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LAND 121 Phase 4 Protected Mobility Vehicle - Light

MGT - 700

Australian Industry Capability Plan - Annex C

Public AIC Plan

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Background

The LAND 121 Phase 4 program will provide a Protected Mobility Vehicle – Light (PMV-L) system capability for the Australian Defence Force (ADF). This capability includes two base vehicle types (a 4-door and a 2-door) with a number of role specific mission kits that, when added to the base vehicle, allow it to perform specific functions such as command, liaison and reconnaissance. A trailer is also included in the system design.

As the vehicles progress from production to in-service, through life support (TLS) arrangements will be implemented to provide maintenance and repair services in selected locations around Australia.

Through the evolution of the contracting process, the Commonwealth has focused the competition down to Thales Australia. In this contract, we have the challenge to maximise opportunities for Australian industry and meet the Commonwealth's 'Manufactured and Supported in Australia' requirement – that at least 50% of the manufacturing and production costs are to be in Australia.

From the start of the design activities, Thales has worked to source suppliers who could provide us with the componentry and subsystems necessary to complete the vehicle system – this includes the vehicle and its supporting trailer. We consulted with our extant supply chain participants and also conducted, in parallel, a comprehensive industry engagement activity. This included having discussions with a range of industry representative bodies – such

as AIDN and the General Motors Holden Supplier Conference – holding briefing sessions with supplier organisations, and standard market research activities. We then identified an extensive range of potential vendors for participation in the Request For Information stage.

Progressive short-listing activities reduced the number of potential suppliers down to 70, and they were then selected to enter the RFP stage. The objective of this open tender process was to select a limited number of Tier 1 vendors, targeting approximately 30 to 35 in number, to provide materials and subassembly requirements. Since then, industry engagement activities including discussions with industry representative organisation, Requests for Proposals (RFP) and Requests for Tender (RFT) have been used to identify the items we needed for the build and the final list of suppliers who are able to satisfy the demand.

The establishment of follow on subcontract and supplier management arrangements through our purchasing department has implemented protocols that facilitate cooperative effort to produce the required deliverables. Where possible, we have pursued Australian based products and services for the project work packages. However in several instances where this was not possible, key items have had to be procured overseas.

Irrespective of the source of supply, we have taken steps to ensure that whatever we procure can be supported in Australia post production. We have been able to bring many of the suppliers with us throughout the entire protected vehicles product activity from production of Bushmaster vehicles and now to Hawkei. This has provided many suppliers with a long term opportunity to continue to develop and grow as they engage with local projects and participate in export programs. We have also been able to include many of these same suppliers in our product support arrangements, so they are involved in sustaining the vehicles throughout their life of type.

Hawkei suppliers who have also been involved in the Bushmaster family of vehicles include:

- Kidde Aerospace for the automatic fire suppression system (AFSS)
- Axletech for the axles
- Blackwoods for assorted hardware
- McCullochs for the hydraulic system
- PPG/Protec for the paint
- Hydrosteer for the steering
- DVR for the sub-frame components and general fabrication tasks
- ZF for the transmission.

Contract Duration and Price

The acquisition contract is for a three stage delivery process which includes:

- Stage 1 – Engineering & Manufacturing Development (EMD) which includes Pilot Build.
- Stage 2 – Low Rate Initial Production (LRIP).
- Stage 3 – Full Rate Production (FRP).

The contract duration (assuming a contract effective date (ED) of September 2015) extends from ED until last deliveries in 2021, a total of 6 years.

The price for the contract is \$ 1,304,353,811 (base date, GST exclusive). Of this, the value of local content is \$669,131,612 or 51.30%.

Industry Requirements

The Commonwealth has identified a number of Industry Requirements (IR) applicable to this program. These IRs represent activities or services that the Commonwealth has determined are important to the successful delivery and sustainment of the PMV-L capability – and are explained in Table 1.

Table 1: Industry Requirements			
Serial	IR No	IR Title	Work Package
1.	IR1	Education and Training	Develop and deliver manuals and training delivery products for operators and maintainers to enable operation and support of the mission system in accordance with the specified design requirements.
2.	IR2	Test and Evaluation	Undertake test and evaluation activities to ensure the system performance as per the Functional Performance Specification (FPS).
3.	IR3	Verification and Validation	Undertake verification and validation of the system to achieve quality control and assurance.
4.	IR4	In-Service Support	Repair, maintenance and upgrade of the mission system in accordance with the specified design requirements.
5.	IR5	Logistics Support	Deliver the logistics infrastructure necessary to support the proposed PMV-L capability throughout its life of type.
6.	IR6	Research and Development	Undertake research and development of the mission system to achieve the specified design requirements
7.	IR7	Production and Manufacturing	Manufacture and construct the mission system in accordance with the specific design requirements.

Work Packages

Each work package has a relationship with the various IRs. In some cases, the supplier will complete the relevant requirements themselves, but for others – where the supplier lacks the capability or it is more efficient to manage delivery in a different way – the work will be done by Thales or Boeing Defence Australia (BDA), our Integrated Logistics Support (ILS) subcontractor.

For each package, the supplier needs to:

- Provide data and information to support the development of the training packages and manuals.
- Conduct some level of test and evaluation to ensure that the equipment deliverables from the work package are fit for purpose and compliant with the specification.
- Undertake verification and validation activities to ensure quality control requirements for their supplies are satisfied.

- Provide information and data to facilitate in service support by Thales as the prime contractor, and potentially a level of Original Equipment Manufacturer (OEM) maintenance support that can be undertaken by appropriate work package providers.
- Work with Thales and BDA to ensure the necessary logistics support requirements in relation to their product(s) have been satisfied.
- If the equipment solution is new or a modification of an extant design, complete necessary research and development activities to ensure the solution is mature for incorporation in the overall project and is compliant with the specification.
- Produce their equipment for incorporation in the end deliverables – the vehicle and the trailer.

Table 2 identifies the work packages being performed within Australian industry and identifies the current preferred Australian supplier. There are still a number of contestable processes ongoing to determine which Australian industry participants will be awarded work. Once finalised these will be included in subsequent updates to the Public AIC Plan.

Table 2: Work Packages related to Industry Requirements			
Serial	Company	Work Package	Applicable Industry Requirement
1.	Penguin Composites Pty Ltd Penguin TAS 7365	Bonnet	IR 2, IR 3, IR 5, IR 7
2.	Parker Hannifin Dandenong South VIC 3175	Cooling	IR 2, IR 3, IR 5, IR 7
3.	RPC Technologies Melbourne VIC 3001	Dashboard	IR 2, IR 3, IR 5, IR 7
4.	Albins Delacombe VIC 3356	Driveline – Cross Drive	IR 2, IR 3, IR 5, IR 7
5.	Albins Delacombe VIC 3356	Driveline – Steering Racks	IR 2, IR 3, IR 5, IR 7
6.	Cablex Bentleigh VIC 3165	Electrical Harness	IR 2, IR 3, IR 5, IR 7
7.	Thales Australia Bendigo VIC 3550	Engine Assembly	IR 1, IR 2, IR 3, IR 5, IR 7
8.	DVR Engineering Coolaroo VIC 3048	Fabrication and Sub Frames	IR 7
10.	Thomas Warburton	Hardware	IR 5, IR 7

Table 2: Work Packages related to Industry Requirements			
Serial	Company	Work Package	Applicable Industry Requirement
	Dandenong South 3164		
11.	MoTec Croydon South VIC 3136	Health and Usage Monitoring System (HUMS)	IR 1, IR 2, IR 3, IR 4, IR 5, IR 6, IR 7
13.	McCullochs Bendigo VIC 3550	Hydraulics	IR 1, IR 2, IR 3, IR 5, IR 7
14.	MoTec Croydon South VIC 3136	Instrument Cluster	IR 5, IR 7
15.	PPG/Protec Delacombe VIC 3356	Paint	IR 7
16.	Trident Plastics Regency Park SA 5010	Plastics (Rotor Moulding)	IR 7
17.	Comtech Industries Pty Ltd Darrah QLD 4076	Plastics (Thermoforming)	IR 7
18.	Parker Hannifin Dandenong South VIC 3175	Pneumatic Frame Assembly	IR 1, IR 2, IR 3, IR 5, IR 7
19.	Hydrosteer Melbourne VIC 3000	Steering	IR 1, IR 2, IR 3, IR 5, IR 7
20.	DVR Engineering Coolaroo VIC 3048	Subframe	IR 7
21.	W.E. Platt Ingleburn NSW 2565	Manned Weapon Mount Swing Arm Kit	IR 7
22.	Thales Australia	Trailer Assembly LRIP BENDIGO FRP BRISBANE	IR 7

Key Offerings for Australian Industry

Suppliers on the Hawkei PMV-L program will have the opportunity to broaden their skill base beyond designing and producing the products that are their core business.

Typically, Defence projects sometimes impose requirements and specifications that stretch the capabilities of those suppliers not used to working on Defence programs. This 'stretching' activity can and often does lead to improvements in manufacturing processes, quality control and configuration management – as the suppliers learn what is required to participate in a Defence program.

Importantly, they also get the opportunity to be involved in developing the full range of Integrated Logistics Support (ILS) deliverables, all designed to optimise the supportability of the equipment solution for its anticipated operational life. This is not something that non-Defence manufacturers would routinely have to do.

Organisations that have not had to produce training packages or have never needed to produce Certificates of Conformance, or any other activities from the myriad of ILS deliverables, will climb the learning curve and acquire skills that will improve their ability to tender for future Defence work both in domestic and international markets. They will also be seen as credible Defence suppliers by other Prime Contractors because of this experience.

Scope of Future Work Opportunities

The Hawkei Supply Chain development strategy is to create an integrated supply chain for all required Hawkei subassemblies and materials. The strategy is underpinned by a clear 'make team buy' policy. Thales has focused on using our core manufacturing capabilities only for Hawkei sub frame production, engine dressing and vehicle final assembly. Non-core manufacturing activities have been sought from specialist vendors with the clear aim being to devolve non-core work as far as practical into the industrial base.

Hawkei's design and modular build offers a unique opportunity to increase the level of 'value-add' provided by vendors in the Australian supplier network. The various sub-assemblies, parts and materials required to be procured were divided into a number of purchasing work packages that were used to engage with industry looking for potential suppliers. The content of each package was defined around particular vehicle system functionality or a particular manufacturing methodology or material type. We then applied our internal supplier selection processes to determine the best outcome for the project.

At this stage of the contract, the allocation of work scope is all but complete for the range of work packages currently required. As the project progresses over time, there is the potential for other opportunities to arise. These could include:

- additional variants
- new mission role kits
- modifications to extant variants
- additional vehicles
- export orders
- design changes

We have already commenced the review of export opportunities and that has highlighted build options/requirements that are different to those incorporated for the ADF product. As we further define these changes, there will be a need to engage with industry to determine options for development and supply and also for the provision of through life support options.

Thales will utilise the same industry engagement process used to identify suppliers for the initial contract for any newly identified opportunities. We will make use of various industry forums and media advertising to alert the industrial base to the existence of the opportunities. Thales will also discuss the opportunity with our existing suppliers to gauge their ability to participate in the new work.

As a fundamental guiding principle, we will give first preference to Australian based companies provided that the offer meets all the other cost targets, contractual and technical requirements.

It is anticipated that the period of time in which to identify suitable vendors will be of the order of 12-18 months from the time that the opportunity is first identified. There may be shorter periods of time for opportunities that are perhaps more limited in scope.

The preferred location for the work will be dictated in the main by the needs of the customer organisation and existing arrangements that are already in place. For the types of opportunity envisaged, it is likely that there will not be any need to conduct work activities away from the supplier's own facilities. This could change if there is a desire by the customer (or a need from Thales) to conduct works where the vehicles are located on Thales or customer premises. Such works would normally be limited in scope and duration to what is economically sustainable.

Register your Interest

If your organisation is interested in being considered for future work programs with Thales in the Defence space (especially the development, build and supply of protected mobility vehicles), please register your interest with:

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Supply Chain Manager

Operations

Thales Australia

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Approver



Paul Feighan

Director, Protected Vehicles

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