# Project Data Summary Sheet[237]

| | |
|---|---|
| Project Number | **SEA 1442 Phase 4** |
| Project Name | **Maritime Communications Modernisation** |
| First Year Reported in the MPR | 2014-15 |
| Capability Type | Upgrade |
| Acquisition Type | Australianised MOTS |
| Service | Royal Australian Navy |
| Government 1st Pass Approval | Dec 10 |
| Government 2nd Pass Approval | Jul 13 |
| Total Approved Budget (Current) | $442.1m |
| 2014–15 Budget | $32.3m |
| Project Stage | Preliminary Design Review |
| Complexity | ACAT II |


## Section 1 – Project Summary

1.1 Project Description

SEA 1442 Phase 4 will upgrade the communications capability in the Anzac Class Frigates and address communications system obsolescence in the Class by modernising it with improved communications management, secure voice and tactical intercom, red/black switching, tactical radios and a high data rate line-of-sight capability. The project will also deliver support systems, a secondary Maritime Tactical Wide Area Network (MTWAN) Shore Gateway and upgrade the Anzac Combat System Trainer Communications Terminals.

1.2 Current Status

**Cost Performance**

In-year

This year the project has spent $31.5m of a budget of $32.3m. The $0.8m underspend was largely due to a delay in getting into contract for Viasat modems due to protracted discussions regarding the Terms and Conditions of the Contract**.**

Project Financial Assurance Statement

As at 30 June 2015, project SEA 1442 Phase 4 has reviewed the approved scope and budget for those elements required to be delivered by the project. Having reviewed the current financial and contractual obligations of the project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

Contingency Statement

The project has applied contingency in the financial year for the treatment of a technical risk related to the unavailability/complexity of digital voice recorder integration.

**Schedule Performance**

237 Notice to reader

Future dates and Sections: 1.3 (Major Risks and Issues), 4.1 (Measures of Materiel Capability Delivery Performance), 5.1 (Major Project Risks) and 5.2 (Major Project Issues) are out of scope for the ANAO's review of this Project Data Summary Sheet. Information on the scope of the review is provided in the *Independent Review Report by the Auditor-General* in **Part 3** of this report.

Key milestones achieved so far include: MTWAN Secondary Shore Gateway; Prime Contract Integrated Baseline Review (IBR), and System Definition Review (SDR). The SDR was achieved three months behind schedule, resulting in delays to the next two intermediate milestones in the lead-up to Detailed Design Review (DDR). However, the schedule is expected to be recovered and Initial Materiel Release (IMR) is forecast to be achieved as planned in June 2018.

**Materiel Capability Delivery Performance**

The MTWAN Secondary Shore Gateway has been delivered and is operational. The first Anzac ship capability with associated support systems is scheduled for delivery in June 2018.

Note

The capability assessments and forecasts by the project are not subject to the ANAO's assurance review.

1.3 Project Context

**Background**

SEA 1442 (Maritime Communications Modernisation) is a multi-phased program that will modernise the Royal Australian Navy's (RAN) communications infrastructure. The preceding phase (Phase 3) delivered an initial Maritime Tactical Wide Area Network (MTWAN) and Message Handling System to the RAN's Major Fleet Units.

SEA 1442 Phase 4 will address critical obsolescence problems affecting the communication systems in the RAN Anzac Class frigates. The modernised communications system (NewGen MCS) will be highly integrated and automated to deliver more agile and faster communication and reduce operator intervention. The project scope includes upgrade of various communications systems in the 8 Anzac frigates, establishment of a training system at HMAS Stirling and a shore integration and test capability at the prime contractor's facility for in-service support, delivery of a secondary MTWAN shore gateway, and upgrade of the Anzac Combat System Trainer Communications Terminals.

The majority of individual equipment and sub-systems is either Military Off The Shelf (MOTS) or Commercial Off The Shelf (COTS). Some development is required and involves functionality enhancements and Australianisation of the MOTS and COTS. The main complexity is in bringing the sub-systems together as a highly integrated and automated system and installation in the ships, cognisant of existing weapons, sensors, emitters, and specific platform requirements.

Government Second Pass approval was achieved in July 2013. Prime acquisition and 5-year support services contracts were awarded to Selex ES Ltd in November 2013 following an open tender process.

Under the acquisition contract, Selex will: design, develop and install the NewGen MCS into the eight Anzac Class frigates; design, develop and install the support systems (training system and integration and test capability); and develop and deliver integrated logistic support products. The support services contract will become operative following acceptance of the first ANZAC frigate and the support systems.

The project is also managing the acquisition of ARC-210 Gen5 V/UHF multi-band multi-mode software defined radios through Foreign Military Sales (FMS) with the US Government. The radios form part of the NewGen MCS.

**Uniqueness**

An advanced feature of the system includes a unique radio frequency distribution system that will allow automated and efficient switching of the multitude of radios and antennae on each ship in order to establish the most effective communications path.

The high data rate line of sight system is a new capability and will be a step towards enabling the RAN to operate in a satellite denied environment and enable more efficient ship-to-ship communication.

**Major Risks and Issues**

The key risks for this project include: timely availability of the ships for installation; platform integration matters such as varying ship configurations, inadequate power and platform services, other concurrent activities on the ships during installation, and integration into the complex electromagnetic environment of the Anzac Class Frigates; integration with existing/legacy systems; equipment obsolescence due to the length of project; and availability of sufficient resources. Noting the staffing freeze and organisational uncertainty, staffing issues are currently impacting project activities.

**Other Current Sub-Projects**

N/A

## Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

| Date | Description | $m | | Notes |
|---|---|---|---|---|
| | **Project Budget** | | | |
| Dec 10 | Original Approved | | 11.4 | |
| Jul 13 | Government Second Pass Approval | 374.3 | | |
| | | | 374.3 | |
| Jun 15 | Exchange Variation | | 56.4 | |
| Jun 15 | **Total Budget** | | 442.1 | |
| | **Project Expenditure** | | | |
| Prior to Jul 14 | Contract Expenditure – Selex | (12.6) | | |
| | Other Contract Payments / Internal Expenses | (9.5) | | 1 |
| | | | (22.1) | |
| FY to Jun 15 | Contract Expenditure – Selex | (28.9) | | |
| | Contract Expenditure – US Government | (0.3) | | 2 |
| | Other Contract Payments / Internal Expenses | (2.3) | | 3 |
| | | | (31.5) | |
| Jun 15 | **Total Expenditure** | | (53.6) | |
| Jun 15 | **Remaining Budget** | | 388.5 | |

| Notes | |
|---|---|
| 1 | Other expenditure comprises $5.9m for Pre-contract work with Selex, $2.1m for other pre Second pass studies and work, $1.2m for other minor contract expenditure, project management costs and travel, and $0.3m for legal services. |
| 2 | The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts. |
| 3 | Other expenditure comprises $1.6m for other minor contract expenditure, project management costs, travel and Liquidated Damages due to late delivery of a contracted milestone, $0.5m for Shore Gateway West, and $0.2m for the Shore Integration Facility. |

2.2A In-year Budget Estimate Variance

| Estimate PBS $m | Estimate PAES $m | Estimate Final Plan $m | Explanation of Material Movements |
|---|---|---|---|
| 23.6 | 21.7 | 32.3 | PBS to PAES variance was caused because entry into contract for purchase of AC210 Radios via FMS Contract took longer than anticipated. PAES to Final Plan estimate increase can be attributed to foreign exchange movement and the early achievement of the Long Lead Time Item Review (LLTIR) Milestone. |
| Variance $m | (1.9) | 10.6 | Total Variance ($m): 8.7 |
| Variance % | (8.1) | 48.8 | Total Variance (%): 36.9 |

2.2B In-year Budget/Expenditure Variance

| Estimate Final Plan $m | Actual $m | Variance $m | Variance Factor | Explanation |
|---|---|---|---|---|
| | | | FMS | The year end variance is largely the result of a delay in getting into contract for Viasat modems due to protracted discussions regarding the Terms and Conditions of the Contract. |
| | | (0.8) | Overseas Industry | |
| | | | Local Industry | |
| | | | Brought Forward | |
| | | | Cost Savings | |
| | | | FOREX Variation | |
| | | | Commonwealth Delays | |
| | | | Additional Government Approvals | |
| 32.3 | 31.5 | (0.8) | Total Variance | |
| | | (2.5) | % Variance | |

2.3 Details of Project Major Contracts

| Contractor | Signature Date | Price at | | Type (Price Basis) | Form of Contract | Notes |
|---|---|---|---|---|---|---|
| | | Signature $m | 30 Jun 15 $m | | | |
| Selex | Nov 2013 | 187.7 | 210.7 | Variable | ASDEFCON Strategic | 1, 2 |
| US Government (AT-P-BSH) | Dec 2014 | 17.0 | 19.9 | Firm | FMS | 1, 3 |

Notes

| | |
|---|---|
| 1 | Contract value as at 30 June 2015 is based on actual expenditure to 30 June 2015 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable). |
| 2 | In addition to Note 1 above, the increase in Selex contract price at 30 June 2015 includes additional elements, namely UHF MILSATCOM Antennae, Voice Recording System, and ARC-210 mounting and remote control ancillaries. |
| 3 | The scope of this contract is explained further below. |

| Contractor | Quantities as at | | Scope | Notes |
|---|---|---|---|---|
| | Signature | 30 Jun 15 | | |
| Selex | See scope | See scope | 8 ship mission systems<br>1 training system<br>1 Shore Integration and Test facility<br>3 deployable High Data Rate line-of-sight systems | |
| US Government (AT-P-BSH) | 131 | 131 | ARC-210 Gen 5 radios, technical data, and technical support. | |

Major equipment received and quantities to 30 June 15

MTWAN Secondary Gateway has been accepted.

## Section 3 – Schedule Performance

3.1 Design Review Progress

| Review | Major System/Platform Variant | Original Planned | Current Planned | Achieved/ Forecast | Variance (Months) | Notes |
|---|---|---|---|---|---|---|
| System Requirements | NewGen MCS and Support System | Sep 14 | N/A | Dec 14 | 3 | 1 |
| Preliminary Design | NewGen MCS and Support System | May 15 | Sep 15 | Sep 15 | 4 | 2 |
| Detailed Design | MTWAN Secondary Gateway | Sep 14 | N/A | Jan 15 | 4 | 3 |
| | NewGen MCS | Oct 16 | N/A | Oct 16 | 0 | |
| | Support System | Apr 17 | N/A | Apr 17 | 0 | |

| Notes | |
|---|---|
| 1 | Delayed from originally planned due to slow ramp up/contractor performance. |
| 2 | Contract schedule re-baselined to reflect previous (SDR) milestone slippage and contractor's improved understanding of the work. No impact on Detailed Design Review milestone as schedule is planned to be recovered by then. |
| 3 | MTWAN System Requirements and Preliminary Design addressed prior to Second Pass Approval. In order to minimise risk to the operational network upon connection of the MTWAN Secondary Gateway, a demonstration of the design in the MTWAN shore integration facility was requested prior to design acceptance. This required additional time to complete. |

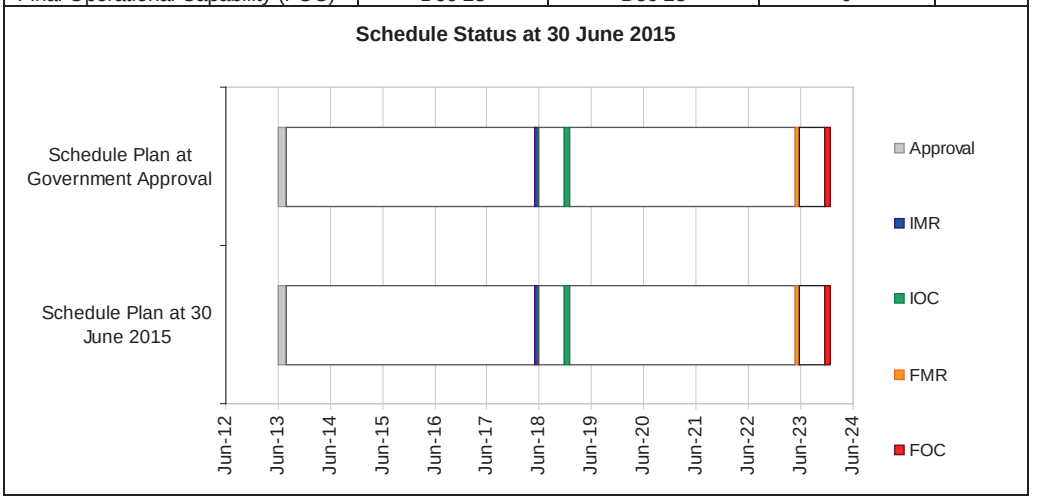
3.2 Contractor Test and Evaluation Progress

| Test and Evaluation | Major System/Platform Variant | Original Planned | Current Planned | Achieved/ Forecast | Variance (Months) | Notes |
|---|---|---|---|---|---|---|
| System Integration | NewGen MCS | Jun 18 | N/A | Jun 18 | 0 | |
| Acceptance | MTWAN Secondary Gateway | Apr 15 | N/A | Mar 15 | (1) | 1 |
| | Support System - Training System | Jun 17 | N/A | Jun 17 | 0 | |
| | Support System - Shore Integration and Test Facility (SITF) | Dec 16 | Mar 18 | Mar 18 | 15 | 2 |
| | Ship #1 | Jun 18 | N/A | Jun 18 | 0 | 3 |
| | Ship #2 | Apr 19 | N/A | Apr 19 | 0 | 3 |
| | Ship #3 | Nov 19 | N/A | Nov 19 | 0 | 3 |
| | Ship #4 | Jun 20 | N/A | Jun 20 | 0 | 3 |
| | Ship #5 | Feb 21 | N/A | Feb 21 | 0 | 3 |
| | Ship #6 | Sep 21 | N/A | Sep 21 | 0 | 3 |
| | Ship #7 | Apr 22 | N/A | Apr 22 | 0 | 3 |
| | Ship #8 | Sep 22 | N/A | Sep 22 | 0 | 3 |

| Notes | |
|---|---|
| 1 | MTWAN Secondary Gateway has been accepted and is operational. |
| 2 | SITF acceptance date initially incorrectly positioned in the contract. Correction made via a formal contract change. |
| 3 | Subject to timely availability of ship for installation. |

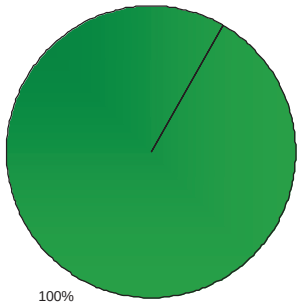
3.3 Progress Toward Materiel Release and Operational Capability Milestones

| Item | Original Planned | Achieved/Forecast | Variance (Months) | Notes |
|---|---|---|---|---|
| Initial Materiel Release (IMR) | Jun 18 | Jun 18 | 0 | |
| Initial Operational Capability (IOC) | Dec 18 | Dec 18 | 0 | |
| Materiel Release 2 – Ship # 2 | Apr 19 | Apr 19 | 0 | |
| Materiel Release 3 – Ship # 3 | Dec 19 | Dec 19 | 0 | |
| Materiel Release 4 – Ship # 4 | Aug 20 | Aug 20 | 0 | |
| Materiel Release 5 – Ship # 5 | Apr 21 | Apr 21 | 0 | |
| Materiel Release 6 – Ship # 6 | Dec 21 | Dec 21 | 0 | |
| Materiel Release 7 – Ship # 7 | Aug 22 | Aug 22 | 0 | |
| Final Materiel Release (FMR) | May 23 | May 23 | 0 | |
| Final Operational Capability (FOC) | Dec 23 | Dec 23 | 0 | |



## Section 4 – Materiel Capability Delivery Performance

4.1 Measures of Materiel Capability Delivery Performance

| Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance | |
|---|---|
|  | **Green:**<br>The Project expects to meet capability materiel requirements as per the Joint Project Directive, Materiel Acquisition Agreement and relevant Technical Regulatory Authority.<br><br>**Amber:**<br>N/A<br><br>**Red:**<br>N/A |
| Note | |
| This Pie Chart does not necessarily represent capability achieved. The capability assessments and forecasts by the project are not subject to the ANAO's assurance review. | |

4.2 Constitution of Initial Materiel Release and Final Materiel Release

| Item | Explanation | Achievement |
|---|---|---|
| Initial Materiel Release (IMR) | Ship 1 acceptance, training system, shore integration and test facility, ship 1 crew training, and support arrangements in place. | Not achieved |
| Final Materiel Release (FMR) | All 8 ships accepted and all support arrangements in place. | Not achieved |

## Section 5 – Major Risks and Issues

5.1 Major Project Risks

| Identified Risks (risk identified by standard project risk management processes) | |
|---|---|
| Description | Remedial Action |
| **Ship availability** – There is a chance that ship(s) may not be available in a timely manner to conduct installation due to other priorities. | The establishment of Anzac Block Upgrade Program has to some extent reduced the likelihood of this risk occurring however, ship availability is beyond the project's control. If one or more ships are not available, revise work program to re-fit when next available and minimise cost impact through reorganisation of tasks and resources. |
| **Platform Integration** – There is a chance that installation will be affected by site or platform issues such as insufficient power, heat and ventilation. | Liaise closely with ANZAC System Project Office (SPO) and the Block Upgrade Program, monitor changes and update design accordingly, and integrate into ANZAC SPO's engineering change processes. |
| **Platform Integration** – There is a chance that installation completion will be affected by other non-SEA 1442 activities which are being conducted on the ship concurrently with each SEA 1442 installation. | The Block Upgrade Program has a number of other significant activities planned during each ship availability. Liaise closely with the Block Upgrade Program to limit interruptions and avoid conflicts with other activities. Monitor activities and conduct regular reviews and re-plan if necessary. |
| **Platform Integration** – There is a chance that installation will be affected by unknown or late changes to ship configuration. | Maintain close liaison with ANZAC SPO, including through the conduct of ship integration working group workshops. Ensure site surveys are conducted as late as possible prior to installation to verify ship configuration. Modify installation as necessary. |
| **Platform Integration** – There is a chance that system performance may be affected by integration into the complex electromagnetic environment of the Anzac Class Frigates. | The Prime Contractor is conducting an Electromagnetic Environmental Effects (E3) program which involves co-site performance analysis, measurements and modelling. If issues arise post design, implement engineering and procedural processes to address the issues. |

| | |
|---|---|
| **System Integration** – There is a chance that system design will be affected by unavailability, complexity, or changing external and legacy interfaces. | Develop interface control documentation, design and develop interface, or procure alternative solution to remove interface as appropriate. Monitor and manage change. |
| **Obsolescence** – There is a chance that retained legacy equipment provided to the Contractor becomes obsolete prior to system acceptance. | Monitor equipment obsolescence and refresh items if obsolete. Change design if necessary and where feasible. |
| **Obsolescence** – There is a chance that some mission system equipment may become obsolete prior to system acceptance. | Monitor equipment selection to ensure obsolete or equipment likely to become obsolete are not selected. Change design if necessary and where feasible. Spare appropriately. |
| **Resourcing** – There is a chance that the project will be affected by a lack of staff. | Recruit to replace as quickly as possible, train and develop graduates within the project, and utilise contracted support as necessary. |
| Emergent Risks (risk not previously identified but has emerged during 2014–15) | |
| Description | Remedial Action |
| N/A | N/A |

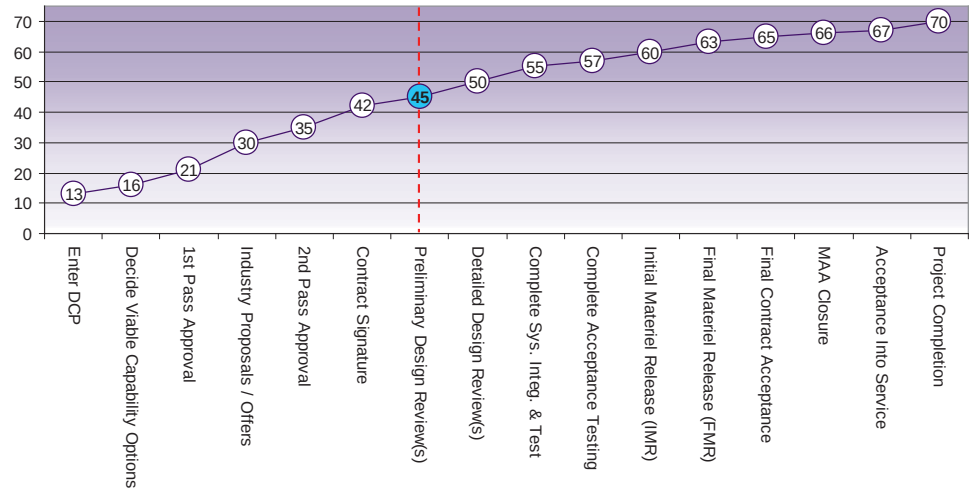
5.2 Major Project Issues

| Description | Remedial Action |
|---|---|
| Vacant positions have not been filled due to ongoing constraints on recruitment. In addition, a number of vacant positions have been disestablished. Staffing freeze is impacting project activities, particularly during peak and staff leave periods. Any further staff losses will affect the project significantly. | Approval has been sought to fill at least one critical position. Attempts are also being made to fill a second position. Whilst not ideal and more costly, the use of contractors will be pursued should the constraints remain. |

## Section 6 – Project Maturity

6.1 Project Maturity Score and Benchmark

| Maturity Score | | Attributes | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | Schedule | Cost | Requirement | Technical Understanding | Technical Difficulty | Commercial | Operations and Support | |
| Project Stage | Benchmark | 6 | 6 | 6 | 7 | 6 | 7 | 7 | 45 |
| Preliminary Design Review | Project Status | 6 | 7 | 7 | 7 | 6 | 6 | 6 | 45 |
| | Explanation | • **Cost:** The overall estimate at completion is projected to be within approved project budget. Contingency is deemed adequate to cover risks should they arise.<br>• **Requirement:** Requirements analysis has been completed and preliminary design indicates all operationally critical requirements as per the Operational Concept Document and Function and Performance Specification can be met.<br>• **Commercial:** Contractor has plans in place to undertake work. Some areas are yet to be optimally functional and improvements are being implemented.<br>• **Operations and Support:** Whilst parts of the Support System are known, the complete system is yet to be fully defined. | | | | | | | |




2014-15 MPR Status - - - -

## Section 7 – Lessons Learned

7.1 Key Lessons Learned

| Project Lesson | Categories of Systemic Lessons |
|---|---|
| It is essential to have a good set of requirements early in the life of the project. In particular, ensure requirements are clear, unambiguous, and a common understanding is established between all parties, be it the Capability Acquisition and Sustainment Group and the end-user or Defence and contractor. | Requirements Management |
| Interface management is extremely critical for integration projects. Legacy interfaces are not always defined or consistent with the documented definitions. Ensure interfaces are well understood by all parties, and where not possible, risk is recognised with adequate contingency. Attempt to address interfaces as early as possible as the longer they are left unattended, the greater their impact on cost, schedule, and possibly performance. | Requirements Management |
| The ASDEFCON suite of contracting template is complex and designed as a single source for all types of projects. It must be tailored well to suit individual project context and strategy to avoid unnecessary detail, resource burden, cost and schedule. | Contract Management |
| De-risk the project as much as possible before contract award. Spend time and resources upfront defining and understanding work and scope, schedule, risk, cost and other aspects of the contract with tenderers. This must include detailed review of the schedule to ensure all work elements have been programmed and the schedule is realistic. The de-risking activity may be through Offer Definition Activities and/or funded pre-contract work. | Contract Management |
| Pay good attention to schedule and ensure all work is captured, logical and can form a basis for sound management post contract award. There is no substitute for good planning and a realistic schedule. | Schedule Management |
| Access to good and experienced resources is critical to sound project planning and management, and success. A realistic and achievable plan is more likely if a project has access to knowledgeable and experienced resources. | Resourcing<br>Schedule Management |

## Section 8 – Project Line Management

8.1 Project Line Management in 2014–15

| Position | Name |
|---|---|
| General Manager | Ms Shireane McKinnie |
| Division Head | Mr Michael Aylward (to Nov 14)<br>Mr Ivan Zlabur (Acting Dec 14)<br>Mr Brad Flux (Acting Jan 15)<br>Mr Ivan Zlabur (Acting Feb 15)<br>Ms Myra Sefton (Acting Mar 15–May 15)<br>Mr Brad Flux (Acting Jun 15–current) |
| Branch Head | Ms Myra Sefton (to Feb 15)<br>Mr Michael Garrety (Acting Feb 15)<br>Ms Lynsey Johnstone (Acting Mar 15)<br>Ms Thea Huber (Acting Apr 15–May 15)<br>Ms Myra Sefton (Jun 15–current) |
| Project Director | Mr Guna Gounder (to mid Dec 15)<br>Mr Norm Ridgway (Acting mid Dec 14–Jan 15)<br>Mr Guna Gounder (Feb 15–current) |
| Project Manager | Mr Norm Ridgway |

# Project Data Summary Sheet[238]

| | |
|---|---|
| Project Number | **SEA 1429 Phase 2** |
| Project Name | **REPLACEMENT HEAVYWEIGHT TORPEDO** |
| First Year Reported in the MPR | 2009-10 |
| Capability Type | Replacement |
| Acquisition Type | MOTS |
| Service | Royal Australian Navy |
| Government 1st Pass Approval | N/A |
| Government 2nd Pass Approval | Jul 01 |
| Total Approved Budget (Current) | **$427.9m** |
| 2014–15 Budget | **$5.2m** |
| Project Stage | Initial Materiel Release |
| Complexity | ACAT III |

## Section 1 – Project Summary

1.1 Project Description

This project **has acquired** a Heavyweight Torpedo (HWT) for the six Collins Class submarines to replace the United States (US) Navy's (USN) Mk48 Mod 4 HWT previously in service with the Royal Australian Navy (RAN). The torpedo **has been** supplied by the US Government under a Memorandum of Understanding (MOU), with work performed by Raytheon US and the US Naval Undersea Warfare Center. The project is also acquiring associated logistic support, weapon system interface equipment, and operational support and test equipment. ASC Pty Ltd is undertaking integration to the Collins Class submarine platform.

1.2 Current Status

**Cost Performance**

In-year

**The project has a $0.5m underspend due mainly to funds returned after reconciliation of a previous In Service Support contract and delay in completion of a feasibility report.**

Project Financial Assurance Statement

As at 30 June 2015, project SEA 1429 Phase 2 has reviewed the approved scope and budget for those elements required to be delivered by the project. Having reviewed the current financial and contractual obligations of the project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

Contingency Statement

The project has not applied contingency in the financial year.

238 Notice to reader

Future dates and Sections: 1.3 (Major Risks and Issues), 4.1 (Measures of Materiel Capability Delivery Performance), 5.1 (Major Project Risks) and 5.2 (Major Project Issues) are out of scope for the ANAO's review of this Project Data Summary Sheet. Information on the scope of the review is provided in the *Independent Review Report by the Auditor-General* in **Part 3** of this report.