

## **Public Accounts and Audit**

Parliamentary Inquiry – into the 2018-19 Defence Major Projects Report and Future Submarine Project - Transition to Design (Auditor-General's Reports 19 and 22 (2019-20))

### **ANSWER TO QUESTION ON NOTICE**

Department of Defence

**Topic:** JCPAA - 20 Apr 2020 - Q2 - Affordable Future Submarine Capability Costs - Patrick

**Question reference number:** 2

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On para 2.2. (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

The Commonwealth's objectives for the Future Submarine Program are listed, with - Dot Point 3 "to deliver an affordable Future Submarine capability within a realistic timeframe and with the knowledge and skills to understand and control sustainment cost drivers for the life of the class"

1. By what parameters is 'affordable' being assessed?
2. When is it to be assessed?
3. Are the cost projections for the design, construction, through life support and disposal robust enough to support this assessment?
4. Are sustainment cost drivers being considered as part of the design phase?
5. Does defence have the knowledge and skills to understand and control them at this point in time?
  - a. Where do these skills and knowledge reside?

#### **Answer:**

1. The affordability of the Future Submarine Program is assessed against the costs budgeted within the Defence Integrated Investment Program for the Attack class submarine capability.
2. Assessment is an ongoing process through whole of life to ensure the required capability remains affordable.
3. Cost projections for design, construction, through life support and disposal are suitably robust and reflective of the current phase of a project of this type. These will continue to mature as the program progresses.

4. Yes.
5. Yes.
  - a. These skills reside within the Future Submarine Program Office and comprise Australian Public Service officers and contracted subject matter experts, ensuring suitably qualified experienced personnel are available to undertake this work.

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### **ANSWER TO QUESTION ON NOTICE**

Department of Defence

**Topic:** JCPAA - 20 Apr 2020 - Q3 - Maximising Australian Industry Content - Patrick

**Question reference number:** 3

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On para 2.2. (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

The Commonwealth's objectives for the Future Submarine Program are listed, with Dot Point 4 "to maximise Australian industry involvement through all phases of the Future Submarine Program without unduly compromising capability, cost and schedule."

1. What is the projects interpretation and understanding of this objective?
2. What guidance or direction has the project given to the Prime contractors regarding this goal?
3. How has that guidance been reflected in the sub-contracting activities of the Prime contractors?
4. How is the project measuring or assessing that Australian industry involvement has been maximised?
5. What reports or records exist that verify these assessments?

#### **Answer:**

1. Under arrangements that maximise opportunities for Australian industry involvement as design of the Attack class progresses, the selection of suppliers will be balanced against a range of considerations including:
  - in-country capabilities critical to sovereignty;
  - the capability and capacity to produce the supplies in Australia;
  - cost and schedule impacts; and
  - broader national supply chain considerations, such as synergies with other Defence programs.

2. Primes are contracted to maximise the involvement of Australian industry through all phases of the program without unduly compromising capability, cost and schedule. To achieve this, they are required to:
  - establish procurement organisations in Australia and to manage the majority of procurement activity from Australia;
  - develop procurement processes which require approaches to the Australian market in the first instance for the majority of equipment;
  - formally seek Defence approval of the source selection for the most significant equipment:
    - for scopes of supply that are categorised as Approved Subcontracts, Defence is part of the decision process in supplier selection, to ensure Australian industry has been considered; and
    - for scopes of supply that are not categorised as Approved Subcontracts, where Primes do not envisage that the procurement of equipment will result in an Australian supplier being selected, they must notify Defence and provide a business case to justify the decision.

Both prime contractors are contracted to deliver an AIC Strategy (to cover the duration of the program) and an AIC Plan (to cover the duration of the contract). To incorporate progress in the design and build process, AIC Strategies are required to be updated every 12 months and AIC Plans are required to be updated every 6 months.

3. Approved Subcontractors selected to provide the most significant equipment for the Future Submarine are required to:
  - develop Subcontractor AIC plans;
  - report achievements against the Subcontractor AIC plans;
  - maximise the participation of Australian industry without unduly compromising capability, cost and schedule;
  - continuously monitor and explore opportunities for the increased involvement of Australian industry; and
  - liaise with the Commonwealth and the relevant Prime in relation to Australian industry involvement over the various phases of the Future Submarine Program.
- 4-5. Progress against AIC Strategies and Plans are reported as part of each prime's Contract Status Report (CSR) and reviewed during the regular contract and program reviews. The Naval Group Submarine Design Contract requires delivery of a CSR every three months and the LMA Design, Build and Integration Contract requires delivery of a CSR every month. Each prime contractor is required to hold regular meetings with the Commonwealth at which progress of the AIC plan achievement is reviewed. These meetings are held at least monthly with each prime.

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#### **ANSWER TO QUESTION ON NOTICE**

##### **Department of Defence**

**Topic:** JCPAA - 20 Apr 2020 - Q4 - Australian Industry Capability Threshold Levels -  
Patrick

**Question reference number:** 4

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On para 2.8 (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

1. What were the threshold levels defence identified in 2016 regarding the Australian Industry Capability?

#### **Answer:**

Paragraph 2.8 of the Auditor General's report stated the key negotiation issues identified by Defence on which acceptable positions would need to be agreed in order to enter the Strategic Partnering Agreement with Naval Group. These issues were reflected in the Contract Negotiation Directive. The Auditor General used the term 'threshold' to describe these issues. The term 'threshold' does not refer to a quantitative value in relation to any of the issues.

Defence ensured the Strategic Partnering Agreement included obligations to maximise Australian industry involvement through all phases of the Future Submarine Program without unduly compromising capability, cost and schedule, which is a contracted objective within the agreement.

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### **ANSWER TO QUESTION ON NOTICE**

Department of Defence

**Topic:** JCPAA - 20 Apr 2020 - Q5 - Differences in Contract Negotiation Directives - Patrick

**Question reference number:** 5

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On para 2.9 (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

In April 2018 a new Contract Negotiation Directive was issued, what were the substantive differences between it and the previous directive (Dec 2017)?

#### **Answer:**

The differences between the April 2018 Negotiation Directive and the December 2017 Negotiations Directive are stated in paragraph 2.10 of the *Auditor-General's Report 22 Future Submarine Project – Transition to Design*. The new directive led to a better understanding by Defence of Naval Group's negotiating position.

The detail of those differences is commercially sensitive and result from documents and other information provided to the Commonwealth by Naval Group, and were the subject of negotiations with Naval Group under conditions of confidentiality.

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#### **ANSWER TO QUESTION ON NOTICE**

##### **Department of Defence**

**Topic:** JCPAA - Q8 - Strategic Partnership & Design Contract Minister Approval - Patrick

**Question reference number:** 8

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On Para 2.21 (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

In Dec 18 “Defence proposed that:

- the Minister for Defence bring forward a submission in early 2019 seeking approval to enter the Strategic Partnering Agreement and the Submarine Design Contract, and
- Australia agree to France’s position on a key issue in the negotiations, relating to Australia’s rights in the event of a Change of Control of Naval Group.”

This infers that seeking approval was scheduled to occur later in that year.

1. At that time when was it scheduled/planned that the Minister for Defence would seek the approvals?
2. What are Australia’s rights in the event of a Change of Control of Naval Group?

#### **Answer:**

1. Within the first quarter of 2019.
2. The Strategic Partnering Agreement contains appropriate provisions in relation to a Change of Control of Naval Group that would enable Defence to continue the Future Submarine Program with the objectives and under the arrangements contemplated when the Strategic Partnering Agreement was entered into. The detailed arrangements in relation to a potential Change of Control of Naval Group are commercially sensitivity.

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#### **ANSWER TO QUESTION ON NOTICE**

##### **Department of Defence**

**Topic:** JCPAA - 20 Apr 2020 - Q12 - Strategic Partnering Agreement 'Control Gates' - Patrick

**Question reference number:** 12

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On the Text Box on page 28 (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

“The key formal requirements for a successful long-term strategic partnership have been established through the signing of the Strategic Partnering Agreement in February 2019. The Agreement addresses 11 out of 12 documented contract goals, which relate to: governance; collaboration; the allocation of risk and reward; incentives and remedies; knowledge transfer; cost control; and industry objectives. The Agreement also establishes ‘control gates’ in the form of mandated system reviews based on defined exit and entry criteria, and contractual off-ramps and break payments.”

1. What are the contracted “off-ramp” points?
2. Has defence got an overall Mitigation strategy or Plan B for this capability in the event an “off ramp” has to be used?
  - a. If so, what are they?
  - b. If not, why not?

#### **Answer:**

The Strategic Partnering Agreement includes provisions to manage termination on a fair and equitable basis, depending on the circumstances leading to termination.

These provisions have been negotiated by the Commonwealth with Naval Group under conditions of confidentiality and are commercially sensitive. The Strategic Partnering Agreement also includes commercially sensitive provisions that mitigate risk to submarine capability.



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#### **ANSWER TO QUESTION ON NOTICE**

##### **Department of Defence**

**Topic:** JCPAA - 20 Apr 2020 - Q14 - Engineering Approaches - Patrick

**Question reference number:**

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

In para 3.1 Text Box (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

“Defence has highlighted for attention differences in the commercial and engineering approaches of Defence and Naval Group, which it considers to have impacted on progress to date. There is evidence of active contract management by Defence to address these issues.”

1. Can Defence provide examples of the differences in the engineering approaches of Defence and Naval Group?
2. Is it realistic to expect that the culture within Naval Group and these differences can or will change for this project?

#### **Answer:**

1. Naval Group is an experienced submarine designer and builder, having built more than 100 submarines for nine navies. Over many years and different classes of submarines, Naval Group has established specialist processes to undertake concept studies, concept design, functional design, detailed design and production design. As Australia has unique submarine capability requirements and well-established assurance practices, it has been necessary to verify in detail that the Naval Group processes would meet all capability, legislative and regulatory needs of the Commonwealth, while also satisfying the objective of maximising Australian industry involvement.
2. Naval Group understands these differences and has recognised opportunities presented by its engagement with Defence on the Future Submarine Program. Naval Group have also aligned their engineering process with international standards, which are consistent with those used elsewhere in Defence acquisition programs.

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### **ANSWER TO QUESTION ON NOTICE**

Department of Defence

**Topic:** JCPAA - 20 Apr 2020 - Q15 - Critical Design Reviews - Patrick

**Question reference number:** 15

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On Table 3.1 (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

1. Is the Preliminary Design Review for the Platform System still on schedule January 2021?
2. What is the contracted date for the Critical Design Review?
3. What was the rationale for changing this project over the IEEE systems engineering standard?

#### **Answer:**

1. Systems Functional Review, previously known as Preliminary Design Review, is on track.
2. Preliminary Design Review, previously known as the Critical Design Review, is proposed to be conducted in May 2023.
3. Naval Group have aligned their engineering process with international standards, which are consistent with those used elsewhere in Defence; hence the change in name of some milestones (for example, Systems Functional Review was previously known as Preliminary Design Review).

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#### **ANSWER TO QUESTION ON NOTICE**

##### **Department of Defence**

**Topic:** JCPAA - 20 Apr 2020 - Q16 - Commencing Construction - Patrick

**Question reference number:** 16

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On Figure 3.2 (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

The figure shows the construction of the first submarine well before the design is completed.

1. Please elaborate in further detail the point in the design in which the construction will start.
2. How are the lessons of the Collins program being applied in respect of not starting construction too soon in the design process? (See also comments on design maturity in para 3.45)

#### **Answer:**

NOTE: this answer is framed on the basis that the details in the question relate to Figure 3.1 (on page 35) of the Audit report, not Figure 3.2.

1. Construction activities will commence with the test, validation and verification of build processes, which is scheduled to commence in 2023. This will enable hull construction for the first submarine to begin in 2024, at which point detailed design of the hull will have progressed to sufficient maturity to generate production work orders and there will be a sufficient quantity of such work orders to sustain the growing production workforce.
2. Major lessons learned from the Collins and Air Warfare Destroyer Programs identified that a high level of design maturity is required before progressing to subsequent phases of the program. A high level of design maturity reduces costly uncertainties during the build phase and the need for larger construction contingencies.

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#### **ANSWER TO QUESTION ON NOTICE**

##### **Department of Defence**

**Topic:** JCPAA - 20 Apr 2020 - Q19 - Deferral of Concept Studies Review- Patrick

**Question reference number:** 19

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On Para 3.14 (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

The design and mobilisation contract commenced 30 Sep 2016. In Sep 2018, the Concept Studies Review was deferred, the rationale for not proceeding included:

- the work provided to Defence by Naval Group did not meet Defence's requirements
- ...the proposed design changes did not sufficiently account for impacts on operational requirements, design risk, costings or other transverse engineering consequences.
- "... a continuing lack of detailed information [as] required by the Commonwealth of Australia to assure design decision making"
- In addition, Defence identified that 63 studies had not been completed by Naval Group, which were required to complete the Preliminary Design: Feasibility Phase of the Future Submarine Program

1. In relation to the work not meeting Defence's requirements, had Naval Group delivered draft or interim versions of the documents to Defence?

a. If yes, what feedback was Defence providing to Naval Group?

2. "a continuing lack of detailed information" was one of the reasons for not commencing the concept studies review.

a. How long has the issue of Naval Group not providing detailed information been an issue?

b. Is Defence still experiencing this?

**Answer:**

1. Naval Group did provide interim versions and drafts of key documents related to Concept Studies Review.
  - a. Defence provided feedback on the draft and interim documents through working-level engagements (Defence engineer to Naval Group engineer), technical review meetings, collaborative workshops, and documented comments.
- 2a. During the Feasibility Design Phase (culminating in the Concept Studies Review).
- 2b. No. The level of detailed information provided by Naval Group has improved since Concept Studies Review.

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#### **ANSWER TO QUESTION ON NOTICE**

##### **Department of Defence**

**Topic:** JCPAA - 20 Apr 2020 - Q21 - Feasibility Studies - Patrick

**Question reference number:** 21

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On Para 3.21 (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

“At the completion of the Concept Studies Review in February 2019, Defence identified a number of incomplete work items which it deemed ‘not necessary to allow progression’ from the Feasibility Phase of Preliminary Design to the Definition Phase. These incomplete work items included:

- 23 feasibility studies which were agreed by Defence and Naval Group as complete on 9 May 2019;
- 21 feasibility studies which were transferred to the Submarine Design Contract;
- a ‘measurement plan’ for the Future Submarine Program, incorporating key performance indicators, which was transferred to the Submarine Design Contract<sup>46</sup>; and
- an ‘integrated master schedule’ for the design and build of the Future Submarine which was transferred to the Submarine Design Contract.”

1. When are the 21 incomplete feasibility studies to be delivered?
2. Is there an agreed measurement plan for the project?
  - a. How is the measurement being done?
3. How is the ‘integrated master schedule’ identified as an incomplete work item from the Concept Studies Review different to the ‘integrated master schedule’ that Defence has attached to the contract?

#### **Answer:**

1. 20 of the 21 incomplete feasibility studies are expected to be completed during Definition Phase, scheduled to conclude in January 2021. The final study is expected to be completed during the Basic Design Phase, which follows the Definition Phase.

2. Yes.
  - a. Measurement is being done in accordance with the approved Measurement Plan, which reflects Naval Group's organisation, tools and processes.
  
3. The Integrated Master Schedule (IMS) is a contract deliverable subject to maintenance and periodic update. The IMS was developed under the Design and Mobilisation Contract, formally approved on 21 October 2017 and operative at commencement of the current Submarine Design Contract.

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#### **ANSWER TO QUESTION ON NOTICE**

##### **Department of Defence**

**Topic:** JCPAA - 20 Apr 2020 - Q24 - Feasibility Studies Costs - Patrick

**Question reference number:** 24

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On Table 3.3 (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

1. Please list the feasibility studies commissioned within the \$193,335,452?
2. What is the total value of feasibility studies conducted in Australia?
3. How much of the total has been spent with DSTG?

#### **Answer:**

1. The feasibility studies commissioned within the \$193,335,452 were Step 3 Feasibility and Definition Studies of the Design and Mobilisation Contract with Naval Group. The objective of this contract was to develop a feasible concept design for the Attack class, capable of meeting key capability requirements.
2. The total value of the activities undertaken by Naval Group in Australia during this design and mobilisation phase of the project is \$36,839,049.
3. DSTG science and technology support is funded separately from design work contracted to Naval Group.



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### **ANSWER TO QUESTION ON NOTICE**

Department of Defence

**Topic:** JCPAA - Q25 - Attack Class sub-systems installation on Collins Class - Patrick

**Question reference number:** 25

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On para 3.39 (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

To introduce efficiencies and manage risk in Navy's transition from the Collins class to the Attack class, Defence is considering installing sub-systems and components in the upgraded Collins class that will be common to the Attack class. Defence expects that this approach will allow it to test these sub-systems, and enable Defence personnel to become familiar with these sub-systems before transitioning to the Attack class. The Government's Naval Shipbuilding Advisory Board endorsed this approach in November 2018.

1. What Attack Class sub-system are currently under consideration for installing on Collins?

#### **Answer:**

Attack class sub-systems being considered for use during the Collins LOTE, yet to be approved by Government, include the diesel generators and optronics sub-system.

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#### **ANSWER TO QUESTION ON NOTICE**

##### **Department of Defence**

**Topic:** JCPAA - 20 Apr 2020 - Q28 - System Requirements Review - Patrick

**Question reference number:** 28

**Senator/Member:** Rex Patrick

**Type of question:** Written

**Date set by the committee for the return of answer:** 8 May 2020

#### **Question:**

On para 3.2, Table 3.1, para 3.24 and 3.25 (of Auditor-General's Report 22 Future Submarine Project – Transition to Design):

The System Requirements Review (SRR) was originally planned for March 2019 (as per Defences Integrated Master Schedule attached to the Design and Mobilisation contract), this was then shifted to October 2019 (under the schedule attached to the Submarine Design Contract). The SRR was scheduled to complete 31 October 2019, it commenced 5 Dec 2019.

1. When did the SRR complete?
2. What, if any, items were incomplete at conclusion/exit of the SRR?

#### **Answer:**

1. The Functional Ship Systems Requirements Review was scheduled for 31 October 2019 and experienced a delay of five weeks. The review was conducted on 5 December 2019.
2. There were 25 corrective actions at the conclusion on the Functional Ship Systems Requirements Review, all of which have been addressed.