). As a result, the competition ensured the best possible outcome for the Royal Navy by driving out unnecessary cost while retaining as much capability as practicable for a price that was fixed through competitive tension.

4th June 2021