DEFENCE LONG-TERM DEVELOPMENT PLAN

11 June 2002

SUMMARY OF CONTENTS

Section	Subject	Pg Nos
1.	Introduction	3
2.	The Long-Term Development Plan and Defence Policy	4-6
3.	Funding	7-8
4.	Managing the LTDP	9-10
5.	Projects approved in principle by government	11-16
	Light Operational Vehicle	*11-12*
	Multi-Role Vessel	*13-14*
	Patrol Vessels	*15-16*
6.	Projects necessary to avoid the failure of policy	17-31
	P-3 Mission Systems Upgrade	*17-18*
	C-130 Replacement/Upgrade	*19-20*
	C-130/P-3 Communications and Navigation Systems Upgrade	*21-22*
	Boeing 727 Replacement	*23-24*
	NZDF Helicopter Capability	*25-26*
	Special Operations Capability	*27*
	Joint Command & Control System	*28-29*
	Ohakea Runway Reconstruction	*30-31*
7.	Projects necessary to provide a well equipped land force	32-42
	Direct Fire Support Weapon – Area	*32*
	Medium Range Anti-Armour Weapon	*33-34*
	Land Intelligence Surveillance Reconnaissance (ISR)	*35*
	Army Tactical Trunk Communications	*36*
	Combat Service Support Vehicles	*37-38*
	Army Engineering Equipment	*39-40*
	Army In-Service Weapon Replacement	*41*
	Very Low Level Air Defence	*42*
8.	Projects necessary to avoid significant risks to policy	43-54
	ANZAC Self-Defence Upgrade	*43-44*
	NZDF Torpedo Replacement	*45-46*
	C-130/P-3 Self-Protection	*47-48*
	Anti-ship Missiles	*49*
	Joint Communications Modernisation	*50-51*
	Whenuapai Runway Reconstruction	*52*
	Whenuapai Hardstanding Reconstruction	*53*
	Ohakea Hardstanding Reconstruction	*54*
9.	Projects that have benefit but are less critical to achieving policy objectives	55-56

1 INTRODUCTION

1.1 The Long-Term Development Plan (LTDP) is a planning tool to enable decisions on defence acquisitions to be taken in the context of the Government's defence policy, the priority of projects and affordability. The Plan links the Government's defence policy objectives, which were set out in the Defence Policy Framework released in June 2000, with the capability requirements announced in the Defence Statement of 8 May 2001. This LTDP contains a comprehensive list of projects, with preliminary costings, timings, and priorities. The LTDP has a rolling forward focus of 10 years. It is an active document, which will be updated regularly.

1.2 The LTDP:

a. describes major acquisition projects required over the next 10 years to provide military capabilities that meet the Government's defence policy objectives;

b. reflects relative priorities of the projects, measured against the Government's defence policy and security needs and interests;

c. works within agreed financial limitations; and

d. sets out planning and decision-making processes incorporating management of both operational and financial risks to ensure that investment in defence provides best value for money.

Funding Parameters

1.3 The LTDP will be managed within approved financial parameters. These are:

a. up to $1 billion, in nominal terms, in capital injections over the next 10 years;

b. current operating baselines set to 2005/06 with adjustments for unfunded depreciation thereafter;

c. any inflationary pressure to be managed within these constraints until 2005/06; and

d. leasing options may be considered where there is a neutral trade-off between capital and operating expenditure.

Project Summary Sheets

1.4 A project summary sheet for each project on the LTDP can be found in sections 5 to 9. Each summary sheet describes the project, how it contributes to the Government's defence policy, links to other capabilities, timing issues, costs and possible options where these are known. Options and trade-offs for defence acquisitions will be properly investigated, costed and presented to Ministers as projects are brought forward for approval.

2 THE LONG-TERM DEVELOPMENT PLAN AND DEFENCE POLICY

2.1 The LTDP sets out the defence acquisition projects that will enable the NZDF to implement the Government's defence policy.

2.2 In its 8 May 2001 Defence Statement, the Government stated that it:

> is building a modern, professional and well-equipped Defence Force with the necessary military capabilities across all three services to meet New Zealand's objectives…The New Zealand Defence Force is being reconfigured so that it is sustainable and affordable over the long-term. It will be able both to meet New Zealand's own defence and security needs, and to make a useful contribution when it is deployed.[1]

2.3 The Government's defence policy objectives are:

- to defend New Zealand and to protect its people, land, territorial waters, Exclusive Economic Zone (EEZ), natural resources and critical infrastructure;
- to meet our alliance commitments to Australia by maintaining a close defence partnership in pursuit of common security interests;
- to assist in the maintenance of security in the South Pacific and to provide assistance to our Pacific neighbours;
- to play an appropriate role in the maintenance of security in the Asia-Pacific region, including meeting our obligations as a member of the FPDA; and
- to contribute to global security and peacekeeping through participation in the full range of UN and other appropriate multilateral peace support and humanitarian relief operations.[2]

Prioritising the LTDP

2.4 The LTDP prioritisation will be reviewed regularly to ensure continuity with defence policy and strategic circumstances.

2.5 The first step in the prioritisation process was a gap analysis. It identified those areas where, over the next 10 years, a capability gap will impact on the NZDF's ability to meet the roles and tasks set out in the Defence Policy Framework under each policy objective. This gap analysis demonstrated that acquisition projects to meet the capability gaps fell into three broad categories:

a. Projects that are critical to avoiding failure to achieve policy objectives. The projects consist of "enabling capabilities" that are necessary to facilitate operational missions (for example, joint command and control system, airfield

[1] Government Defence Statement, 8 May 2001, A Modern, Sustainable Defence Force Matched to New Zealand's Needs, p.2.
[2] Defence Policy Framework, June 2000, para.19.

infrastructure maintenance), and operational capabilities that are fundamental to meet defence policy objectives.

b. Projects that are necessary to avoid significant policy risks. These projects affect the degree to which policy objectives can be achieved and the manner in which they are fulfilled.

c. Projects that carry a lower level of risk affecting the degree to which policy objectives are met and the manner in which they are fulfilled.

2.6 The gap analysis considered the five defence policy objectives to be equally important. A sensitivity analysis assessed the impact of weighting the importance of each objective. It demonstrated that the projects within the top category remained constant, and confirmed their importance to avoid policy failure.

2.7 As a further check, the list of high priority projects was compared with the priorities set out in the Defence Policy Framework, which states that:

> A capital investment programme will concentrate defence resources in a range of affordable and sustainable military capabilities that contribute to meeting our objectives. Priority will be given to the acquisition and maintenance of essential equipment. Our core requirement is for well-equipped, combat trained land forces which are also able to act as effective peacekeepers, supported by the Navy and Air Force.[3]

2.8 To be consistent with this statement, higher priority was accorded to a number of projects which are necessary to provide well-equipped, combat trained land forces, also able to act as effective peacekeepers.

2.9 Projects already approved in principle by the Government were treated in the prioritisation as a separate category. Other considerations that affect the sequencing of high priority projects were also taken into account. These include the projected end-of-life of current equipment and the amount of pre-acquisition work that is required.

[3] Defence Policy Framework, June 2000, para. 31.

Long-Term Development Plan Priorities

2.10 The projects under each category are:

Projects Approved in Principle by Government

Light Operational Vehicle
Multi-Role Vessel
Patrol Vessels

Projects Necessary to Avoid the Failure of Policy

P-3 Mission Systems Upgrade
C-130 Replacement/Upgrade
C-130/P-3 Communications/Navigation Systems Upgrades
Boeing 727 Replacement
NZDF Helicopter Capability
Special Operations Capability
Joint Command and Control System
Ohakea Runway Reconstruction

Projects Necessary to Provide a Well Equipped Land Force

Direct Fire Support Weapon – Area
Medium Range Anti-Armour Weapon
Land Intelligence/Surveillance/Reconnaissance
Army Tactical Trunk Communications
Combat Service Support Vehicles
Army Engineering Equipment
Army In-Service Weapon Replacement
Very Low Level Air Defence

Projects Necessary to Avoid Significant Risks to Policy

ANZAC Self-defence Upgrade
NZDF Torpedo Replacement
C-130/P-3 Self-protection
Anti-ship Missiles
Joint Communications Modernisation
Whenuapai Runway Reconstruction
Whenuapai Hardstanding Reconstruction
Ohakea Hardstanding Reconstruction

Projects that have Benefit but are Less Critical to Achieving Policy Objectives

High Readiness Infantry Company
Short Range Air Patrol
Modifications to enable MRV/OPV to operate in the Ross Sea
Remote Mine Detection
Army Manoeuvre Range
Indirect Fire Support Weapon
Infrastructure Projects

2.11 The list does not indicate the order in which projects would be completed.

3 FUNDING

Funding Guidelines

3.1 The Government directed financial parameters are:

a. up to $1 billion, in nominal terms, in capital injections over the next 10 years;

b. current operating baselines set to 2005/06 with adjustments for unfunded depreciation thereafter;

c. any inflationary pressure to be managed within these constraints until 2005/06; and

d. leasing options may be considered where there is a neutral trade-off between capital and operating expenditure.

Affordability, Options and Trade-Offs

3.2 Funding constraints, cash flow management (both from depreciation and new capital) and defence industry considerations will also affect priorities, timing and the overall affordability of the LTDP. Trade-offs within and between projects are necessary. The projects presented in the LTDP take into account the Government's existing funding parameters. Solutions have been developed to provide capabilities within the financial parameters that are appropriate for New Zealand's circumstances and will deliver the Government's policy. For most projects, however, present costing information is not refined. It is acknowledged that in order to determine the affordability of the LTDP, Defence needs to improve the individual costing data on which the plan is based, on a project-by-project basis.

3.3 In order to provide more robust decision-making information the process by which costing for acquisition projects is developed is being reviewed. A revised costing review process will consider all elements of defence capital expenditure, including acquisition costs, through-life costs and cost/risk mitigation. Deflators will also be developed to reflect how military-related inflation impacts on defence capital expenditure and planning.

3.4 By changing levels of capability, cost and policy compliance it is possible to identify options within projects. These options, which will be investigated for each project, could include phasing projects to spread the cash flow or reducing the size and/or scope of a project. Reducing the level of capability acquired could affect the NZDF's ability to deliver outputs designed to achieve the Government's policy objectives.

Financial Risks

3.5 There are several financial risks associated with the LTDP that will have to be managed to ensure the plan remains affordable.

a. Inflation. Estimated costs need to reflect inflation.

b. Foreign Exchange Movements. The majority of the project costs included in the revised LTDP have been converted from USD into NZD using exchange rate projections advised by Treasury (below). Any change to these projections will result in changes to project costs.

FY 02/03	FY 03/04	FY 04/05 Onwards
0.44	0.49	0.51

c. Upgrades. Military equipment requires regular upgrades to ensure that it is able to provide the required capability. Upgrades are also important to keep pace with technological changes and to maintain interoperability with other defence forces. Known upgrades have been included in the LTDP. Other unpredicted upgrades may be required during the life of the equipment.

d. Personnel and Operating Costs. Operating baseline changes will need to be managed to take account of pay increases and changes in NZDF personnel numbers, training requirements, maintenance and operating resulting from new equipment.

Projects Currently 'Below the Funding Line'

3.6 The LTDP contains those projects currently deemed necessary to deliver the capability required by Government, and which are being processed by the NZDF. Given the current financial parameters, however, projects in the category of those *that have benefit but are less critical to achieving policy objectives* are unlikely to be funded. This underlines the importance of reviewing projects that are 'above the line' in order to realise potential savings. These projects will still require work to clarify their scope, utility across the policy objectives and cost, and will be included in future reviews of the LTDP. Changing strategic circumstances could result in reprioritisation of projects.

4 MANAGING THE LTDP

4.1 Several processes have been developed to ensure that the LTDP will be a core decision-making tool for the Government.

Updating the LTDP

4.2 It is important that the LTDP is updated regularly to provide the best information possible to make informed decisions on defence acquisitions and the budget cycle. The following processes will, therefore, be a feature of the Defence Planning System:

a. An updated LTDP and accompanying report from officials will be submitted to Ministers to inform their considerations during the strategic phase of the budget process.

b. The LTDP will be treated as a dynamic, evolutionary document and updated on a regular basis as warranted by the availability of new and more accurate information.

c. The LTDP will be updated whenever there is a significant change in the Government's financial circumstances or a change in policy.

d. An updated LTDP will be made available whenever acquisition proposals are submitted for government consideration and approval. This will permit Ministers to consider each project within the overall context of total planned acquisitions and with a clear view of priorities, risks and trade-offs.

4.3 It is also important that Ministers have confidence that projects are well managed and that acquisition activity is consistent with the LTDP and Government direction. This has been achieved by the use of the following processes by the Ministry of Defence (MoD) and the New Zealand Defence Force (NZDF):

a. Government approval will be sought to proceed with acquisition activity for each project.

b. The Minister of Defence will be consulted prior to commencing major project definition studies.

c. The Minister of Defence will be consulted prior to documentation being made available to commercial suppliers.

d. The Minister of Defence will be advised of the outcome of the evaluation of the responses from commercial suppliers.

e. The Minister of Defence will be consulted prior to documentation being made available to short-listed suppliers, and on the criteria to be used for evaluating the responses.

f. The Minister of Defence will be advised of the outcome of the tender evaluation, including an analysis of the ability of the equipment to be

acquired to meet the capability, and on contract negotiations with the preferred supplier(s).

g. On completion of the contract negotiations, Ministerial approval will be sought to enter into contract with the preferred supplier(s) and for the appropriation of funds.

Workplan

4.4 HQNZDF Development Branch will provide a work plan to manage the LTDP. The aim of this plan is to ensure that the projects on the LTDP are defined, costed and presented to Ministers in a timely manner. The work plan will allow single Services, NZDF and MoD to plan for, and allocate appropriate resources to, those projects that have a higher priority on the LTDP.

5 PROJECTS APPROVED IN PRINCIPLE BY GOVERNMENT

Light Operational Vehicle (LOV)

Description

5.1 This project provides the Army with a modern, light operational, military vehicle.

Policy Value

5.2 The LOV provides an essential capability to enable the Army to train and to participate in operations in the South Pacific, Asia-Pacific and globally. LOVs are the primary means of transport used by the Army in peacekeeping operations and also in peace enforcement operations, including in support of the Light Armoured Vehicle (LAV). In addition, the LOVs may provide support for evacuation operations in the South Pacific.

Capability Gap

5.3 The Army's military mobility needs are currently met by the obsolete fleet of Land Rovers. The Land Rovers have reached the end of their economic life.

Links to other Capabilities

5.4 This project has links to the following projects and capabilities:

- Light Armoured Vehicle
- Air transport
- Multi-role vessel
- Land intelligence surveillance reconnaissance
- Medium range anti-armour weapon
- Direct fire support weapon (area)

Timing

5.5 Acquisition needs to occur as soon as possible to ensure that the Army can continue to meet the Government's policy requirements.

Current Status

5.6 The Government has approved in principle (Cab (00) M41/2C(2) dated 11 Dec 00) the acquisition of 308 LOVs for $60 - $110 million. The Ministers of Defence and Finance have agreed to the Ministry of Defence inviting tenders for the LOV.

5.7 The Ministry of Defence will shortly seek tenders for the LOV.

Costs

5.8 This project is expected to cost $60 million - $110 million.

Possible Options

5.9 The costs for this project are based on the purchase of a single type of more capable vehicle that could perform the full range of tasks required. A single type of vehicle would simplify the support and maintenance required for the LOV fleet, but may not necessarily be the most cost-effective option.

5.10 A second, possibly cheaper, option for the LOV purchase would be a mixed fleet of two or more different types of vehicles. This would enable a smaller number of more expensive, combat-capable vehicles to be purchased for more demanding tasks, along with vehicles for non-combat roles. This option would not have an impact on the NZDF's ability to meet policy objectives.

Multi-Role Vessel (MRV)

Description

5.11 This project involves the purchase of a MRV to provide tactical sealift for the NZDF, to support disaster relief and peace support operations, to conduct resource protection patrols, to provide diplomatic/military presence, and for training. The vessel will replace HMNZS *Canterbury*.

Policy Value

5.12 The MRV would be used in the South Pacific and Asia-Pacific for contributing to peace support operations, evacuations of personnel during civil emergencies, and disaster relief. A tactical sealift capability, to off-load people and equipment without access to a port facility will be particularly useful in meeting the Government's policy objectives in the South Pacific. The MRV will also be able to undertake patrol and presence operations in New Zealand's Exclusive Economic Zone (EEZ) and the South Pacific, and provide the Government with an additional option for global deployments (or allow the ANZAC frigates to be deployed for global tasks). The MRV will provide additional berths for sea training purposes.

Capability Gap

5.13 The NZDF has no tactical sealift capability and cannot easily deploy land force personnel and equipment into areas without port facilities. Tactical sealift vessels cannot be chartered. Without a MRV New Zealand will continue to rely on the tactical sealift capabilities of our allies and friends in the region for deploying to peace support operations and evacuating our nationals from trouble spots.

5.14 The MRV, in conjunction with the frigates and the offshore patrol vessels, will provide additional capacity for tasks such as presence, support to land operations, patrol and disaster relief, and for training.

Links to Other Capabilities

5.15 This project has links to the following projects and capabilities:

- Light Armoured Vehicle
- Light Operational Vehicle
- Patrol vessels
- NZDF Helicopter capability
- P-3 mission systems upgrade

Timing

5.16 It is intended that the MRV will be brought into service to replace *Canterbury* when she is retired in 2005.

Current Status

5.17 The Ministry of Defence, in consultation with NZDF and other departments and agencies as appropriate, is developing functional descriptions of the capabilities

required for the MRV for distribution to industry. Final decisions on fleet composition will be deferred until after proposals from industry have been evaluated.

Costs

5.18 The total cost of the MRV and patrol vessels is not to exceed $500 million. The cost of the MRV is capped at US$100 million.

Possible Options

5.19 It may be possible to identify options to reduce the cost of the MRV as the acquisition process progresses and consultation with industry is able to identify cost savings.

Patrol Vessels

Description

5.20 This project proposes the acquisition of patrol capabilities to meet inshore and offshore requirements for maritime surface surveillance in New Zealand's EEZ and the South Pacific.

Policy Value

5.21 Patrol vessels are an important element in the surveillance of New Zealand's EEZ and other maritime areas of interest. They work in conjunction with maritime patrol aircraft to protect our natural resources and detect and deter maritime transnational crime. Patrol vessels will meet many government agencies' needs, including the Ministry of Fisheries, the New Zealand Customs Service, the Department of Conservation, the Police, the Maritime Safety Authority and others. Offshore patrol vessels will also be able to support maritime counter-terrorism, and provide a presence in the South Pacific to support peace and stability and help with disaster relief.

Capability Gap

5.22 New Zealand currently has a very limited maritime surface patrol capability, provided by three frigates (and by 2005, two ANZAC class frigates). The largest gap is in New Zealand's ability to patrol the inshore zone around New Zealand where the majority of civilian patrol requirements – primarily Ministry of Fisheries and Customs – are situated. There is also very limited capacity to undertake counter-terrorism operations at sea.

Links to other Capabilities

5.23 This project has links to the following projects and capabilities:

- Multi-Role Vessel
- P-3 mission systems upgrade
- NZDF Helicopter capability
- Special Forces capabilities

Timing

5.24 The introduction into service of patrol vessels will depend upon a number of factors. These include the Navy's ability to man new vessels, the length of time required to design and build new vessels, and capital and operating funding constraints.

Current Status

5.25 The Ministry of Defence, in consultation with NZDF and other departments and agencies as appropriate, is developing functional descriptions of the capabilities required for inshore and offshore patrol for distribution to industry. Final decisions on fleet composition will be deferred until after proposals from industry have been evaluated.

Costs

5.26 The total cost of the MRV and patrol vessels is not to exceed $500 million.

Possible Options

5.27 Final decisions on the fleet composition will not be made until proposals from industry have been evaluated.

6 PROJECTS NECESSARY TO AVOID THE FAILURE OF POLICY

P-3 Mission Systems Upgrade

Description

6.1 This project proposes to upgrade the sensors and mission management systems required for the P-3 Orion maritime patrol aircraft to conduct surface surveillance tasks.

Policy Value

6.2 The capability provided by the P-3 is central to meeting a broad range of civilian roles and tasks and for many functions required of the NZDF across the range of the Government's five defence policy objectives. The P-3 undertakes surveillance of New Zealand's EEZ and the Southern Ocean, meets our South Pacific search and rescue obligations and provides surveillance assistance to Pacific Island countries. The P-3 has a high utility for a wide range of civilian and military operations. It is one of the primary force elements contributing to our defence relationships with Australia and Five Power Defence Arrangements (FPDA) partners.

Capability Gap

6.3 The obsolescent mission systems onboard the P-3 are limiting availability for surveillance flights and other missions due to repeated equipment failures. Without an upgrade, the Government may be faced with policy failure in meeting its objectives for EEZ and Southern Ocean surveillance and assisting South Pacific countries with surveillance of their EEZs. The Government would also have difficulty meeting commitments to Australia and the FPDA.

Associated Projects

6.4 The P-3 communications and navigation systems also need to be upgraded to address equipment obsolescence and comply with evolving international air traffic regulations. This work is less urgent, but needs to be completed by 2010. The similar communications and navigation upgrade requirements for both the P-3 and the C-130 are covered in a separate project.

6.5 The P-3 also lacks self-protection capability against man-portable, infrared missiles. This deficiency is also addressed in a separate project.

Links to other Capabilities

6.6 This project has links to the following projects and capabilities:

- ANZAC frigates
- Patrol vessels
- Multi-role vessel
- Land intelligence surveillance reconnaissance
- Joint Command and Control System

- NZDF torpedo replacement
- Anti-ship missile
- P-3/C-130 Self-protection
- C-130/P-3 Communications and Navigation Upgrade

Timing

6.7 This project will take some time. Project approval by mid-2002 would not produce the first mission capable aircraft before 2006, with complete fleet modernisation in 2009. There is a significant risk that ineffective sensor and communications systems will prevent the P-3 fleet from meeting national patrol requirements before the first modernised aircraft enter into service.

Current Status

6.8 Building on the Maritime Patrol Review, an extensive consultation process has been undertaken with the principal agencies responsible for New Zealand's maritime security. A whole-of-government requirement has been compiled of the range of mission systems that will be needed to meet the range of the Government's policy objectives. Other government agencies with a strong interest in the P-3 upgrade will be consulted during the next stages of the process. Their input will be critical to further defining the options.

Costs

6.9 This project is expected to cost $150-$220 million depending on the extent of the upgrade. The options for upgrade will be explained fully, with costings, when the project is brought forward for Government consideration.

C-130 Replacement/Upgrade

Description

6.10 This project proposes to extend the life of the NZDF's C-130 aircraft by upgrading the aircraft systems and undertaking some structural refurbishment work.

Policy Value

6.11 The C-130 is a critical enabler for many NZDF operations. It provides essential air transport for the deployment of NZDF personnel and equipment, within New Zealand, to the South Pacific, Australia, the Asia-Pacific region and globally. Air transport is a critical capability for a number of roles and tasks, including: supporting counter-terrorist operations; peace support operations; evacuations of New Zealanders from trouble spots; disaster relief and humanitarian operations; supporting the civil power; and supporting New Zealand's Antarctic programme. The C-130 has particular utility where runways are short or in poor repair.

Capability Gaps

6.12 The declining availability of C-130 air transport is a major capability gap that will increasingly impinge on the NZDF's ability to deploy and support personnel. This is due to the age of the airframe and systems. There is a risk of policy failure, particularly in the New Zealand, South Pacific and Asia-Pacific contexts, if this project is not carried out, as the NZDF would not have sufficient air transport to support deployments and perform other tasks.

Associate Projects

6.13 The C-130 communications and navigation systems also need to be upgraded to address equipment obsolescence and comply with evolving international air traffic regulations. The similar communications and navigation upgrade for the C-130 and the P-3 are covered in a separate project.

6.14 The C-130 also lacks an adequate self-protection system against man-portable infrared missiles. This deficiency is also addressed in a separate project.

Links to Other Capabilities

6.15 This project has links to the following projects and capabilities:

- Boeing 727 replacement
- Deployment of other capabilities
- Light Armoured Vehicles
- Light Operational Vehicles
- Special Forces capabilities
- C-130/P-3 Self-protection
- C-130/P-3 Communications and Navigation Upgrade

Timing

6.16 Systems on the C-130 are unreliable and difficult to support. Managing airframe corrosion is adversely affecting aircraft availability.

Current Status

6.17 A life of type study to determine the extent of work needed to keep the current fleet in service for the next 10 to 20 years is underway. Once the study is complete Defence will report to Cabinet on the recommended approach.

Costs

6.18 The cost of life extension is dependent to some extent on how long the aircraft is to be kept in service. Assuming an extension of 15-20 years, the cost is expected to be $100 million - $170 million.

Possible Options

6.19 New Zealand has an option, which must be exercised by the end of this year, to purchase new C-130J aircraft under the Australian contract. This option is likely to cost more than $800 million.

C-130/P-3 Communications and Navigation Systems Upgrade

Description

6.20 This project involves the upgrade of the C-130 and P-3 communications and navigation systems to address equipment obsolescence and comply with evolving international air traffic regulations.

Policy Value

6.21 The C-130 is a critical enabler for many NZDF operations. It provides essential air transport for the deployment of NZDF personnel and equipment, within New Zealand, to the South Pacific, Australia, the Asia-Pacific region and globally. Air transport is a critical capability for a number of roles and tasks, including: supporting counter-terrorist operations; peace support operations; evacuations of New Zealanders from trouble spots; disaster relief and humanitarian operations; supporting the civil power; and supporting New Zealand's Antarctic programme. The C-130 has particular utility where runways are short or in poor repair.

6.22 The capability provided by the P-3 is central to meeting a broad range of civilian roles and tasks and for many functions required of the NZDF across the range of the Government's five defence policy objectives. The P-3 undertakes surveillance of New Zealand's EEZ and the Southern Ocean, meets our South Pacific search and rescue obligations and provides surveillance assistance to Pacific Island countries. The P-3 has a high utility for peace support operations, particularly peace enforcement, both regionally and globally. It is one of the primary force elements contributing to our defence relationships with Australia and FPDA partners.

Capability Gap

6.23 The global air traffic system is being progressively upgraded to increase system capacity and improve flight efficiency within required flight safety standards. By 2010, all military and commercial aircraft operating within this new environment will need to comply with the rules governing its use. This upgrade is designed to enable greater use of automated systems, with less reliance on human input and ground-based systems.

6.24 The C-130s and P-3s have systems designed for an earlier generation. They are not compliant with the new regulations. As more stringent rules and procedures are implemented, the P-3s and C-130s will be increasingly restricted in their operation, and ultimately will be unable to operate.

6.25 Without upgrading the C-130 and P-3 communication and navigation systems, the Government will be faced with policy failure in meeting its objectives relating to air transport and aerial surveillance.

Links to Other Capabilities

6.26 This project has links to the following projects and capabilities:

- C-130 life extension
- P-3 Mission Systems Upgrade

- Maritime surveillance
- Air transport

Timing

6.27 Some systems on the C-130 and P-3 are already difficult to support. By 2005 the C-130 will be facing airspace restrictions. The P-3 has a different equipment fit and will not be significantly affected until around 2010. Both aircraft will, however, require some upgrade in the near term to meet more immediate requirements.

Current Status

6.28 Part of the C-130 life of type study currently underway to determine the extent of work needed to keep the current fleet in service includes analysis of current and pending air traffic regulations and the implications of these changes. The report will form the basis on which to develop options to upgrade the C-130 and P-3 communications and navigation systems.

Costs

6.29 The communications and navigation requirements created by new air traffic regulations are still evolving and it is therefore difficult to estimate the likely costs of upgrading communications and navigation systems. At this stage, the cost for both the C-130 and P-3 is expected to be around $320 million for eleven aircraft, spread over several years.

Possible Options

6.30 The new international air traffic regulations are being implemented over several years. There will be a number of options available from progressively upgrading systems on a ‘just in time’ basis through to completing the upgrade in major packages. Once analysis is complete, Defence will develop options.

Boeing 727 Replacement

Description

6.31 This project proposes to replace the Boeing 727 aircraft with commercial jet aircraft with greater range and payload capacity.

Policy Value

6.32 In addition to the C-130s, the two Boeing 727s comprise New Zealand's military air transport capability. The Boeing 727 is an enabler for the same roles and tasks as the C-130, particularly the deployment and sustainment of NZDF forces on overseas deployments and the evacuation of New Zealand citizens. An advantage of the Boeing 727 is its speed, allowing a rapid response if required.

Capability Gaps

6.33 The declining availability of air transport is a major capability gap that will increasingly impinge on the NZDF's ability to deploy and support forces. This decline is related to both the age of the airframe and systems, and developments in international navigation/communications requirements. There is a risk of policy failure, particularly in the New Zealand, South Pacific and Asia-Pacific contexts, if this project is not carried out, as the NZDF would not have sufficient air transport to support deployments and perform other tasks.

6.34 The growing pressures on C-130 availability are partly due to the extra use of C-130s to make up for the declining capability of the Boeing 727. C-130 availability will decline further if aircraft are taken out of service to undergo a life extension upgrade. In order to avoid a serious shortfall in the NZDF's total airlift capacity, it is desirable to have the Boeing 727 replacement in service before the C-130 life extension programme commences.

Links to other Capabilities

6.35 This project has links to the following projects and capabilities:

- C-130 life extension
- Deployment of other NZDF capabilities

Timing

6.36 Replacement of the Boeing 727 aircraft is urgent. World-wide the Boeing 727 is facing serious operational restrictions. The aircraft is already subject to airspace restrictions in Europe, USA and the Pacific, resulting in higher fuel costs, decreased payload and/or range and schedule delays. Of more immediate concern is the issue of noise. From 1 April 2002 international civil aviation environmental protection legislation became effective resulting in the Boeing 727 being banned from many airfields and requiring a waiver to operate from others, including Wellington Airport.

6.37 The major downturn in the airline industry following the events of 11 September 2001 has resulted in the price of used aircraft falling significantly, presenting a favourable opportunity to acquire a commercial B-727 replacement.

Current Status

6.38 A statement of requirement has been produced to identify the capability needed to meet both the NZDF requirements and those of other users of the aircraft. Defence is ready to canvass options from industry.

Costs

6.39 This project is expected to cost $100 million - $200 million.

Possible Options

6.40 There are a number of possible options for replacing the Boeing 727 aircraft. These include purchase, lease or charter.

NZDF Helicopter Capability

Description

6.41 This project proposes to replace the Iroquois utility and Sioux training helicopters with a capability that meets the NZDF's contemporary needs.

Policy Value

6.42 Utility helicopters provide essential support to the Army, particularly in the South Pacific and in peace support operations. Helicopters are important for supporting police operations in New Zealand. In addition, utility helicopters are able to provide a range of support functions within New Zealand and the South Pacific, such as search and rescue and disaster relief.

6.43 The introduction into service of a multi-role vessel will create an additional role for utility helicopters in supporting the Army ashore, especially in the South Pacific.

Capability Gap

6.44 The Iroquois no longer provide the capability required by a modern, mobile land force. These 35-year-old aircraft are becoming increasingly difficult to support because of their age. With helicopters assuming greater importance for mobility and tasks in peace support operations, there is a risk that the Army will be unable adequately to perform its policy roles and tasks if the Iroquois is not upgraded or replaced to meet current requirements.

6.45 The Sioux training helicopter is of 1950s vintage and is inadequate to meet training needs. It does not provide an adequate step in pilot training progression from the Airtrainer aircraft to operational utility and maritime helicopters.

Links to other Capabilities

6.46 This project has links to the following projects and capabilities:

- Special operations capabilities
- Army capabilities
- Multi-role vessel

Timing

6.47 The Iroquois is becoming increasingly difficult and costly to support. The United States military has begun to withdraw support of the Iroquois to foreign owners in advance of retiring that aircraft from United States Army service by 2004. As the Iroquois no long adequately meets NZDF capability requirements, there will be some operational limitations until the aircraft is replaced.

6.48 There is some urgency to replace the Sioux training helicopter. It dates from the 1950s and does not provide an adequate training capability for converting pilots to helicopter operations. This has caused difficulties in maintaining training

standards and placed an increased burden on the Iroquois, as extra training time is required on the Iroquois to compensate for the deficiencies of the Sioux.

Current Status

6.49 A statement of requirement has been produced that identifies the capability needed to meet traditional NZDF requirements and those of other users. This statement needs some refinement particularly due to the uncertainty about the type of helicopter capability needed to support the logistic support functions of the MRV and support forces ashore. Once the requirement has been refined, Defence will bring forward a paper seeking approval to canvass industry for proposals.

Costs

6.50 Replacement of the Iroquois is expected to cost $400 million - $500 million. Replacement of the Sioux is expected to cost around $11 million. The lower end of the cost range is based on 12 helicopters at the lower end of the capability range replacing the 14 Iroquois.

Special Operations Capability

Description

6.51 This project provides the Army with equipment to undertake special operations.

Policy Value

6.52 Army special operations capabilities have utility in meeting a range of Government defence policy objectives and also in supporting policing operations in New Zealand and the South Pacific.

Links to Other Capabilities

6.53 This project has links to the following capabilities:

- Light Operational Vehicles (Special Forces variant)
- Land intelligence surveillance reconnaissance
- NZDF helicopter capability
- C-130 upgrade/replacement

Current Status

6.54 Work is underway to determine how best to acquire the equipment needed.

Costs

6.55 This project is expected to cost $8 million - $10 million.

Joint Command and Control System (JCCS)

Description

6.56 The joint command and control system project is a programme to implement an automated command and control system for the NZDF. This IT system will collect, collate, process, display, store, disseminate and protect command and control information in near real-time.

Policy Value

6.57 Joint command and control is an enabling capability for all of the policy roles and tasks required of the NZDF. Joint command and control enables elements from all three services to work together efficiently and effectively by enhancing decision-making processes.

Capability Gap

6.58 The NZDF's current command and control systems are largely manual and paper based. Experience in recent operations and exercises has shown that the NZDF system is dated and inefficient. This has impacted on the effectiveness of the Joint Force Headquarters. The slower and less accurate decision making cycle currently available to commanders is likely to lead to policy failure as it becomes increasingly difficult for the NZDF to plan operations and effectively co-ordinate its own operations.

Links to Other Capabilities

6.59 The joint command and control system is an overarching capability that contributes to all NZDF outputs.

6.60 While the JCCS will give the NZDF the ability to manage command and control information, the project does not provide the ability to communicate data. JCCS will therefore depend on the ability of a suitable communications infrastructure, part of which will be provided by the:

- Joint Communications Modernisation
- Army Tactical Trunk Communications

6.61 These two projects will, however, be directly influenced by the JCCS as the JCCS will largely determine the requirements for future improvements to the communications infrastructure.

Timing

6.62 Although the current system has significant limitations, developing a modern integrated command, control, communications and intelligence (C3I) infrastructure is a major undertaking and needs to be managed carefully. A project definition study (PDS) is soon to be initiated and will be undertaken by experienced and independent consultants. The PDS will investigate, provide advice and options, and make recommendations on how to best deliver, establish and sustain a cost effective, fit for

purpose, JCCS to meet the NZDF's command and control and interoperability requirements.

Current Status

6.63 The joint NZDF/MoD project team for the JCCS is currently managing the PDS acquisition process under State Services Commission and Treasury guidelines for major IT projects.

6.64 A request for proposals to conduct the PDS was released in early May 2002, with responses due back by the end of June 2002.

Costs

6.65 This project is expected to cost $15 million - $30 million.

Possible Options

6.66 Implementation of the JCCS could be managed in a progressive way, and could be structured to match funding availability. The project definition study will identify options.

Ohakea Runway Reconstruction

Description

6.67 This project proposes to reconstruct the Ohakea runway to keep it fully operational for military and commercial use for the next 40 years.

Policy Value

6.68 The basing requirements for the Air Force are currently being reviewed in a separate study. Depending on the outcome, Ohakea will be either the sole or primary operational airfield for the Air Force. Ohakea, therefore, will support the operations of the maritime surveillance aircraft, air transport aircraft, and helicopters.

Capability Gap

6.69 The hexagonal block construction of the runway is failing leading to runway cracking, which constitutes a flight safety hazard to all aircraft. This risk can be offset in the short term by regular runway sweeps and inspections, but the risk will increase as the break-up process becomes more widespread. Operations by larger aircraft are already restricted to 'essential' only. An upgrade of the runway is essential for Ohakea to continue as an operational base and to support an increase in air traffic. Restrictions on large aircraft operations at Ohakea will impact on the ability of the Army to deploy, and risks to the operation of other air capabilities will restrict their ability to meet policy objectives.

Links to Other Capabilities

6.70 This project has links to the following capabilities:

- Maritime surveillance
- Air transport

Timing

6.71 There is a need to minimise flight safety risks and restore the airfield to unrestricted operations. If the Boeing 727 is replaced with a heavier aircraft, it may not be able to operate from Ohakea with a full load. The Air Force would not be able to relocate from Whenuapai until reconstruction is completed.

6.72 Ohakea is used as a nominated alternate airfield by some airlines for long haul flights. This reduces the amount of reserve fuel the aircraft need to carry. Further deterioration of the runway will likely affect this arrangement. Reconstruction work needs to be undertaken during a summer season.

Current Status

6.73 An engineering study has been completed to determine the extent of work required and obtain accurate costs. The RNZAF Basing Study has been forwarded to the Ministry of Economic Development to enable civil interest in a joint civil/military airfield to be ascertained.

Costs

6.74 This project is expected to cost up to $23 million.

Possible Options

6.75 Two reconstruction options have been recommended:

- Military operations only
- Joint civil/military operations

6.76 The Ministry of Economic Development has undertaken a study to determine if there is sufficient interest to justify upgrading the runway for civil operations, and if civilian support can be engaged to offset costs. It is, therefore, possible that the upgrade could be undertaken as a Private/Public Partnership arrangement. Cabinet will be asked to decide on the options and funding to enable construction, if approved, during the summer of 2002/03.

6.77 These options will be explained fully, with costings, when the project is brought forward for Government approval.

7 PROJECTS NECESSARY TO PROVIDE A WELL-EQUIPPED LAND FORCE

Direct Fire Support Weapon – Area

Description

7.1 The area direct fire support weapon (DFSW-A) project will provide land forces with the ability to engage groups of enemy at a range of up to two kilometres.

Policy Value

7.2 DFSW-A forms an element of any significant land force contribution to peace enforcement operations in the Asia-Pacific and globally where land forces may face a threat on the ground. The DFSW-A is also important in peacekeeping operations for self-protection and as a deterrent to escalation. The weapon may have some utility in higher-threat situations in the South Pacific.

Capability Gap

7.3 The New Zealand Army presently lacks this capability. This limits the effectiveness and self-protection capability of land forces, particularly during peace enforcement operations in the Asia-Pacific and globally.

Links to other Capabilities

7.4 This project has links to the following projects and capabilities:

- Light Armoured Vehicle
- Light Operational Vehicle
- Medium Range Anti-Armour Weapon
- Land Intelligence Surveillance Reconnaissance

Timing

7.5 The optimum entry into service for DFSW-A would be over 2003-04 to coincide with introduction of LAVs into service.

Current Status

7.6 Government approval to proceed with this project will be sought following finalisation of the requirement.

Costs

7.7 This project is expected to cost $22 million.

Medium Range Anti-Armour Weapon

Description

7.8 This project proposes to provide protection for our land forces from armoured threats.

Policy Value

7.9 The Medium Range Anti-Armour Weapon (MRAAW) provides land forces with a medium range capability against armoured vehicles and other targets. It is a critical part of any contribution to peace enforcement operations where land forces may face an armoured vehicle threat. The MRAAW also has some utility in peacekeeping operations in the Asia-Pacific and globally for self-protection in the event of an escalation in the threat to ground forces.

Capability Gap

7.10 New Zealand land forces are currently very vulnerable to threats from tanks, armoured vehicles or other anti-armour weapons. There is a need for a capability to engage these threats at the greatest distance practicable.

7.11 The Army currently has a short-range anti-armour weapon, however, it is limited in range and lethality. A medium range anti-armour weapon is required to defeat threats at a greater range (2,300 metres) than the current weapon.

Links to other Capabilities

7.12 This project has links to the following projects and capabilities:

- Light Armoured Vehicle
- Light Operational Vehicle
- Direct Fire Support Weapon
- Land Intelligence Surveillance Reconnaissance

Timing

7.13 The optimum entry into service for MRAAW would be over 2003-04 to coincide with introduction of LAVs into service.

Current Status

7.14 Government approval to proceed with this project will be sought following finalisation of the requirement.

Costs

7.15 This project is expected to cost $10 million - $22 million.

Possible Options

7.16 The missiles are the major cost driver for this capability. One option would be to phase purchase of the missiles. Another option would be to enter into an agreement with the manufacturer guaranteeing access to missile stocks for operations and training. These options will be explained fully, with costings, when the project is brought forward for Government approval.

Land Intelligence Surveillance Reconnaissance (ISR)

Description

7.17 This project proposes to equip the Army with an improved land intelligence surveillance and reconnaissance capability.

Policy Value

7.18 An improved land ISR capability provides land forces with the ability to detect threats at greater distances and with greater certainty. An improved land ISR capability is an important element in operations where land forces face a demanding threat environment and need to know what is happening around them.

Capability Gap

7.19 Land forces require integral capabilities to identify personnel and vehicles, both static and moving. Current ISR capabilities are limited to foot, vehicle and motorcycle patrols and include night vision and some ground sensors. A significantly larger area, up to 100 by 60 square kilometres, will need to be observed when the LAV is introduced into service.

Links to other Capabilities

7.20 This project has links to the following projects and capabilities:

- Special Operations capability
- Light Operational Vehicle
- Light Armoured Vehicle
- P-3 mission systems upgrade

Timing

7.21 The optimal time for entry into service for a land ISR capability would be over 2003-04 to coincide with introduction of LAVs into service.

Current Status

7.22 Further studies are required to assess joint contributions to land ISR needs, assess the best mix and numbers of sensors and review personnel issues.

Costs

7.23 This project is expected to cost $25 million - $52 million.

Possible Options

7.24 Options for providing land ISR capabilities will be identified as part of the further studies required on this capability.

Army Tactical Trunk Communications

Description

7.25 This project proposes to replace and/or upgrade existing Army short-range communications systems to provide a high bandwidth (high capacity) digital theatre communication system to support command and control requirements of the NZDF Battalion Group operations.

Policy Value

7.26 The Army Tactical Trunk Communications system will provide an enhanced capability to exercise command and control over an NZDF battalion group, as well as communicate with allied forces. It forms an important component of any battalion group deployment, particularly in peace enforcement operations where good command, control and communications enhance the safety and effectiveness of land forces.

Capability Gap

7.27 Current Army tactical trunk communications systems are voice oriented, technologically old and are comprised of ad hoc and short-term systems. This limits the Army's ability to exchange information between deployed Army sub-units. An upgraded system would provide short-range communications that interface between medium/long range communications and the tactical units. This system needs to be military specification equipment.

Links to Other Capabilities

7.28 The Army tactical trunk communications system will need to be interoperable with other NZDF communications systems, particularly the Joint Command and Control System and the Joint Modernisation Communications.

Timing and Current Status

7.29 This capability needs to be implemented following the outcome of the JCCS project definition study and on completion of a separate study to determine the work required to achieve an integrated communications infrastructure.

Costs

7.30 This project is expected to cost up to $10 million.

Combat Service Support Vehicles

Description

7.31 This project has two parts:

- Additional combat service support trucks, to provide support to the LAV. LAV support vehicles include fuel, water and bulk-handling equipment (moving containers/pallets over rough terrain).

- Later in the decade, a replacement for the Unimog general service trucks that provide service, maintenance and sustainability to the motorised battalions, specifically LAV and LOV logistic support.

Policy Value

7.32 Combat service support vehicles are a critical enabler for LAV motorised operations. They sustain and resupply the LAVs with fuel, personnel and spares and provide maintenance support. Their utility in meeting policy objectives is in peace support operations in the Asia-Pacific and globally.

Capability Gap

7.33 The introduction of the LAV will create an additional requirement for combat service support trucks beyond the Army's current capabilities.

7.34 In addition, the current fleet of Unimog general service trucks (2.5 and 4 tonne) will be 25 years old in 2008. At this age they will be approaching the end of their economic life and will require replacement.

Links to other Capabilities

7.35 This project has links to the following projects and capabilities:

- Light Armoured Vehicle
- Light Operational Vehicle
- Multi-role vessel

Timing

7.36 The optimum entry into service for the additional combat service support capabilities would be over 2003-04 to coincide with introduction of LAVs into service.

7.37 The Unimogs will need to be replaced from around 2008/9. Timing will depend on the levels of serviceability of the Unimogs.

Current Status

7.38 Work is underway to define requirements.

Costs

7.39 This project is expected to cost $10 million for immediate needs and $84 million from 2008/9 to replace the Unimogs.

Army Engineering Equipment

Description

7.40 This project proposes to enhance Army engineering equipment to support mobility of the motorised land force. Equipment includes:

- Fast engineer tractors
- 20 metre light bridging equipment
- Lane way track laying equipment (metal carpet rolled in front of a truck)
- Water purification/storage

Policy Value

7.41 Additional engineering equipment will enable LAVs and LOVs to cross obstacles that may be encountered. Some engineering equipment may also be necessary to enable landing operations from the multi-role vessel.

7.42 The policy utility of this equipment will be in supporting the LAVs when deployed on peace support operations in the Asia-Pacific region and globally.

Capability Gap

7.43 Current engineering capabilities are very limited and not oriented towards motorisation. Additional capabilities are necessary to provide for the increase in the scale of mobility requirements associated with the increased number of vehicles in the motorised battalion. This also includes providing for the crossing of gaps and broken or soft ground, potentially including beach crossing from the MRV.

7.44 The Army lacks water purification and storage capacity.

Links to other Capabilities

7.45 This project has links to the following projects and capabilities:

- Light Armoured Vehicle
- Light Operational Vehicle
- Multi-role vessel

Timing

7.46 The engineering equipment is required in 2003-04 to coincide with introduction of LAVs into service. This equipment could be acquired in tranches to spread the cost over several years.

Current Status

7.47 Work is underway to define requirements.

Costs

7.48 This project is expected to cost around $15 million for near term needs.

Army In-Service Weapon Replacement

Description

7.49 This project proposes to replace the following in-service weapons when they become due for replacement around 2007-2009:

- 1000 C9 light machine guns
- Special Forces miscellaneous weapons
- Carl Gustav light anti-armour weapons

Policy Value

7.50 The above small arms are integral to the full range of land force operations and have applications in a host of policy roles.

Capability Gap

7.51 Current weapons are serviceable but will require replacement around 2007 – 2009.

Timing

7.52 The weapons do not require replacement until 2007-2009.

Current Status

7.53 No action required at this stage.

Costs

7.54 This project is expected to cost $8 million.

Very Low Level Air Defence

Description

7.55 This project proposes to purchase additional equipment to bring the Mistral Air Defence System up to operational standard.

Policy Value

7.56 An air defence capability is necessary to protect critical land force elements from air threats such as low flying aircraft and armed helicopters.

Capability Gap

7.57 The current system is not fully operational. The system acquired comprises 23 missiles, 12 firing points, two practice acquisition systems, one firing simulator, test equipment and seven thermal night sights. The equipment required is the auto cueing system.

Timing

7.58 This project should proceed as soon as possible.

Current Status

7.59 Work is underway to identify the best option to bring the system up to a fully operational standard.

Costs

7.60 This project is estimated to cost $8 million.

8 PROJECTS NECESSARY TO AVOID SIGNIFICANT RISKS TO POLICY

ANZAC Self-Defence Upgrade

Description

8.1 This project proposes to upgrade the ANZAC frigates' self-defence systems to protect the Naval Combat Force against increasingly sophisticated anti-ship systems and to address equipment obsolescence.

Policy Value

8.2 The role of the Naval Combat Force is to meet military tasks, particularly in support of the Government's regional and global objectives. The ANZACs are critical to the protection of New Zealand/Australian territorial sovereignty, for participating in FPDA activities, supporting our relationships with regional partners, and undertaking peace support operations in the Asia-Pacific and beyond. These environments contain significantly higher threats to surface vessels than exist in New Zealand's immediate area, including air and sub-surface threats. To continue operating in these environments, and therefore meet the Government's policy requirements, the ANZACs will require an upgrade to their defensive systems to meet the changing threat levels in these areas.

Capability Gap

8.3 By the end of the decade, the increase in air, surface and sub-surface threats, and the sophistication of these threats, within the Australia/Asia-Pacific region and beyond will mean that the defensive systems onboard the ANZACs will become increasingly ineffective. Consequently, the operational capability of the ANZACs will decline to the point where their ability to operate in these environments would carry serious risks.

8.4 The design of the majority of self-defence equipment on the ANZACs will be approaching 25 years of age by 2010. Support will become increasingly difficult and operating costs will rise. In some cases, such as the anti-air missile, existing systems are becoming increasingly difficult to support.

Links to other Capabilities

8.5 This project has links to the following projects and capabilities:

- NZDF torpedo replacement
- Multi-role vessel
- Anti-ship missiles
- P-3 mission systems upgrade

Timing

8.6 This project needs to be implemented from around the end of this decade.

Current Status

8.7 Preliminary work is underway to scope the project and determine the best way to implement the package of required work.

Costs

8.8 This project is expected to cost around $300 million.

Possible Options

8.9 It may be possible to share in economies of scale with the Australian project to upgrade ANZAC self-defence systems. The self-defence capability comprises a number of components and these may be able to be implemented in a phased manner.

NZDF Torpedo Replacement

Description

8.10 This project proposes to replace the torpedoes for the ANZAC frigates, P-3 Orions and SH-2G Seasprite helicopters to maintain the ANZAC's basic self-defence capability against sub-surface threats and the P-3's area anti-submarine capability.

Policy Value

8.11 The role of the Naval Combat Force is to meet military tasks, particularly in support of the Government's regional and global objectives. The ANZACs are critical to the protection of New Zealand/Australia territorial sovereignty, for participating in FPDA activities, supporting our relationships with regional partners, and undertaking peace support operations in the Asia-Pacific and beyond. These environments contain significantly higher threats to surface vessels than exist in New Zealand's immediate environs, including air and sub-surface threats. Torpedoes provide a basic self-defence capability against sub-surface threats, and enable the ANZACs to be safely deployed in these environments.

8.12 The P-3s require a torpedo replacement to maintain their current capability to fulfil the above policy roles.

Capability Gap

8.13 The current torpedoes will reach the end of their life around 2007, limiting the ability of the ANZACs to be deployed to areas beyond the South Pacific where sub-surface threats may be encountered. This would impact most significantly on the ability of the ANZACs to provide support for peace enforcement operations, such as during INTERFET. It would also limit the utility of the ANZACs as a contribution to the protection of New Zealand/Australia territorial sovereignty.

8.14 The absence of a torpedo capability will mean that the P-3 aircraft will be unable to provide area protection for New Zealand naval vessels against submarine threats.

Links to other Capabilities

8.15 This project has links to the following projects and capabilities:

- ANZAC self-defence upgrade
- Multi-Role Vessel
- Anti-ship missiles
- P-3 mission systems upgrade

Timing

8.16 The current Mark 46 Mod 2 torpedo will not be supportable beyond about 2007. A replacement, either short-term solution or new torpedo, will need to be in service by that date.

Current Status

8.17 Work is underway to consider options to replace the current torpedo.

Costs

8.18 This project is expected to cost around $30 million.

C-130/P-3 Self-protection

Description

8.19 This project proposes to equip the C-130 and P-3 with a self-protection capability against likely threats, primarily man-portable infrared (IR) missiles.

Policy Value

8.20 The C-130 is a critical enabler for many NZDF operations. It provides essential air transport for a number of roles and tasks, including: supporting counter-terrorist operations; peace support operations; evacuations of New Zealanders from trouble spots; disaster relief and humanitarian operations; supporting the civil power; and supporting New Zealand's Antarctic programme.

8.21 The capability provided by the P-3 is critical to meeting many of the roles and tasks required of the NZDF across the range of the Government's five defence policy objectives. The P-3 is critical for the surveillance of New Zealand's EEZ and the Southern Ocean. It is also critical to meeting our South Pacific obligations. The P-3 is one of the primary capabilities that contributes to our defence relationships with Australia and FPDA partners, and is of high utility for peace support operations.

8.22 C-130s and P-3s are expensive assets and moreover carry a significant number of people. It is important therefore to protect those assets and minimise the risks to people onboard.

Capability Gaps

8.23 The current C-130 self-protection fit was installed in the early 1990s. Since that time there has been a significant increase in the sophistication and availability of missiles. The current system is no longer appropriate for today's threat environment.

8.24 The P-3 currently has no dedicated self-protection equipment. The aircraft's sensors inherently provide protection from long-range and/or obvious threats. Man-portable missiles are easy to conceal, however, and detection may not be possible before the aircraft has closed within range of the weapon. It is therefore necessary to be able to detect the missile launch and use countermeasure techniques to defeat it.

8.25 In the last 15 years, 90 percent of all aircraft lost in combat have been attributed to infrared (IR) guided missiles. Specifically, these aircraft have fallen to man-portable missile systems. These shoulder-launched systems are widespread throughout third world nations. Lack of a self-protection capability could limit the use of our C-130s or P-3s in humanitarian or peace support operations globally.

Links to Other Capabilities

8.26 This project has links to the following projects and capabilities:

- C-130 upgrade
- P-3 mission systems upgrade

Timing

8.27 This project should be considered in parallel to the upgrade projects for the C-130 and P-3. Ideally a self-protection capability would be available as the upgraded aircraft return to service.

Current Status

8.28 The NZDF is conducting an investigation into threat scenarios that in turn will determine the appropriate self-protection requirement.

Costs

8.29 This project is expected to cost around $30 million.

Anti-ship Missiles

Description

8.30 This project proposes to equip the P-3 aircraft with an anti-ship missile capability.

Policy Value

8.31 Equipping the P-3 aircraft with an anti-ship missile capability would significantly enhance the value of these aircraft in fulfilling policy roles relating to the territorial sovereignty of New Zealand and Australia, playing an appropriate role in the maintenance of security in the Asia-Pacific and participating in the FPDA.

Capability Gap

8.32 Disbanding the Air Combat Force has resulted in the loss of the maritime strike capability. The P-3s provide targeting information but do not have an anti-ship capability. The inability to take immediate action against surface threats limits the P-3's ability to provide force protection for New Zealand naval vessels, particularly the frigates and, in future, the MRV.

Links to other Capabilities

8.33 This project has links to the following projects and capabilities:

- P-3 mission systems upgrade
- ANZAC frigates
- Multi-role vessel

Timing

8.34 The timing of this project is dependent on the completion of the P-3 mission systems upgrade. The modification required to enable the P-3 to launch anti-ship missiles is relatively straightforward and could be done during routine maintenance. A minimum number of missiles would need to be purchased, with the rest obtainable through an access arrangement. Before a missile capability is added, the mission systems upgrade would be necessary to provide sensors capable of locating and properly identifying targets.

Current Status

8.35 Further work on this project is on hold pending availability of funding.

Costs

8.36 This project is expected to cost $10 million to equip the P-3 with the capability to launch anti-ship missiles and a further $10 million - $15 million for the missiles.

Joint Communications Modernisation

Description

8.37 This project proposes to modernise the NZDF's long-range and medium-range communications capability to ensure that the NZDF maintains a reliable, integrated, world-wide communications infrastructure. This communications infrastructure will support NZDF deployed forces, ships and aircraft operating outside short-range radio coverage and enable communications between force elements deployed to different parts of a theatre of operations.

8.38 The modernisation will support higher data transfer rates and modern communication protocols, with a mix of military and commercial communications services.

Policy Value

8.39 As communications are critical in almost all roles, the modernisation of the communications infrastructure is important in the achievement of defence policy objectives in New Zealand's environs, the South Pacific, Asia-Pacific and, potentially, in contributions to global security and peacekeeping.

Capability Gap

8.40 Current communications systems are single Service oriented, technologically dated and comprise ad hoc and short-term systems. Communications between the Joint Force Headquarters and units deployed or operating beyond short-range radio coverage will not meet requirements, resulting in an inability to exchange information between NZDF units and allies. Deferral of this project will limit the type and timeliness of information that can be exchanged and thus will limit the ability of the NZDF to develop a modern, integrated command control communications and intelligence capability.

Links to Other Capabilities

8.41 Long-range and medium-range communication systems form an essential part of the NZDF communications infrastructure and contribute to all NZDF outputs. This project is dependent on the completion of the JCCS PDS and is linked to the Army Tactical Communications System.

Timing

8.42 Modernisation of this capability needs to be started around 2005 to fully realise the benefits of the JCCS and the enhanced communications systems being introduced with other projects such as the P-3 mission systems upgrade and the MRV. To provide a fully effective command, control, communications and intelligence capability, the communications infrastructure must match the capability of the JCCS.

Current Status

8.43 A study is underway to determine the programme of work required to achieve an integrated communications infrastructure. This study, scheduled for completion in December 2002, along with input from the JCCS project definition study, will assist in developing a strategy to implement this project.

Costs

8.44 This project is expected to cost $20 million - $40 million.

Whenuapai Runway Reconstruction

Description

8.45 This project proposes to reconstruct the Whenuapai runway to keep it fully operational for military and commercial use.

Policy Value

8.46 The basing requirements for the Air Force are currently being reviewed in a separate study. Depending on the outcome, Whenuapai may remain an operational airfield for the Air Force. Whenuapai could, therefore, continue to support the operations of the maritime surveillance and air transport aircraft.

Capability Gap

8.47 The hexagonal block construction of the runway is failing leading to runway cracking. Runway cracking constitutes a flight safety hazard to all aircraft. This risk can be offset in the short-term by regular runway sweeps and inspections, but the risk will increase as the break-up process becomes more widespread. Operations by larger aircraft are already restricted. An upgrade of the runway is essential if Whenuapai is to continue as an operational base and to support an increase in air traffic. Restrictions on aircraft operations at Whenuapai will impact on the ability of the Air Force to operate.

Links to Other Capabilities

8.48 This project has links to the following projects and capabilities:

- Whenuapai hardstanding reconstruction
- Ohakea runway reconstruction
- Maritime surveillance
- Air transport

Timing

8.49 There is a need to minimise flight safety risks and restore the airfield to unrestricted operations. Reconstruction work needs to be undertaken within the next eight years.

Current Status

8.50 Awaiting the outcome of the RNZAF basing study.

Costs

8.51 This project is expected to cost $19 million.

Whenuapai Hardstanding Reconstruction

Description

8.52 This project proposes to reconstruct the Whenuapai hardstanding to keep the airfield fully operational for military and commercial use.

Policy Value

8.53 The basing requirements for the Air Force are currently being reviewed in a separate study. Depending on the outcome, Whenuapai may remain an operational airfield for the Air Force. Whenuapai could, therefore, continue to support the operations of the maritime surveillance and air transport aircraft.

Capability Gap

8.54 The hexagonal block construction of the hardstanding area has failed due to aircraft usage far above the original design limits. The hardstanding will become unusable and restrict aircraft operation. An upgrade of the hardstanding area is essential for Whenuapai to continue as an operational base and to support an increase in air traffic. Restrictions on aircraft operations at Whenuapai will impact on the ability of the Air Force to operate.

Links to Other Capabilities

8.55 This project has links to the following projects and capabilities:

- Whenuapai runway reconstruction
- Ohakea runway reconstruction
- Maritime surveillance
- Air transport

Timing

8.56 Reconstruction work needs to be undertaken within the next four years.

Current Status

8.57 Awaiting the outcome of the RNZAF basing study.

Costs

8.58 This project is expected to cost $10 million.

Ohakea Hardstanding Reconstruction

Description

8.59 This project proposes to reconstruct the Ohakea hardstanding and taxiways to keep the airfield fully operational for military and commercial use.

Policy Value

8.60 The basing requirements for the Air Force are currently being reviewed in a separate study. Depending on the outcome, Ohakea will be either the sole or primary operational airfield for the Air Force. Ohakea, therefore, will support the operations of the maritime surveillance aircraft, air transport aircraft, and helicopters.

Capability Gap

8.61 The hexagonal block construction of the hardstanding area and taxiways is failing due to irregular aircraft usage far above the original design limits. The hardstanding and taxiways will become unusable and restrict aircraft operation. An upgrade of these areas is essential for Ohakea to continue as an operational base and to support an increase in air traffic. Restrictions on aircraft operations at Ohakea impact on the ability of the Air Force to operate.

Links to Other Capabilities

8.62 This project has links to the following projects and capabilities:

- Ohakea runway reconstruction
- Maritime surveillance
- Air transport

Timing

8.63 Reconstruction work needs to be undertaken around 2010.

Current Status

8.64 Ongoing monitoring of hardstanding and taxiway condition.

Costs

8.65 This project is expected to cost $8 million.

9 PROJECTS THAT HAVE BENEFIT BUT ARE LESS CRITICAL TO ACHIEVING POLICY OBJECTIVES

High Readiness Infantry Company

9.1 The Army does not maintain a high readiness infantry company which can undertake many short-notice tasks. This represents a policy gap and affects deployment times.

Short Range Air Patrol

9.2 The Maritime Patrol Review identified a need for a short-medium range air patrol capability to complement the long range P-3. Options include provision of patrol services by a commercial contractor or by the Air Force. A commercial contract is estimated to cost in the order of $8 million - $10 million annually. The Air Force could potentially provide the service at a lower annual cost by combining this task with existing training requirements.

Modifications to enable MRV/OPV to operate in the Ross Sea

9.3 The Maritime Forces Review identified a requirement for patrolling in the Southern Ocean and in the Ross Sea. At least one of the vessels (multi-role vessel and/or offshore patrol vessels should be capable of conducting operations in these waters. Advice will be sought from industry as to the marginal cost of including an ice-strenthened capability in the vessel design. Funding for this capability is included in the $500 million allocated for the naval surface fleet.

Remote Mine Detection

9.4 The Maritime Forces Review identified a requirement to protect New Zealand's major ports by developing a capacity to detect and dispose of mines and other explosives underwater. The Review concluded that the mine countermeasures role should be retained. The capability of the Navy to detect mine-like objects is becoming increasingly difficult as current equipment reaches the end of its economical life. Upgrading this capability would significantly improve the safety of personnel and ships over the current inadequate, emergency only, systems.

Army Manoeuvre Range

9.5 A moving target range enables soldiers and commanders to practice the skills necessary to conduct motorised operations. The range would allow the practice of low level manoeuvre (up to platoon level) while engaging static and moving targets.

Indirect Fire Support Weapon

9.6 Army currently has 81mm mortars and the 105mm artillery howitzer. Based on current usage and firing wear and tear, both weapons are expected to require replacement around 2012.

Infrastructure projects

9.7 There are a range of infrastructure requirements that will need to be addressed over the next ten years. These projects will upgrade or replace existing facilities and may reduce infrastructure and operating costs.