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MANATŪ KAUPAPA WAONGA
NEW ZEALAND MINISTRY OF DEFENCE

15 October 2026

RESPONSE TO YOUR OFFICIAL INFORMATION ACT REQUEST

On 18 September 2026 the New Zealand Defence Force (NZDF) transferred to the Ministry of Defence (the Ministry), part of your Official Information Act 1982 request for the following information:

> *"Tenders were sought [in 1999] for 152 wheeled vehicles in the variants of 26 FSV's and 126 IMV's including Command Vehicles, Engineer Vehicles and Recovery Vehicles."*
>
> *This OIA seeks the tender docs referred to above and the MoD/Army assessment of responses to this tender - that I understand concluded the LAV III was the preferred choice.*

As outlined in the transfer email, the Ministry is responding to the aspect of your request relating to tender documents and Ministry of Defence assessments of responses to this tender.

The specific tender documents include sensitive commercial details provided by suppliers, who continue work as part of Defence Industry. They set out details that relate to capabilities used in combat situations – including equipment currently used by the New Zealand Defence Force and partner nations. As such, and in accordance with section 16(1)(e) of the Act, I am enclosing the following documents that provide a detailed assessment of the tenders, and were the basis for the recommendation and Cabinet decisions:

- *Divisional Review Committee, Light Armoured Vehicle Project, Proposal to declare a Preferred Vehicle, AD 4403/03i*
- *Light Armoured Vehicle Project: Cabinet Paper seeking Cabinet Approval in Principle to purchase up to 105 Light Armoured Vehicles*, 10 August 2000

Under section 28(3) of the Act you have the right to request the Ombudsman to investigate and review this response.

Yours sincerely

Karen White
Acting Deputy Secretary, Capability and Delivery

Enclosed:

- *Light Armoured Vehicle Project: Cabinet Paper seeking Cabinet Approval in Principle to purchase up to 105 Light Armoured Vehicles*, 10 August 2000
- *Divisional Review Committee, Light Armoured Vehicle Project, Proposal to declare a Preferred Vehicle, AD 4403/03i*

COPY

CLASSIFICATION

MOD REPORT COVER SHEET
To accompany any reports to Hon Mark Burton

Subject:	**Light Armoured Vehicle Project : Cabinet Paper seeking Cabinet Approval in Principle to purchase up to 105 Light Armoured Vehicles**		
Date:	10 August 2000		
Priority:	Routine Urgent	Action required by:	
Consultation Minister:	Hon Matt Robson		
MOD contact:	Mr K. McMahon Acting Deputy Secretary (Acquisitions)	Tel: 4960660 Tel:	A/H:
D File No:	AD 4417/1		

Key issues/ Background:	The Army proposes to motorise two Infantry Battalions in accordance with the "Motorisation of the NZ Army" paper Light armoured vehicles are required to replace obsolete MII3 armoured personnel carriers and Scorpion light tanks.		
Recommendations:	The options recommended are: 1. Purchase 105 LAV3 light armoured vehicles. 2. Purchase 75 LAV3 light armoured vehicles. 3. Purchase 55 LAV3 light armoured vehicles. 4. Redefine project.		
Consultation Minister's comment:		**Date:**	**Initials:**
Comment:			
Action sought:			
Minister's comments:			

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Office of the Minister of Defence

Chair
Cabinet Policy Committee

PURCHASE OF REPLACEMENT LIGHT ARMOURED VEHICLES

PROPOSAL

1. This proposal seeks Approval-in-Principle to procure up to 105 Light Armoured Vehicles for the NZ Army.

EXECUTIVE SUMMARY

2. The Governments Defence Policy Framework acknowledged that "the greatest needs are to upgrade the Army's mobility, communications, surveillance, and fire power capabilities".

3. The Army has a light infantry orientation, based on a doctrine of manoeuvre warfare. Its success depends on agility, and rapid manoeuvre to exploit opportunities, and minimise operational risk. Army's mobility is obtained through light armoured vehicles (IMV's and FSV's), a range of military soft skinned vehicles (trucks, landrovers), non-military vehicles (Holden Rodeos) and reconnaissance vehicles. Armoured vehicles are the only vehicles that provide protected mobility and direct fire support, to enable the infantry to manoeuvre safely.

4. To meet the Army's requirements, competitive tenders were called for the supply of armoured vehicles. Based on the detailed evaluation of tenders received, including assessment of project risk, the preferred vehicle named was the LAV III, 8x8 Light Armoured Vehicle, built in Canada by Diesel Division of General Motors.

5. This paper provide the Government with the following options:

Purchase 105 vehicles over a 5 year period;
Purchase 75 vehicles over a 3-4 year period with a further option for 30 vehicles.
Purchase 55 vehicles over a 3 year period with a further option for 50.
Redefine the project requirements

PROJECT HISTORY

a. CAB (98) M 10/5B(4) of 23 March 1998 approved-in-principle the acquisition of armoured vehicles for the NZ Army at an estimated cost of NZ$180 million. The proposal envisaged either an upgrade of 69 M113A1 vehicles to A4 standard or a new armoured personnel carrier (APC) vehicle and purchase of 12 fire support vehicles (FSV) to replace 24 Scorpion light tanks.

b. In March 1999, the then Minister approved the acquisition strategy, (open competitive tender, rather than a selective tender based on the Australian ASLAV vehicle, and with a common hull for both APC's and FSV's).

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c. CAB (99) M 13/2B of 24 May 1999, STR(99) M 12/6, confirmed the concept of Motorisation of the NZ Army, based on the use of wheeled vehicles and approved a change in scope for the project to increase the number of vehicles to 24 FSV and sufficient Infantry Mobility Vehicles (IMV's) to equip one battalion group plus an additional company's lift of IMV's for the second battalion, at an estimated cost of NZ$212 million.

d. The Minister of Defence subsequently confirmed the total cost of the project was not to exceed NZ$212 million

6. The Ministry conducted an open tender process based on specifications, configurations and numbers provided by the NZDF. This culminated in seven companies being invited to submit offers for the supply of Light Armoured Vehicles.

7. Tenders were sought for 152 wheeled vehicles in the variants of 26 FSV's and 126 IMV's, including Command Vehicles, Engineer Vehicles and Recovery Vehicles.

8. Three tender responses were received and after a detailed technical evaluation the lowest priced offer was selected as the preferred tenderer/vehicle.

9. The preferred contractor is Canadian Commercial Corporation (CCC) a Canadian Government agency supplying the 8X8 wheeled LAVIII as manufactured by Diesel Division of General Motors, Canada. The vehicle tendered comes in FSV configuration only (ie with a turret and cannon). In this configuration the Army requirements reduce from 152 vehicles to 105 because of operational synergies.

BACKGROUND

10. The June 2000 "Defence Policy Framework", confirmed the need to upgrade the Army's mobility, communications, surveillance and fire support capabilities, through the urgent capital acquisition of equipment. The acquisition of light armoured vehicles is central to Army's modernisation programme.

11. The Army has a light infantry orientation, based on a doctrine of manoeuvre warfare. Its success depends on agility, and rapid manoeuvre to exploit opportunities, and minimise operational risk. Army's mobility is obtained through light armoured vehicles (IMV's and FSV's), a range of military soft skinned vehicles (trucks, landrovers), non-military vehicles (Holden Rodeos) and reconnaissance vehicles. Armoured vehicles are the only vehicles that provide protected mobility and direct fire support, to enable the infantry to manoeuvre safely.

12. The intended organisation of the motorised infantry battalion is at Annex A.

13. The previous government's approval of the "Motorisation of the NZ Army" paper confirmed the change in concept of operations of the Army to a motorised infantry force noting the intention to equip two infantry battalion groups with wheeled armoured vehicles over time; the second battalion group being required to sustain a deployed battalion group, within the requirements of the Purchase Agreement.

14. Current planning directives require the Army to be able to deploy, at 60 days notice, a battalion group to participate in conventional mid-level conflict or in a range of UN and peace support operations. A second battalion is required to deploy at six months notice.

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15. The Government's Defence Policy Framework has directed a review of land force planning and capability, to identify options for "ensuring the core requirement for well equipped land forces capable of meeting our most immediate needs". This review is to be completed by November 2000.

CURRENT CAPABILITY

16. In the late 1960s the NZ Army procured M113 Armoured Personnel Carrier (APC) vehicles to provide mobility and protection to its combat forces. The vehicle has proven reliable but it lacks the protection, mobility and firepower required by modern forces. The twenty six M113 APCs that deployed to Bosnia-Herzegovinia in 1995 underwent major modifications costing NZ$3.2 million in order to provide the minimum acceptable level of protection. In addition, belly armour and sponson armour was borrowed from Australia. Although the level of protection of these vehicles was increased, their mobility was severely compromised.

17. Twenty-five M113s are currently in East Timor, and none are fitted with either belly or sponson armour. This would have been a grave deficiency were the vehicles placed under attack or had there been a mine threat. These vehicles are very old and unreliable.

18. The Scorpion which entered service in 1983 was employed as both a reconnaissance vehicle and a fire support vehicle in support of light infantry operations. All of these vehicles have since been withdrawn from service.

CAPABILITY REQUIREMENT

19. The functional capabilities required of the family of armoured vehicles were identified as :

a. **Mobility** - To provide infantry elements with cross-country battlefield mobility and operational mobility over longer distances using roads and tracks;

b. **Firepower** - To provide mobile 24 hour close direct support to mounted and dismounted infantry regardless of weather conditions;

c. **Protection** - To provide 7.62mm all-round protection that can be increased to 14.5mm all-round protection by way of bolt on armour. The vehicles must also protect the occupants against injury from anti-personnel mines and 155mm artillery high explosive (HE) detonations 15 metres from the vehicle;

d. **Command** - To provide the necessary communications, navigation aid and command post facilities to command and control manoeuvre elements when mobile;

e. **Supporting Elements** - To provide artillery and mortar observation parties or any of the NZ Army's infantry crew served weapons systems with protected mobility;

f. **Engineering Support** - To facilitate minor earthworks, obstacle clearance and counter mobility tasks;

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g. **Recovery** - To extricate and recover other armoured vehicles that are broken-down, bogged in soft terrain or casualties of enemy action;

h. **Casualty Evacuation** - To evacuate casualties;

i. **Logistics** - To carry sufficient food, water and ammunition to meet the needs of their passengers for two days; and

j. **Life of Vehicle** - The selected vehicle must be able to be sustained for 25 years.

ACQUISITION STRATEGY

20. To ensure that the proposed user requirement as provided by NZ Army would ensure a competitive tender environment, a UK based consultant (HVR Consulting) was employed to undertake an "independent verification and validation (IV&V)" of the user requirement.

21. The purpose of the IV&V was to:

a. Indicate where the defined capability did not provide an "off-the-shelf" solution and hence introduced development implications.

b. Indicate the achievability of the user requirement.

c. Identify of any performance or safety improvements that were required.

d. Identify any opportunities for cost savings.

e. Identify any omissions, duplications, contradictions, errors or need for rationalisation or clarifications.

22. The IV&V consultant recommended a substantial number of changes. All of these were incorporated within the final document, prior to its release to industry.

23. After reviewing the responses received in relation to the Registration of Interest as issued by the Ministry of Defence, the IV&V consultant indicated which of the short listed companies vehicles would be able to meet the user requirements. Accordingly the seven tenderers identified by the IV&V consultant were asked to quote and responses were received from:

a. Canadian Commercial Corporation (CCC) to provide the 8X8 wheeled, LAV III vehicle manufactured by Diesel Division General Motors (DDGM) Canada;

b. DDGM also responded, offering to supply the LAV III in their own right; and

c. Henschel Wehretchnik GmbH (HWK) of Germany to provide the 6x6 FOX vehicle.

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24. The evaluation of the offers received revealed that the offer from HWK, whilst technically acceptable, incurred a higher level of risk. The following risk areas were identified by HWK in their tender response:

a. FSV turret integration;

b. Mission kit configuration;

c. Verification of technical performance;

d. Preparation and compilation of manuals;

e. Verification of mine protection; and

f. Sub contractor component delivery.

25. The proposal was also deemed incomplete with the lack of operating, through life support and maintenance costs. There were also inconsistencies in the information provided for the turrets, hull (vehicle body) and spare parts.

26. When considering the comparative project costs (all variants/spares/armour/ simulators/STTE/publications/training/data deliverables/codification), the HWK proposal was some 15-20% more expensive than the other tenderers, at the then exchange rate. At present exchange rates this proposal would be in the order of 3-10% more expensive.

PREFERRED VEHICLE

27. Based on the detailed evaluation including assessment of project risk, the preferred vehicle named was the LAV III, 8x8 Light Armoured Vehicle, built in Canada by Diesel Division of General Motors.

28. The LAV III vehicle was deemed to be superior in terms of mobility and carrying capacity. As a vehicle that will be in service for at least 25 years, the recently designed LAV III offers superior growth potential in such areas as command and control, add on armour and other protective systems. The growth potential will also allow Army to deliver effective land forces with the capabilities needed to fulfil key tasks envisaged under the government's Defence Policy Framework.

29. During the evaluation of the proposals received it was ascertained that the LAV III vehicle also offered the ability to combine the functions of the IMV and FSV in a single light armoured vehicle. This meant that it has the capacity to carry a full infantry section (3 crew plus 7 troops) even when fitted with a turreted weapon system.

30. This increase in capability has meant that the total fleet requirement, which was originally seen as 152 vehicles, can be reduced to 105 vehicles. This revised capability will also reduce the annual operating costs.

31. The LAV III has a high degree of commonality with the Canadian Army vehicle. Whilst having only a limited commonality with the ADF ASLAV vehicle, (see Annex B) it will be fully inter-operable with it.

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DETERMINANTS

Land Capability Requirements

32. This submission is based on the requirement for the Army to be able to deploy and sustain a battalion group able to participate in a collation peace support operations or play a supporting role in a mid-level conventional conflict based on a motorised Army. These policy settings will be reviewed in the land capability review commissioned under the Defence Policy Framework. This review will also consider the implications of alternative deployment scenarios, including multiple simultaneous deployments involving force elements below battalion size.

Wheels versus Tracks

33. This submission is based on the earlier decision that wheeled armoured vehicles provide an advantage over tracked vehicles. Annex B provides a comparison.

Common Body Shell versus Multi Body Shell

34. In its desired requirements the Army indicated a preference for a common body shell type for the FSV and IMV. This commonality introduces operational, logistic, training and maintenance advantages. One common vehicle type can limit flexibility, and may be initially more expensive. For instance having one battalion equipped with the LAV III and the other equipped with an upgraded M113 APC or similar may be a cheaper and more versatile combination. This concept has not been tested.

35. The Australian Army has three armoured vehicle types: the ASLAV; the M113 APC; and the Bushranger (IMV).

One Common Vehicle for FSV and IMV roles

36. It emerged during discussions with the preferred tenderer that having one common vehicle -a light armoured vehicle with a 25mm cannon in the turret, - reduced the number of vehicles required and therefore produced a cheaper through life option. This submission is based on a common light armoured vehicle for both the FSV and IMV roles rather than specific variants.

Numbers

37. The existing Cabinet Approval-in-Principle is to meet a battalion plus company requirement for FSV's and IMV's based on a vehicle for each role. This submission is based on a two battalion requirement using a common vehicle for both roles.

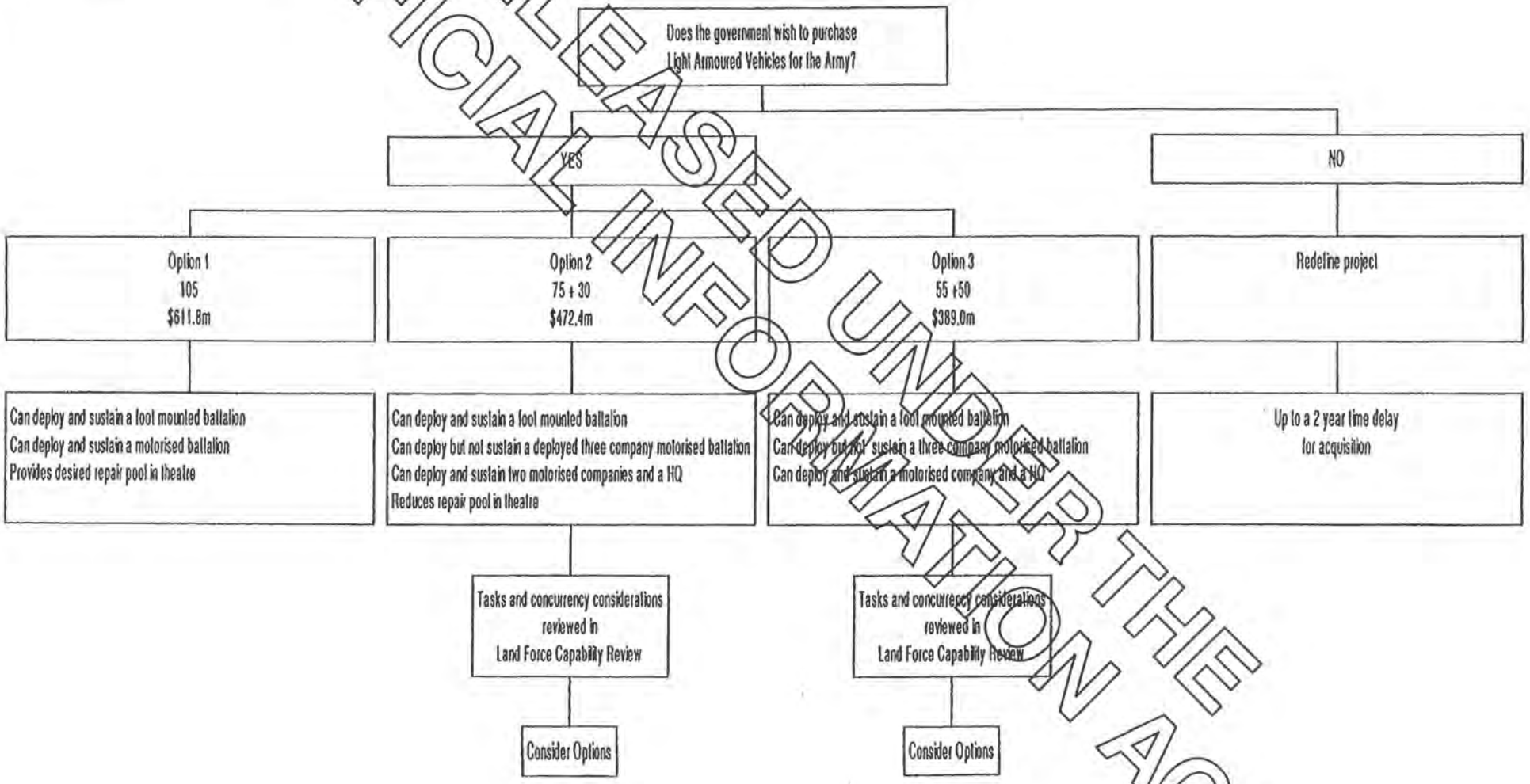
Stepped Acquisition

38. The existing Cabinet Approval envisaged an initial purchase of NZ$212 million worth of vehicles, with the purchase of the remaining IMV's to complete motorisation of the Army over five to seven years. This submission provides three acquisition options.

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CHOICES

39. The Government has the following choices:



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OPTIONS

40. These options assume the Government will wish to proceed with the purchase of up to 105 LAV III light armoured vehicles.

41. The options proposed are as follows:

a. **Option 1** - Purchase **105** light armoured vehicles delivered over a five year period at a total cost of NZ$611,764,613 (GST inclusive).

105 vehicles would provide commonality of equipment across both battalions. This would:

(1) provide a deployable and sustainable battalion group, consisting of three motorised rifle companies, able to meet intended policy outcomes, and which is seen as both credible and usable by our defence partners.

(2) enable the reinforcement to the battalion group to arrive in the unit with a high level of skills in motorised operations, both during mobilisation in NZ and once the force is deployed.

(3) enable the battalion group commitment to be sustained by rotating the complete battalion at the time of change.

b. **Option 2** - Purchase **75** light armoured vehicles delivered over a 3-4 year period at a cost of NZ$472,369,463 (GST inclusive) with an option for **30** more light armoured vehicles later.

Purchase of 75 vehicles would result in a force structure capable of providing a deployable motorised battalion group, able to meet intended policy outcomes. There would, however, be a high degree of risk in ensuring its sustainability once deployed. The basis for this assessment is:

(1) There would be fewer vehicles in the in-theatre repair and maintenance pool. This may result in lower vehicle availability through mechanical failure or vehicle casualties (both battle and non battle).

(2) A complete motorised battalion deployment would be unsustainable within the constraints of the Purchase Agreement. Sufficient vehicles would be left in New Zealand after the deployment of a three rifle company battalion to train only one rifle company at a time. This would result in the battalion group commitment being sustained by rotating the force one rifle company at a time. Complete the rotation of a battalion sized force would take longer than the six months currently planned for in the Purchase Agreement.

(3) The maximum fully motorised infantry force that could be deployed and sustained would be two motorised rifle companies in the battalion. This

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would leave sufficient vehicles in New Zealand to train reinforcements and the rotation contingent.

(4) Whilst fewer vehicles would have been purchased, the same sized force would need to be trained. Therefore, the vehicles would have a higher usage rate, higher operating costs and a shorter fleet life.

c. **Option 3** - Purchase **55** light armoured vehicles delivered over a 3 year period at a cost of NZ$388,948,841 (GST inclusive) with an option for **50** more light armoured vehicles later.

Purchase of 55 vehicles would result in a force structure capable of providing:

(1) For operations involving motorised infantry, Army would be able to provide one of three options:

(a) A deployable mounted battalion (with a reduced in-theatre repair and maintenance pool). The battalion would not be sustainable after the initial deployment, and reinforcements would have to be trained in theatre.

(b) A deployable and sustainable reinforced company group.

(c) A deployable and sustainable battalion structure with only one motorised rifle company. The other rifle companies would be dismounted infantry, or non New Zealand motorised units.

(2) For operations involving foot mounted infantry, Army would be able to provide:

(a) A deployable and sustainable battalion group based around three foot mounted infantry companies.

(b) A deployable and sustainable battalion group based around two foot mounted companies and one motorised rifle company.

42. The option vehicles as detailed in Option 2 and 3 do not constitute a commitment by the Government at this time and would require an additional submission seeking funding approval prior to the expiry of the option validity date. The scale of such a commitment would be:

a. The option to buy another 30 vehicles, if exercised before the delivery of the last of the initial 75, would be an additional cost of NZ$163,561,806 (GST inclusive). The total project cost for 105 vehicles under this arrangement would therefore be approximately NZ$635,931,269 (GST inclusive).

b. The option to buy another 50 vehicles, if exercised before the delivery the last of the initial 55, would be at an additional cost of NZ$274,032,099. The total project cost for 105 vehicles under this arrangement would therefore be NZ$662,980,940 (GST inclusive).

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DELIVERY SCHEDULE

43. The following delivery schedule indicates when vehicles could arrive in Waiouru for acceptance testing.

Option	Batch 1	Batch 2	Batch 3	Batch 4	Batch 5	Batch 6	Batch 7
105 vehicles	Jul 02 13 vehs	Sep 02 17 vehs	Nov 02 16 vehs	Jan 03 10 vehs	Jul 03 14 vehs	Jul 04 18 vehs	Sep 04 17 vehs
75/30 vehicles	Jul 02 13 vehs	Sep 02 17 vehs	Nov 02 16 vehs	Jan 03 10 vehs	Jul 03 19 vehs	Jan 06 16 vehs	Mar 06 14 vehs
55/50 vehicles	Jul 02 13 vehs	Sep 02 17 vehs	Nov 02 17 vehs	Jan 03 8 vehs	Jan 06 15 vehs	Mar 06 18 vehs	May 06 17 vehs

DEFENCE POLICY FRAMEWORK

44. The capital and operating cost of this capability is consistent with the priorities for rebuilding the NZDF as set down in the June 2000 Defence Policy Framework.

CONCLUSIONS

45. The purchase of the LAV III Light Armoured Vehicle will provide Army with the minimum levels of armoured mobility needed to meet the Government's requirements. It demonstrates commitment, resolve and the ability to deploy at the lower tactical levels with our potential coalition and UN partners in a broad range of conflict types.

CONSULTATION WITH OTHER DEPARTMENTS

46. The Department of Prime Minister and Cabinet, The Treasury, the Ministry of Foreign Affairs and Trade and the Ministry of Commerce have been consulted on this proposal.

TREASURY COMMENT

47. The Government's June 2000 Defence Policy Framework places significant emphasis on upgrading the Army's capability. The current vehicles are obsolete and in need of urgent replacement. Given the Government's core requirement to have a well equipped combat trained land force, the replacement light armoured vehicle project and the tactical communications project are the higher priority of the three acquisition projects in front of Ministers.

48. We have been guided by Ministry of Defence and NZDF advice that this vehicle is an appropriate vehicle to meet the Government's policy objectives.

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49. The option of 105 vehicles is predicated on being able to deploy and sustain a three-company battalion group in a theatre of operations for up to 12 months duration. If 105 vehicles were purchased, then Ministers would be able to deploy one three-company battalion offshore for six months, while a further similar battalion remains under training in New Zealand. Having a second battalion under training in New Zealand means that a fully trained equivalent unit can replace the Army battalion that is deployed offshore. This involves a significant deepening of the Army's current capability. In order to fully achieve the Government's policy as outlined in the Purchase Agreement of maintaining one battalion overseas and to sustain it for a year, 105 vehicles is required.

50. This paper, in addition to providing an option to purchase 105 vehicles, provides options to purchase a lesser number of vehicles (75 or 55 vehicles). If Ministers want the capability outlined above, it will be cheaper to purchase the 105 vehicles in one batch.

51. Despite this capital acquisition being a high priority defence purchase for successive Governments for several years, and the significant size of this capital acquisition, the final stages of this capital acquisition process have been rushed. Treasury has not had the opportunity to scrutinise fully the operational and capital costs of the proposed purchase and considerable fiscal risks remain.

52. We will report directly to the Minister of Finance with more detail on this proposal.

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RECOMMENDATIONS

53. It is recommended that the Committee :

APPROVE-IN-PRINCIPLE the procurement of light armoured vehicles for the Army by selecting either;

OPTION 1 - The purchase of **105** light armoured vehicles for delivery over a five year period at a cost not to exceed **NZ$$611,764,613 (GST inclusive)** based on an exchange rate of NZ$1.00=CDN$0.6685 and NZ$1.00=US$0.460.

OR

OPTION 2 - The purchase of **75** light armoured vehicles delivered over a 3-4 year period at a cost of **NZ$472,369,463 (GST inclusive)** based on an exchange rate of NZ$1.00=CDN$0.6685 and NZ$1.00=US$0.460, with an option for **30** more light armoured vehicles later.

OR

OPTION 3 - The purchase of **55** light armoured vehicles delivered over a three year period at a cost of **NZ$388,948,841 (GST inclusive)** based on an exchange rate of NZ$1.00=CDN$0.6685 and NZ$1.00=US$0.460, with an option for **50** more light armoured vehicles later.

OR

OPTION 4 - Redefine the project requirements.

REQUEST officials to submit detailed proposals for project implementation covering funding, timing and publicity for consideration by the Cabinet Policy Committee on 6 Wednesday 6 September 2000.

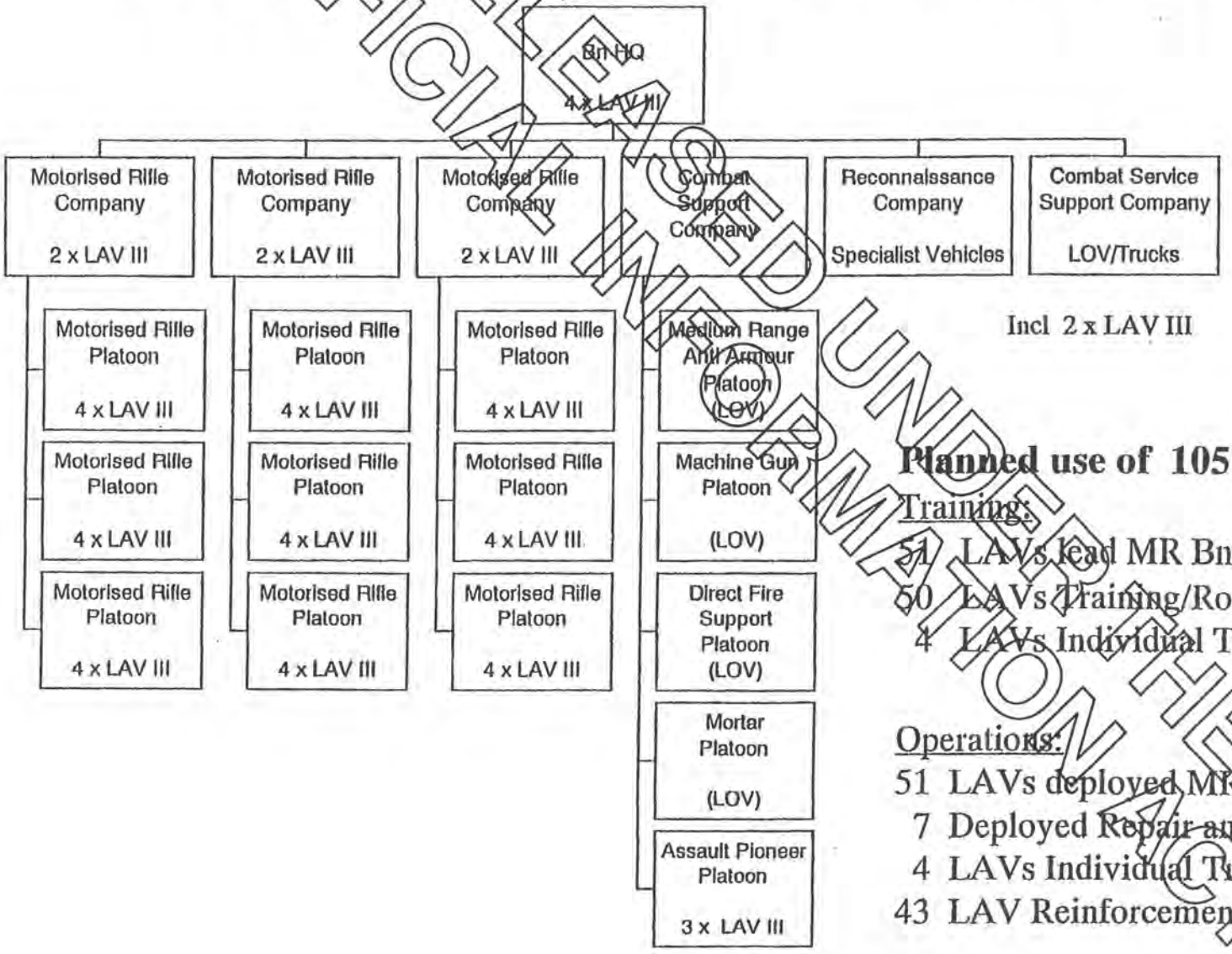
NOTE that the detailed proposals will incorporate the financial considerations for both Vote:Defence and Vote:Defence Force.

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Hon Mark Burton
Minister of Defence

Date : ..... / ..... / 2000

NZ Army's Motorised Battalion - Overview



Planned use of 105 LAV IIIs

Training:

51 LAVs lead MR Bn
50 LAVs Training/Rotation Bn
4 LAVs Individual Training

Operations:

51 LAVs deployed MR Bn
7 Deployed Repair and Maintenance Pool
4 LAVs Individual Training
43 LAV Reinforcement/Rotation Training

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ANNEX B.

VEHICLE COMPARISIONS

WHEELS VERSUS TRACKS

Types Of Infantry Carrying Vehicles

1. In any discussion of protected mobility for manoeuvre elements, three factors are important, each in natural tension with the other two. The first two relate to vehicle survivability and hence operational effectiveness/risk – the degree of protection provided and the speed of movement in a combat environment. The third factor is that of the cost of the option selected.

2. There are three basic categories of vehicles which can provide protected mobility to manoeuvre elements: tracked armoured vehicles such as the M113 (generically known as APCs) wheeled armoured vehicles such as the "Light Armoured Vehicle" or LAVs (generically known as Infantry Mobility Vehicles or IMVs), and protected trucks such as the Australian Bushmaster.

3. Protected Trucks. Cabinet has agreed the minimum level of protection necessary for Army's armoured vehicles. Any armoured vehicle being considered for procurement must be able to provide the occupants of the vehicle with protection against 12.7 mm (.50 cal) armour piercing (AP) machine gun fire. The protected truck fails to meet this criterion. It would therefore not provide the level of survivability necessary to enable a unit equipped with them to undertake the range of tasks necessary to achieve Government's policy goals, in either a warfighting or peace support/enforcement environment at an acceptable level of risk. In light of this, this vehicle type has not been considered further.

4. Wheeled Versus Tracked Armoured Vehicles. Both wheeled (IMVs) and tracked (APCs) vehicle will meet the majority of the operational effectiveness criteria considered appropriate for the NZ Army's manoeuvre elements. However, neither vehicle will meet all the criteria. Based upon the size of the NZ Army, it would not be cost effective to hold both vehicle types within the force. Therefore, the vehicle type that best meets the requirements should be selected, acknowledging that in doing so, some desirable characteristics would be lost.

5. IMVs do have a number of significant advantages over their tracked counterparts:

a. Vehicle Serviceability. IMVs have a higher Mean Time Between Failure (MTBF), generating approximately 95% availability. APCs' MTBF is approximately 75-80%. This means that fewer IMVs would need to be purchased for the "Repair and Maintenance Pool" to maintain an effective and sustainable capability.

b. Levels of Protection. Whilst both vehicle types meet the Cabinet directed level of protection against direct fire weapons, the IMV is able to provide better protection against mines. The bottom of the IMV's hull is shaped to minimise the effects of blast. The vehicle can loose up to two of the four wheels on one side of the vehicle and is still able to move. APCs have a flat hull. Whilst additional armour can be applied to the APC's hull to reduce the effects of mines inside the vehicle,

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this increases the weight of the vehicle and therefore lowers its speed. If a mine cuts a track, the vehicle can not move.

c. Soldier Effectiveness. Wheeled vehicles give a significantly softer and smoother ride for the soldiers that will dismount. The result is a soldier who has a higher degree of operational effectiveness at the time he/she needs it – dismounted completing the task.

d. Self Deployment. There will be times when the area of operations intended for the NZ Force is physically removed from the point of disembarkation by considerable distances (in excess of 150km). IMVs can "self deploy" quickly and with greater reliability over these distances. APCs would require significantly more time to achieve this movement (with significantly greater logistic burden due to vehicle breakdowns), or require transporting by rail or flat bed trucks. Either of these deployment methods could impose significant burden on the wider force, the first a time burden and the second a logistical one.

e. Growth Potential. The IMVs being considered are all of modern technology (1990s). They therefore offer significant growth potential across the 25 year life of the vehicle. The technology in the APCs of comparative purchase prices (such as the M113 family) is of 1960s vintage. These APCs would therefore be at the end of their growth potential as they enter service with the NZ Army, and could not be as readily adapted to the changing needs of the vehicle through their life. The same arguments are true for 6 wheeled vehicles. These are of a similar design technology.

f. Environmental Considerations. Wheeled vehicles will be kinder to the environment. This is particularly important when considering the sustainability of Army's training areas in NZ, and is particularly relevant when considering the use of private land for training. The same considerations hold true when considering the impact on roads and infrastructures within an operational area. In achieving this, there is some loss of mobility in heavy periods of rain, such as the wet season in the tropical belt. Wheeled vehicles would largely be restricted to roads. Tracked vehicles would have better off-road mobility under these conditions, but equally, would inflict significantly greater damage to the roads and arable land in these same conditions.

g. Through Life Costs. APC type vehicles are significantly more expense to operate across an anticipated 25 year life span intended for the vehicle. Refurbished M113s, whilst appearing to be a cheaper option, have a number of significant problems:

(1) The vehicles would still incur the higher operating costs.

(2) Additional M113s would have to be purchased to motorise the two battalions.

(3) More importantly, the refurbished M113 would only have an 8-10 year life span, after which a replacement vehicle would have to be purchased.

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(4) In addition, a fire support vehicle would have to be purchased to protect the M113s. The .50 Cal Machine gun the vehicle is equipped with is not sufficient in any situation above the lower end of peace support tasks, without exposing the force element to significant additional operational risk.

h. Training Considerations. Operator and maintenance training is quicker for wheeled vehicles.

i. Unit Locations. If the two battalions are equipped with wheeled vehicles, they can remain based in their current locations (Linton and Burnham). If the battalions were equipped with tracked vehicles, both battalions would have to move to Waiouru. This movement would incur significant additional infrastructural costs.

6. The above arguments point strongly to the purchase of new IMV as being the most cost-effective solution.

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ASLAV and LAV III

Description	ASLAV (Gen II)	LAV III (Gen 3)
Survivability/Protection (Basic protection)	7.62 mm ball 155 mm at a range of 15 metres in overhead attack. **Bolt on Armour** **Additional Protection Levels Provided** 12.7 mm all round	7.62 mm ball, ballistic floor panels, energy absorbing seating, ballistic impact resistant seating. 155 mm at a range of 15 metres in overhead attack. **Bolt on Armour** **Additional Protection Levels Provided** 12.7 mm all round 14.4 AP protection on horizontal attack in any direction. 155 mm HE at a range of 10 metres in overhead attack. Mine Blast Belly RHA Seat Crush Cushion
Seating Infantry Mobility Vehicle (IMV) Fire Support Vehicle (FSV)	Crew of 2, seating for 7 Crew of 3, possible seating for 4	Crew of 3, seating for 7 Crew of 3, seating for 7
Weight Gross Vehicle Weight Combat payload Growth Potential	32,000lbs 11,000lbs nil	38,000lbs 14,000lbs up to 18,000lbs
Intergrated Logistic Support Operating Cost per km Annual Operating Cost (based on 5000km/pa) Power Pack exchange Body shell variants Designed	NZ$7.50/km $5.70m 10 hours 3 late 60's	NZ$2.98/km $2.64m 1.5 hours 1 mid 90's

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CAB 100/2000/1

CONSULTATION ON CABINET AND CABINET COMMITTEE SUBMISSIONS

Certification by Department

partments consulted: The attached submission has implications for the following departments whose views have en sought and are accurately reflected in the submission:

THE TREASURY, THE DEPARTMENT OF THE PRIME MINISTER & CABINET and THE MINISTRY OF FOREIGN AFFAIRS & TRADE

epartments informed: In addition, the following departments have an interest in the submission and have been formed:

thers consulted: Other interested groups have been consulted as follows:

gnature	**Name, Title, Department**	**Date**
	G.C. FORTUNE SECRETARY OF DEFENCE	/ /

Certification by Minister

Ministers should be prepared to update and amplify the advice below when the submission is discussed at abinet/Cabinet committee. The attached submission:

Consultation at Ministerial level	☐ did not need consultation with other Ministers ☐ has been the subject of consultation with the Minister of Finance *[required for all submissions seeking new funding]* ☐ has been the subject of consultation with the following relevant portfolio Minister(s) ..... ☒ has been the subject of consultation with relevant coalition consultation Minister(s)
Consultation with Government MPs	☐ does not need consultation with the government caucuses ☐ **has been** or **will be** *[specify which]* the subject of consultation with the following government caucuses: ☐ Labour caucus ☐ Alliance caucus
Consultation at Parliamentary level	☐ does not need consultation at parliamentary level ☐ **has been** or **will be** *[specify which]* the subject of consultation with the following other parties represented in Parliament: .....

Signature	**Portfolio**	**Date**
		/ /

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11 MAY 1999
RECORDS MANAGEMENT SERVICES
M212

Chief of Defence Force
Q New Zealand Defence Force

015508

CABINET STRATEGY COMMITTEE

STR (99) 87

11 May 1999

FILE COPY

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Title MOTORISATION OF THE NZ ARMY

Purpose The paper seeks agreement to change the concept of operations of the Army to a motorised infantry and seeks consequential decisions on the acquisition of armoured vehicles.

Previous Consideration On 23 March 1998 Cabinet approved in principle the acquisition of armoured vehicles for the New Zealand Army at an estimated cost of NZ$180 million (GST inclusive). Cabinet noted that the cost of this project was included in the Defence Assessment, that the New Zealand Defence Force's operating baseline had been adjusted to encompass the project [CAB (97) M 42/4D(4) refers] and that the capital will be found from within the current baseline [CAB (98) M 10/5B(4) refers].

Summary At present, the infantry's main method of movement is by foot. Where infantry are required to be moved in areas exposing them to high risk of enemy directed fire, there are only sufficient Armoured Personnel Carriers (APCs) to move one company group at a time (one quarter of one battalion).

The major conclusion from both Army's internal study and a comparison with the doctrines and capabilities of NZ's allies, confirmed the Army's need to motorise its infantry and reconnaissance elements. Motorisation of the Army would ensure interoperability with NZ's principal defence partners across a broad (but not complete) range of operational tasks and environments.

The decision from March 1998, referred to above, anticipated procuring protected mobility, using an APC type vehicle, for a sustainable company group lift within a foot-mobile battalion. It was indicated that 69 APCs and 12 Fire Support Vehicles (FSV) were needed to provide this capability.

A change in project scope is now proposed. To ensure that the infantry battalion group that was deployed could be effectively sustained for commitments longer than six months, it is proposed that the second infantry battalion should be held at the same level of training, using the same equipment. It is now suggested that approximately 127 Infantry Mobility Vehicles (IMV) and 24 FSV would be required. This could cost up to NZ $408 million (excluding GST). The Defence Capital Plan (DCP) has funding provision of NZ$212 million (excluding GST).

CABINET PAPERS

PA/CDF	CNS
DCDS	CGS
AC OPS	CAS
AC RSCS	DLS
AC DEV	
AC PERS	
CFO	
SRA	
GM DFS	

Three options are considered to purchase the equipment:

- Option 1 would be to increase funding to buy the total number of IMVs and FSVs at once.
- Option 2 would be purchase all the FSVs and sufficient IMVs to equip one battalion, plus an additional company's lift of IMVs for the second battalion. The cost would be in the order of $212 million.
- Option 3 would be purchasing the vehicles in two tranches, using Option 2 for the initial purchase, and acknowledging that the remainder would be purchased later. This would result in a second project being introduced to the DCP for the second vehicle buy in the outyears. Acknowledging the constraints of the approved DCP, this is Defence's preferred strategy.

The implementation of the Motorisation Project will have effects on three other Priority One projects on the DCP. These are summarised in paragraph 30 on pages 6-7.

Baseline Implications	None, as the funding is contained within the approved Defence Capital Plan.
Legislative Implications	None.
Timing Issues	None indicated.
Announcement	None indicated.
Consultation	NZDF, Ministry of Defence, DPMC, MFAT, Treasury. The Minister has indicated that consultation with the National caucus is not required.

The Minister of Defence recommends that the Committee:

a approve the intention to change the concept of operations of the New Zealand Army to a motorised infantry force, to be carried out progressively as funds are available;

b i note that on 23 March 1998 Cabinet approved in principle the acquisition of armoured vehicles for the New Zealand Army at an estimated cost of NZ$180 million (GST inclusive) [CAB (98) M 10/5B(4) refers];

ii approve a change in scope for the replacement of armoured vehicles to reflect an increase in the number of vehicles to 24 Fire Support Vehicles and sufficient Infantry Mobility Vehicles to equip one battalion group, plus an additional company's lift of Infantry Mobility Vehicles for the second battalion, at an estimated cost of NZ$212 million (GST exclusive);

c note that the NZ$212 million falls within the envelope of the approved the Defence Capital Plan [CAB (99) M 45/25 refers];

d note that the Ministry of Defence intends to restrict the tender process to wheeled armoured vehicles;

e note that a submission will be made later in 1999 to seek Approval-to-Commit funds once a preferred supplier has been identified and detailed costs established;

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note that the authority to adjust the Ministry of Defence's Appropriation Purchase or Development of Capital Assets by the Crown will be sought as part of the further submission to commit funds; and

note the intention of the New Zealand Defence Force to introduce a new project into the Defence Capital Plan within five to seven years, being the purchase of the remaining Infantry Mobility Vehicles to complete the motorisation of the Army.

ah Egan
Secretary of the Cabinet

PIES TO:

binet Strategy Committee
ief Executive, PM&C
retary to the Treasury
ary of Defence
nief of Defence Force
cretary of Foreign Affairs and Trade
ate Services Commissioner

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DIVISIONAL REVIEW COMMITTEE

AD 4403/03

Chairman
Acquisition Advisory Board

LIGHT ARMOURED VEHICLE PROJECT – PROPOSAL TO DECLARE A PREFERRED VEHICLE

Reference: A. Project Director's Minute AD 4417 dated 9 Feb. 00

1. The Divisional Review Committee, (DRC) met at 0900hrs on Tuesday 15 February 2000 and considered the recommendations contained in the reference; namely:

   a. **Endorse** the selection of the LAV III as the preferred vehicle for the Light Armoured Vehicle Project;

   b. **Request** AC Dev/Army to review the feasibility of dual rolling the Canadian APC to meet the operational requirements of the NZ Army.

2. The members of the DRC recommend that the Acquisition Advisory Board, (AAB):

   a. **Note** that there were three tenders received from CCC, DDGM and HWK

   b. **Note** that none of the tenders were fully compliant

   c. **Note** that the non-compliances of the LAV III family of vehicles are of a minor nature whereas those associated with the HWK vehicles are significant and compromise the User Requirement

   d. **Note** that the comparative price from HWK is higher than those from CCC and DDGM

   e. **Note** that the tender evaluation rates the HWK offer as having a significantly higher risk associated with it

   f. **Approve** the selection of the LAV III family of vehicles as those preferred to meet the requirements of the Light Armoured Vehicle Project

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g. **Approve** a request to AC Dev to review the feasibility of the Canadian Army variant of the LAV III to fulfill the dual roles of the FSV and IMV as this would appear to provide the potential for significant cost savings

h. **Note** that following any decision by the OCE over the feasibility of pursuing an option to acquire the Canadian Army variant, the issue and evaluation of a BAFO to CCC and DDGM will facilitate a source selection recommendation

i. **Note** that Due Diligence should not occur until any BAFO evaluation is completed.

K W McMahon
AS(A)
Chairperson

15 Feb. 00

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MINUTE

AC Dev
ACGS (Dev)
ASSTSEC(F)
DILM
PD1

A meeting of the Meeting of the TENDERS REVIEW COMMITTEE will be held at 1300 hours on Thursday, 17 February 2000 in the 3rd floor Conference Room, Defence House. Attached are the papers pertaining to this meeting.

Ngaire Cowie
PA / DEPSEC(A)

15 Feb 2000

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MINUTE

AD 4003/03

DILM
PD-P Ware
PD-G Dilks

LIGHT ARMOURED VEHICLE PROJECT

Ref. A: Minute AD 4417 dated 9 Feb. 00

1. The minute at reference proposes that the Tenders Review Board approve the selection of the LAVIII as the preferred vehicle for the light Armoured Vehicle Project.

2. It should be noted that there is no recommendation for a specific Tenderer as the LAV III can be procured through two organisations. A decision on which organisation to contract through will be made at a later time, maintaining a competitive environment.

3. In accordance with the agreed procedures relating to the TRB, addressees are requested to attend a meeting tomorrow, Tuesday 15 Feb. 00 at 0900 hrs in the "Black Hole".

4. The outcome of the meeting will be a recommendation to the TRB. Addressees not able to attend the TRB will have their recommendation recorded at this proposed meeting.

K.W. McMahon
AS(A)

14 Feb. 00

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FACSIMILE MESSAGE

TO : Assistant Secretary (Acquisition) **FAX NO: 06 3049662**	
FROM: Peter Ware **Project Director** **Acquisition Division** **Ministry of Defence** **PO Box 5347** **Wellington** **NEW ZEALAND**	**Phone : (+64 4) 496-0666** **Fax No: (+64 4) 496-0858** **Date : 9 February 2000** **No of Pages : 16**

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Kevin,

A little light reading.

Robin has endorsed the concept of short listing and then putting the matter in the hands of AC Dev.

Any questions/comments please don't hesitate to contact me.

Thanks

Peter

Caution: The information contained in this facsimile message is confidential and may be legally privileged. If the reader of this message is not the intended recipient you are hereby notified that any use, dissemination, distribution, or reproduction of this message is prohibited. If you have received this message in error, please notify us immediately and return the original message to us. Thank you.

MINUTES OF THE MEETING OF THE ACQUISITION ADVISORY HELD ON THURSDAY, 17 FEBRUARY 2000 IN THE 3RD FLOOR CONFERENCE ROOM, DEFENCE HOUSE, STOUT STREET, WELLINGTON AT 1300 HOURS BOARD TO DISCUSS A PROPOSAL TO DECLARE A PREFERRED VEHICLE FOR THE LIGHT ARMOURED VEHICLE PROJECT

PRESENT :

MoD : DEPSEC(A), ASSTSEC(A), ASSTSEC(F), DILM, PD1, PM:LAVs and PA/DEPSEC(A)

Army : ACGS (Dev), PO:Armoured Vehicles

Apologies : AC (Dev)

1. **INTRODUCTION** :

The Project Director commenced the meeting by explaining the new format for the review of projects - firstly by the Divisional Review Committee, who then put forward a recommendation to the Acquisition Advisory Board for consideration.

The Divisional Review Committee ("DRC") endorsed the selection of the LAV III as the preferred vehicle for the Light Armoured Vehicle Project and requested Army (AC Dev) to review the feasibility of dual rolling the Canadian APC vehicles to meet the operational requirements of the NZ Army.

2. **BACKGROUND** :

- During the tender stage the User Requirement, as originally issued, was amended by way of 'waivers' - these being granted to both DDGM and HWK.

- During clarification discussions with Diesel Division of General Motors] ("DDGM"), they stated that an option to buy the standard Canadian variant was a possibility. This option was not provided within their proposal, is outside the current User Requirement and has therefore not been considered in detail. However, if this option is pursued there could be significant cost reductions especially in relation to non-recurring engineering (NRE)/project management and logistic support costs as outlined in their current proposal. Also, this option will require the endorsement of Army [AC Dev] as it does not meet the FDP requirements.

- The standard Canadian vehicle is fitted with a Fire Support Capacity and can therefore be utilised in a dual role, i.e. as both Fire Support and an Infantry Mobility Vehicle. The combining of the capability will result in the requirement for less vehicles, less personnel and therefore a reduction in the annual operating costs.

3. **RECOMMENDATION** :

The DRC recommended that the Acquisition Advisory Board ("AAB") :

a) **Note** that there were three tenders received -

- Canadian Commercial Corporation ("CCC") [on behalf of Diesel Division of General Motors] ("DDGM") offered the 8x8 LAV III family of vehicles;

- DDGM, in their own right, offered the 8x8 LAV III family of vehicles; and

- Henschel Wehrtehnick GmbH ("HWK") of Germany offered their 6x6 FOX family of vehicles.

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b) **Note** that :

- none of the tenders were fully compliant;
- the non-compliance of the LAV III family of vehicles are minor compared with the HWK vehicles which have significant non-compliance and compromise the User Requirement;
- the comparative price from HWK is higher than those from CCC and DDGM;
- the tender evaluation rates the HWK offer as having significantly higher risks associated with it.

c) **APPROVE** the selection of the LAV III family of vehicles as those preferred to meet the requirements of the Light Armoured Vehicle Project.

d) **APPROVE** the request to AC (Dev) to review the feasibility of the Canadian Army variant of the LAV III to fulfill the dual roles of the FSV and IMV as this would appear to provide the potential for significant cost savings.

e) **Note** that following any decision by the Office of the Chief Executives, over the feasibility of pursuing an option to acquire the Canadian Army variant, the issue and evaluation of a BAFO to CCC and DDGM will facilitate a source selection recommendation; and

f) **Note** that Due Diligence should not occur until after the BAFO evaluation is completed.

4. **ARMY'S POSITION :** Col Ian Gordon stated that the Canadian variant of the LAV III family of vehicles as a single variant would meet the NZ Army's capabilities; would cost less to sustain over time and therefore the Army endorse the recommendation.

5. **COMMENTS**

5.1 Kevin McMahon - ASST SEC(A)'s - The companies were given the opportunity to meet some of the shortfalls in the deliverables. HWK is a long way short, are more expensive and have significant risks, e.g. their ability to provide all deliverables. ASSTSEC(A) was comfortable with the proposals put forward by the Project Director and supports recommendation for :

- Issue of a BAFO between CCC and DDGM;
- Proposed purchase of the Canadian Army variant, subject to AC Dev's approval;
- Not making a source selection but looking at a family of vehicles;
- Evaluation Team to undertake due diligence following the BAFO.

5.2 Stu Patterson [ASST SEC (F)]

Nil to report; agrees with the method of selection. Appreciated there were gaps to the costings, which didn't meet the requirements.

ASST SEC(A) stated that if HWK were asked for more detailed information this would bring they would increase their price.

5.3 Tom Just (DILM)

Happy with the selection process.

Technically DDGM had six non-compliances, some were insignificant but concerned the tendering process. DILM asked whether, with those non-compliances and in terms of the audit trail, we could

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legally deal with DDGM?

Action: Project Director to seek legal advice regarding a clear direction on this issue.

5.4 Robin Johansen [DEPSEC(A)]

Page 8 DDGM Risks - Have the risks listed been identified by DDGM or have the MoD identified these risks in their assessment?

Answer : They are DDGM's risks.

Action : There needs to be a matrix in the next document formulating how the MoD assess the risks. Therefore, if we are asked to identify risk it is in a format that is easily accessible.

5.5 General Comments

Risks The Project Director stated that HWK have never fitted a turret and they state this as a "low risk" in their assessment. How do they rate "low"?

ASSTSEC(A) stated that verification of mine ..... had a high cost impact; how do they assess this?

Project Manager AFV stated that the HWK offer was very poor, it did not even include ground pressure requirements for the vehicle.

6 RECOMMENDATION

DEPSEC(A) approved the above, subject to the following provisos :-

- Legal advice is sort as to whether we can legally deal with DDGM because they are technically non-compliant;
- A clear direction from the lawyers is obtained before issuing a BAFO;
- **Action** : Project Director to draft a minute to AC Dev stating the issues and seeking approval/advice on the way ahead;

THEN :

- Inform HWK of their unsuccessful bid;
- Inform DDGM of the way we wish to proceed but that there will be a pause for approaisal
- AC Dev to put whole proposal back to Government.
- Letter to DEPSEC(A) from Project Director stating that all the above amendments have been incorporated into the document; that the above actions have been carried out.

Meeting closed at 1325 hours.

Signed : ..... Date : ..... / ..... / 2000

R V Johansen, DEPSEC(A)

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Signed : ..... Date : 9 / 3 / 2000

P Ware, Project Director

Signed : ..... Date : 9 / 3 / 2000

I Benfell, Project Manager

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MINUTE

AD:4417

Chairman
MoD Tenders Review Board

LIGHT ARMOURED VEHICLE PROJECT

1 The attached report prepared by the Armoured Vehicle Project Team clearly demonstrates that there is a preferred vehicle, namely the LAV III family of vehicles.

2. These vehicles have been offered by Canadian Commercial Corporation (CCC) on behalf of Diesel Division of General Motors (DDGM) and DDGM in their own right.

3. A third proposal was received from Henschel Wehrtehnick GmbH (HWK) of Germany. This offer will not be considered further due to the fact that it is less favourable than the offer from CCC/DDGM in all areas of the evaluation.

4. During the tender stage, the User Requirement as originally issued was amended by way of "waivers", these were granted to both DDGM and HWK .

5. The evaluation has been conducted against the agreed Evaluation Plan. This has ensured that a fair and unbiassed evaluation has taken place.

6. During clarification discussions with DDGM, it appears that an option to buy the standard Canadian variant whilst not provided within the current proposals is a possibility. The standard Canadian vehicle is fitted with a Fire Support Capability and can therefore be utilised in a dual role, ie both Fire Support and Infantry Mobility Vehicle (see attached picture).

7. It appears that by combining these characteristics into a single variant, Army can motorise two battalions for the same cost as the tendered for one and a half battalions. The combining of the capability will result in less vehicles, less personnel and less annual operating costs.

8. As this option is outside the current User Requirement it has therefore not been considered in detail. DDGM have advised however, that if this option was pursued, there could be significant cost reductions especially in relation to the Non Recurring Engineering (NRE)/Project Management/Logistic Support costs currently in their proposal.

9. The detailed investigation of this option will however require the endorsement of AC Dev and Army as it does not meet the requirements of the FDP.

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10. To enable the Project Team to consider the options the Tenders Review Board is requested to:

Endorse the selection of the LAV III as the preferred vehicle for the Light Armoured Vehicle Project;

Request AC Dev/Army to review the feasability of dual rolling the Canadian APC to meet the operatational requirements of the NZ Army.

P.J.Ware
Project Director

9 February 2000

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Light Armoured Vehicle Project

Executive Summary

3 responses were received from the 7 companies that were selected to receive the RFT.

The companies that responded were:

- Canadian Commercial Corporation (CCC) who endorsed and supported a proposal submitted by Diesel Division of General Motors (DDGM) Canada who offered their 8x8 LAVIII family of vehicles.
- DDGM also responded on their own behalf providing a completed Form of Tender.
- Henschel Wehrtechnik GmbH (HWK) of Germany who offered their 6x6 FOX family of vehicles.

The response from DDGM was comprehensive and complete whereas the response from HWK was incomplete. HWK made a last minute decision to bid and their response was non compliant in many areas and lacking in detail.

During the tender period a number of waivers were granted to both tenderers.
In response to a request from HWK the closure date was extended by 1 month..

Tenders closed on the 17th Dec 1999 and both tenders were received on time.

The Evaluation Plan was approved by Dep Sec (A) on the 16 Dec 1999.

Recommendation

The tender response from Henschel was less favorable than that offered by DDGM in all of the considerations made.

- Tendered Price
- Life Cycle Costs
- Delivery Schedule
- Tender Deliverables - Rules Of Tender
- Risk
- Industry Programme
- Compliance with the User Requirement
- Compliance with the Support Requirement

It is therefore recommended that the Henschel tender is not shortlisted and that DDGM is declared as the preferred tenderer.

Approval is sought to conduct Due Diligence on DDGM to confirm the suitability of the products and services they offered and then to commence Contract Negotiations.

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Tendered Price

Tenderers were required to submit bids for a quantity of 102, alternatively 152 vehicles in 6 different configurations.

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Light Armoured Vehicle Project

Life Cycle Costs Analysis

An incomplete submission from HWK made comparisons between the Fox and LAV3whole of life costs difficult, however initial calculations indicate Fox operating costs are slightly higher than those of the LAV3.

To refine the comparison further would require significant work with HWK.

Delivery Schedules

Both HWK and DDGM offered first deliveries approximately 17 months after contract award and final delivery within 3 years, however DDGM proposed that loan vehicles could be made available by arrangement with the Canadian Army.

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Light Armoured Vehicle Project

Responses To The Rules Of Tender, Part Three.

	DDGM	HWK
Completed Form of Tender in duplicate (Rules 2.1.1.1 and 2.1.1.2);	Yes	Yes
Profile of Tenderer that complies with Annex B (Rule 2.1.2.1) and DID ENG-1;	Yes	Yes
Alternative proposals (optional) (Rule 2.1.3);	Yes	Yes
Completion of statements of compliance to the Rules of Tender, User Requirement and the Support Requirement- (Rule 2.2.1);	Yes	Yes
Details of all objections to the proposed Contract together with offered alternative contractual provisions (Rule 2.2.3);	Yes	Brief comments only
Price, payment and delivery schedules complying with Annex F – with the payment terms required of the Crown including progressive payment schedules, clearly identified performance milestones, proposed financial security arrangements or other proposed payment terms (Rules 2.2.6 and 2.2.8); this document is attached in electronic format for responses.	Yes	Yes
Details of the current status of the Equipment being offered including the numbers produced and the countries in which they are in service.	Yes	Yes
Details of the Quality Certification held and Control Procedures currently followed by the Tenderer. (Rule 2.2.7.2);	ISO9001 (Feb 1995)	ISO9001 (Nov 1998)
A draft Project Management Plan complying with DID PROJ-1.1 (Rule 2.2.7.3.1.);	Yes	Incomplete
Certification that the Tenderer has familiarised itself with New Zealand tax laws (Rules 2.2.8.4);	Yes	Will Do So
A draft Project Quality plan complying with DID PROJ-1.2 (Rule 2.2.7.3.3);	Yes	Incomplete
A draft Project Risk Management Plan complying with DID PROJ 1.3;	Yes	Yes

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	DDGM	HWK
The draft Verification Cross Reference Index complying with DID PROJ-5;	Yes	Yes
A draft summary Contract Work Breakdown Structure and Dictionary complying with DID PROJ-6 (Rule 2.2.7.3.2);	Yes	Yes
The draft Specification in accordance with DID PROJ-7;	Yes	No
Details of Warranties offered (Rule 2.2.9.1);	Yes	Yes
Statement of export clearances obtained or the steps and timing required in relation to obtaining necessary export clearances (Rule 2.2.10);	Yes	Yes
Any suggested improvements to the Form of Tender (Rule 2.2.11);	Yes	No
Statement of country origin for all components sourced outside New Zealand (Rule 2.2.13);	Yes	Yes
Proposed standards (Rule 2.2.14);	Yes	Yes
Details of Government Furnished Materiel (GFM) including benefits to the Crown from supplying GFM in accordance with Rule 2.2.15 and DID LOG-4.3;	Yes	Yes
Provision of information relating to ability to comply with various specific terms of the Contract (Rule 2.2.16);	Yes	Yes
Description of all benefits and consequences for the Crown if any if the Contract Deliverables are purchased in conjunction with any other defence force acquisitions;	N/A	N/A
Details of proposed New Zealand Industry Programmes;	Yes	Yes
Proposed Insurance arrangements in accordance with clause 37 of the General Conditions of the Contract;	Yes	Yes
The draft Human Engineering Programme Plan in accordance with DID OP-1;	Yes	Yes

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Light Armoured Vehicle Project

	DDGM	HWK
The Design Capability Submission in accordance with DID ENG-1;	Yes	Yes
The draft Configuration Management Plan in accordance with DID ENG-2.1;	Yes	Incomplete
The draft Equipment Layout Drawings in accordance with DID ENG-2.4;	Yes	Yes
The Vehicle Communications in accordance with DID ENG-2.6;	Yes	Incomplete
The Engineering Analyses in accordance with DID ENG-3;	Yes	Incomplete
The draft Engineering Effects Control Plans in accordance with DID ENG-4;	Yes	No
The draft Master Test Plans in accordance with DID ENG-5;	Yes	Incomplete
The draft Test Reports (format only) in accordance with DID ENG-6;	Yes	No
The draft Software Life Cycle Management Plans in accordance with DID SOFT-1;	Yes	No
The draft Software Documentation Production Plan in accordance with DID SOFT-2.1;	Yes	Incomplete
The Software Licenses and Data Rights in accordance with DID SOFT- 3;	Yes	Yes
The Logistics Support Strategy in accordance with DID LOG-1;	Yes	No
The Logistics Support Options in accordance with DID LOG-2;	Yes	No
The Product Support Agreements in accordance with DID LOG-2.1;	Yes	Incomplete
The draft Manufacturers Recommended Spares List in accordance with DID LOG-2.2;	Yes	Yes

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Light Armoured Vehicle Project

	DDGM	HWK
The draft Support Equipment Provisioning List in accordance DID LOG-2.3;	Yes	Incomplete
The Life Cycle Costs in accordance with DID LOG-2.4;	Yes	Yes
The draft Integrated Logistics Support Plan in accordance with DID LOG-3;	Yes	Incomplete
The draft Codification Data in accordance with DID LOG-4.2;	Yes	Incomplete
The Government Furnished Materiel List in accordance with DID LOG-4.3;	Yes	Incomplete
The draft Publications Package in accordance with DID LOG-5;	Yes	Incomplete
The draft Technical Data Package in accordance with DID LOG-6;	Yes	Incomplete
The draft Training Management Package in accordance with DID LOG-7.1.	Yes	Incomplete

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Light Armoured Vehicle Project

Project Risks as Identified by the Tenderer

DDGM

Title Of Risk	Prob.	Schedule Impact	Cost Impact	Tech Impact	Precis. Value
Turret thermal sight	2	2	2	4	1
Drive Train	2	4	3	3	2
Auxiliary Power Unit	1	2	2	2	3
Height management system	1	3	4	4	3
Production schedule	1	2	1	1	2
N.B. 5 is equiv. to VHi					

HWK

Title Of Risk	Prob.	Schedule Impact	Cost Impact
1. FSV turret integration	VLo	Med	
1. Mission kit configuration	Hi	Lo	
2. Verification of technical performance	Hi	Hi	
3. Preparation and compilation of manuals	VHi	Hi	
4. Verification of mine protection	Med	Hi	VHi
5. Postponement of contract signing	Med	VHi	Hi
6. Sub contractor component delivery	VLo	Vhi	
7. Poor Quality of sub contractor components	Nil	Hi	

Other Risks Identified

HWK have not integrated either of the turret systems that they offer. It would not be possible for HWK to demonstrate a vehicle fitted with:

- a two man turret
- 20 tonne winch or
- a crane for the Recovery Vehicle variant

these are considered to be risks considering that the DDGM proposal includes a proven integration of all of the above systems into the LAVIII vehicle.

HWK is also going through a change in ownership with the company being owned by Rheinmetall De Tec AG from the 1st January 2000.

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ANALYSIS OF NEW ZEALAND INDUSTRY INVOLVEMENT OFFERINGS.

SUMMARY

Both bidders, DDGM and Henschel, have addressed the tender requirement to provide programmes of New Zealand Industry Involvement (NZII). However, both presentations are rather superficial. Neither bidder has provided information in sufficient detail to allow a qualitative or quantitative assessment of each offering. Both appear to be prepared to leave the development and finalisation of NZII to the period between the commencement of post tender discussion and the signing of any resulting contract.

OUTLINE OF EACH COMPANIES OFFER

DDGM

DDGM states that it is prepared to make an NZII commitment worth $NZ30 million, this being both content and Defence Offsets.

The $NZ30 million figure includes multipliers which DDGM consider applicable. This work includes preparing vehicles for delivery to the New Zealand Army, and the manufacture of components. While the total commitment is said to include Defence Offsets, it is not clear what valuation (if any) has been placed on the only identified offset item – a Logistic Support Strategy.

Insufficient detail has been provided to allow an assessment of the commercial basis for placing this work in New Zealand, either on cost or sustainability.

It is worth noting that DDGM have spent over 12 months working at the Australian Department of Defence's direction to develop an industry programme for the Australian ASLAV programme of 150 vehicles. DDGM have stated that this programme will amount to A$23 million, for a lesser number of machines than New Zealand seeks.

Henschel

The Henschel offering contains no indication of a possible NZII offering worth or value. It also gives only broad guidance on where work in New Zealand may arise. The main New Zealand partner for Henschel is Safe Air, and there is an indication that Safe will supply wiring harnesses for the Henschel offer.

Henschel have made contact with a number of other New Zealand companies and Non Disclosure Agreements have been signed with some. However, no clear indication of work type or value has been provided.

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Evaluation Of Responses To The User Requirement

	HWK-Fox	DDGM-LAV3
Annex A-Mobility	Non-Compliant: 6 • Highway movement (axle loads too high) • Braking (Lacks ABS)* • Ground Pressure (MMP too high, 650kpa, similar to a laden Unimog) • Trench crossing (inadequate) • Loss of wheels (too easily immobilised) • Vehicle Navigation System (no digital compass)* • Power to weight ratio (FSV 13.6 kW/tonne, 15 kW/tonne required)*	Compliant
Annex B-Protection and Survivability	Non-Compliant:2 • Laser Warning System (accuracy) • BC Protection (no individual air supply)*	Non-Compliant:1 • Laser Warning System (accuracy)
Annex C-Carrying Capacity	Compliant	Compliant
Annex D-Firepower	Non-Compliant: • Delco turret non-compliances as per DDGM. • Alenia turret non-compliant on 8 characteristics: Ammo re-distribution time (not provided) Ammo replenishment time (not provided) Target acquisition range too short Traverse, elevation and firing control requirements not met Ammunition selection info not provided Manual traverse single speed not two speed Far target location criteria not met (no digital compass) Spotlight not integrated (Alenia Turret not acceptable)	Non-Compliant:1 • Elevation range short by 1 degree.

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	HWK-Fox	DDGM-LAV3
Annex E-RAM-D	Non-Compliant:7 • FMECA not provided. • Mission reliability not provided. • Basic reliability not provided. • Reliability analysis not provided. • Inherent availability not provided. • Maintainability demonstration plan not provided. • Durability response not acceptable. • (RAM-D response totally inadequate).	Non-Compliant:1 • Basic reliability at 89.7% not 90%
Annex F-Miscellaneous	Non-Compliant:3 • Silent watch ability (needs main engine running). • No APU fitted.* • No heating cooling and ventilation. analysis provided.	Non-Compliant:3 • Vetronics requirement not met. • Not data capable (no data bus). • Map light intensity not variable
Annex G-IMV and Variants	Non-Compliant:1 • Vehicle commanders vision inadequate.*	Compliant
Total Non-Compliant	With Delco Turret 22. With Alenia Turret 30.	6

* marked items are significant cost drivers

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Evaluation Of Responses To The Support Requirement

DDGM

- offered a complete Logistic Support Strategy.
- Intend to use SPEL and include field service reps.
- Offer 25year indexed ILS Plan.
- No mid life refurbishment anticipated
- Low risk
- Complete publications supplied

HWK

- Logistic Plans not fully developed.
- Indicate their intention to use SAFE Air, probably for field service reps.
- Bid lacks information on support equipment, parts lists etc; no 25 year Logistic Support Plan.
- Mid-life refurbishment may be required.
- Risk is probably low, but a lot of work will still be required tp put together a LSA.
- Publications are incomplete, risk is medium in this area.

Conclusion

- DDGM demonstrate a willingness to meet Crown expectations.
- HWK submission is incomplete and would not have been acceptable were there more tenderers.

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Executive Summary

3 responses were received from the 7 companies that were selected to receive the RFT.

The companies that responded were:

- Canadian Commercial Corporation (CCC) who endorsed and supported a proposal submitted by Diesel Division of General Motors (DDGM) Canada who offered their 8x8 LAVIII family of vehicles.

- DDGM also responded on their own behalf providing a completed Form of Tender.

- Henschel Wehrtechnik GmbH (HWK) of Germany who offered their 6x6 FOX family of vehicles.

The response from DDGM was comprehensive and complete whereas the response from HWK was incomplete. HWK made a last minute decision to bid and their response was non compliant in many areas and lacking in detail.

During the tender period a number of waivers were granted to both tenderers.
In response to a request from HWK the closure date was extended by 1 month..

Tenders closed on the 17th Dec 1999 and both tenders were received on time.

The Evaluation Plan was approved by Dep Sec (A) on the 16 Dec 1999.

Recommendation

The tender response from Henschel was less favorable than that offered by DDGM in all of the considerations made.

- Tendered Price
- Life Cycle Costs
- Delivery Schedule
- Tender Deliverables - Rules Of Tender
- Risk
- Industry Programme
- Compliance with the User Requirement
- Compliance with the Support Requirement

It is therefore recommended that the Henschel tender is not shortlisted and that DDGM is declared as the preferred tenderer.

Approval is sought to conduct Due Diligence on DDGM to confirm the suitability of the products and services they offered and then to commence Contract Negotiations.

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