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Australian Defence Force
Posture Review

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**AUSTRALIAN DEFENCE FORCE
POSTURE REVIEW**

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CONTENTS

| | |
|--|------------------|
| Executive Summary & Recommendations | i- viii |
| Chapter One: Force Posture | Page 1 |
| <i>The Functions of Bases</i> | <i>Para 1.6</i> |
| <i>Approach Taken</i> | <i>Para 1.21</i> |
| <i>Parallel Work</i> | <i>Para 1.27</i> |
| Chapter Two: Strategic & Capability Judgements | Page 6 |
| <i>Strategic Judgements</i> | <i>Para 2.1</i> |
| <i>Australia's Military Strategy</i> | <i>Para 2.9</i> |
| <i>Operating Concept and Campaign Plan</i> | <i>Para 2.17</i> |
| <i>ADF Capability Judgements</i> | <i>Para 2.20</i> |
| <i>Strategic Basing Principles</i> | <i>Para 2.21</i> |
| Chapter Three: Economic & Demographic Trends | Page 12 |
| <i>Energy Security in the Asia- Pacific</i> | <i>Para 3.1</i> |
| <i>Growing Resource Developments in Northern Australia</i> | <i>Para 3.5</i> |
| <i>Long Term Economic and Demographic Trends</i> | <i>Para 3.10</i> |
| <i>The 'Two Speed Economy': Defence Implications</i> | <i>Para 3.15</i> |
| <i>Industry and Infrastructure Requirements for Generating & Sustaining Capability</i> | <i>Para 3.19</i> |
| <i>Encroachment</i> | <i>Para 3.22</i> |
| Chapter Four: Securing Australia's North | Page 18 |
| <i>A National Approach to Security in the North</i> | <i>Para 4.5</i> |
| <i>The ADF Presence in Northern Australia</i> | <i>Para 4.10</i> |
| <i>Enhancing the ADF Presence</i> | <i>Para 4.12</i> |
| <i>Bases and Civil Infrastructure</i> | <i>Para 4.16</i> |
| <i>Exercises and Operational Activities</i> | <i>Para 4.25</i> |
| <i>Regional Force Surveillance Units</i> | <i>Para 4.29</i> |
| <i>Civil Engagement & Whole- of- Government Coordination</i> | <i>Para 4.34</i> |
| Chapter Five: Australia's Offshore Territories | Page 26 |
| <i>Cocos (Keeling) Islands & Christmas Island</i> | <i>Para 5.1</i> |
| <i>Australian Antarctic Territory and the Southern Ocean</i> | <i>Para 5.6</i> |
| Chapter Six: The Current & Future Force Posture | Page 28 |
| <i>Overall Assessment</i> | <i>Para 6.1</i> |
| Navy | Page 30 |
| <i>Navy Force 2030</i> | <i>Para 6.4</i> |
| <i>The Future Submarine and Large Amphibious Ships</i> | <i>Para 6.7</i> |
| <i>Fleet Base East</i> | <i>Para 6.18</i> |
| <i>Fleet Base West</i> | <i>Para 6.22</i> |
| <i>Northern Navy Bases</i> | <i>Para 6.27</i> |
| <i>Mine Counter Measures and Hydrographic Capability</i> | <i>Para 6.32</i> |
| Army | Page 36 |
| <i>'Plan Beersheba'</i> | <i>Para 6.35</i> |
| <i>1 Brigade</i> | <i>Para 6.38</i> |
| <i>7 Brigade</i> | <i>Para 6.41</i> |
| <i>6 Brigade</i> | <i>Para 6.47</i> |
| <i>16 Brigade</i> | <i>Para 6.51</i> |

| | |
|--|------------------|
| <i>Special Operations Forces</i> | <i>Para 6.53</i> |
| <i>Army Reserve</i> | <i>Para 6.54</i> |
| Air Force | Page 40 |
| <i>Air Base Locations</i> | <i>Para 6.55</i> |
| <i>Upgrading Air Base Capacity</i> | <i>Para 6.59</i> |
| <i>Sustaining Air Bases - Logistics</i> | <i>Para 6.63</i> |
| <i>Resilience, Hardening and Security of Air Bases</i> | <i>Para 6.65</i> |
| <i>US Air Force Access</i> | <i>Para 6.66</i> |
| <i>Civil Aviation Access and Encroachment Issues</i> | <i>Para 6.67</i> |
| Joint Amphibious Capability | Page 43 |
| Mobilisation Planning | Page 45 |
| Chapter Seven: Force Enablers | Page 46 |
| Joint Training | Page 46 |
| <i>Training Areas</i> | <i>Para 7.1</i> |
| <i>Maritime Exercise Areas</i> | <i>Para 7.13</i> |
| Strategic Logistics | Page 48 |
| <i>Strategic Fuel Issues</i> | <i>Para 7.16</i> |
| <i>Deployable Refuelling Capabilities</i> | <i>Para 7.21</i> |
| <i>Naval Munitions Loading</i> | <i>Para 7.24</i> |
| <i>Munitions Imports</i> | <i>Para 7.29</i> |
| <i>Loading Explosive Ordnance for LHDs</i> | <i>Para 7.31</i> |
| Joint Situational Awareness | Page 52 |
| <i>Strategic Fusion Integration Facility</i> | <i>Para 7.32</i> |
| Chapter Eight: Overseas Partners | Page 53 |
| <i>US Force Posture</i> | <i>Para 8.1</i> |
| <i>Singaporean Training in Australia</i> | <i>Para 8.5</i> |
| <i>New Zealand, the South Pacific & East Timor</i> | <i>Para 8.8</i> |
| <i>The Asia-Pacific</i> | <i>Para 8.12</i> |
| Chapter Nine: Resources | Page 55 |
| <i>Funding</i> | <i>Para 9.1</i> |
| <i>The Defence Estate Consolidation Project</i> | <i>Para 9.4</i> |

Annexes

A: Media Release and Terms of Reference, 22 June 2011

B: Map of ADF Facilities, Training Areas, Selected Civil Ports and Offshore Resources

C: Historical Background

D: Not Included – Contains Sensitive Strategic Guidance

E: Summary of Judgements and Recommendations against Terms of Reference

F: Summary of Stakeholder Consultation

G: Summary of Submissions to the Review

H: Deloitte Access Economics Study on Long Term Economic and Demographic Trends

Executive Summary & Recommendations

1. Although Australia's changing strategic environment does not necessitate widespread changes in the location of the ADF's bases, ADF posture needs to be adjusted to meet current and future needs.
2. While there is much that is commendable in the ADF's current force posture, there are also some significant weaknesses and risks that will become more pressing over coming years in meeting Force 2030 requirements. These mostly relate to the capacity of ADF bases, facilities and training areas to support current and future capabilities, particularly in Australia's North and West, and our ability to sustain high tempo operations in Northern Australia and our approaches, the immediate neighbourhood and the wider Asia-Pacific region.
3. This Review's recommendations should help to ensure an appropriate focus on the key issues and proposes options for further improvements to our force posture. Defence is already working to address many of the weaknesses and risks we have identified.

Strategic and Capability Judgements

4. Looking beyond our immediate neighbourhood, Australia's strategic outlook is shaped most fundamentally by the changing global distribution of power, particularly the shift of power to the Asia-Pacific with the rise of China, India and other powers and the continuing strategic engagement of the United States in the Asia-Pacific.
5. These developments reinforce the need for a force posture that can support ADF operations in Australia's Northern approaches; humanitarian assistance and disaster relief operations in our neighbourhood; stabilisation operations in the South Pacific and East Timor; and enhanced cooperation with the United States and regional partners.
6. Asia-Pacific military modernisation is characterised by the development and proliferation of capabilities including ballistic missiles, cruise missiles, submarines, strike aircraft, electronic warfare systems, cyber operations and counter-space systems. This has implications for Australia's ability to maintain a capability edge and for the potential vulnerability of bases and logistics in the event of conflict.
7. Defence has recently given renewed attention to planning for potential requirements for deterring and defeating attacks against Australia. This Review commends these efforts and encourages Defence to sustain this attention.

Recommendations

- (1) Defence should continue to review the joint operating concept for how the current joint force-in-being would deter and defeat attacks against Australia across a range of threat levels.
- (2) Defence should review campaign planning for deterring and defeating attacks against Australia across a range of threat levels. Such a plan should:

- a. integrate current arrangements for domestic security and border protection;
- b. have a strong focus on shaping and deterrence activities;
- c. support a whole-of-Government approach to security; and
- d. be validated through joint exercises and other activities.

Economic and Demographic Trends

8. Apart from the normal processes of population growth, key economic and demographic trends that impact on force posture include the 'two speed economy', the costs for Defence arising from strong resource sector competition and opportunities for the ADF created by new infrastructure development.
9. Defence bases and training areas face encroachment pressures, but, for the most part, these can be managed with appropriate policies, planning and consultation.

Recommendations

(3) Defence's annual Consultative Forums with State and Territory Governments should be the peak forums for functional engagement on estate planning and encroachment issues. Subordinate engagement forums and Defence-industry forums should report key issues to the State and Territory Consultative Forums to ensure awareness and coordinated action on estate planning and encroachment. Defence, and State and Territory Governments, should take a proactive approach to identify any major private sector infrastructure developments with implications and/or opportunities for Defence.

Securing Australia's North

10. The rapid growth and scale of resource development in Northern Australia is a factor in force posture considerations, although potential threats to Australia's resource and energy interests should not be exaggerated.
11. The ADF has an active presence in Northern Australia and its approaches, but it is 'low visibility' and focused on border protection. An increased and more visible ADF presence is warranted, though this does not require new permanent bases.

Recommendations

(4) Defence should continue to consult closely with ACBPS to determine how its Future Operating Concept and new capabilities may affect the level of access sought to Defence bases and facilities out to 2030 and beyond.

(5) Defence should upgrade RAAF Learmonth to enable protracted, unrestricted operations by KC-30 and P-8 aircraft.

- (6) While permanent Navy bases in the North West are not operationally necessary, Defence should examine, in consultation with ACBPS, options involving investment to enhance Broome as a forward operating base.
- (7) Defence should maintain a continually updated assessment of civil infrastructure and the available logistics capacity to support operations in the North West in a range of contingencies.
- (8) Defence should enhance its familiarity and preparedness for operations in the North West through:
- a. joint exercises, including land forces such as RFSU units, and other relevant Government agencies, with a focus on contingencies involving maritime security and vital asset protection;
 - b. more simulated exercises and ‘wargames’ to minimise the costs and practical difficulties involved with exercising in the North West;
 - c. increased aircraft and ship visits to airfields and ports; and
 - d. a program of senior officer and staff study visits (including Defence civilian leaders and officials from other Government agencies) to improve awareness and familiarity with the North West.
- (9) Defence should develop an action plan to improve the sustainability of the Pilbara Regiment and other RFSUs. Possible measures could include:
- a. more flexible recruitment and personnel practices such as the Perth-based squadron of the Pilbara Regiment (for example, additional squadrons or troops recruited from metropolitan areas, including those in South East Australia; ‘industry-sponsored reserves’ recruiting from the fly-in, fly-out workforce; and the opening of more roles in the RFSUs to women);
 - b. improving conditions of service for posted personnel and their families, especially in the Pilbara Regiment;
 - c. improving training through more frequent and systematic involvement with the Army’s force generation cycle; and
 - d. using Reserve brigade units to supplement or ‘round out’ regional surveillance activities.
- (10) Defence should create a new one star Navy appointment in WA to act as a senior representational officer for broader civil and interagency coordination and international engagement, in view of:
- a. the prominence of the ADF and Navy presence in Western Australia; and
 - b. the increasing importance of the Indian Ocean.

Responsibility for senior representation in the North West regions of WA could be assigned to either this position or Commander NORCOM, noting that the Gascoyne, Pilbara and Kimberley regions lie within NORCOM’s current Area of Responsibility.

(11) Defence should develop a plan to communicate better the level of ADF activities and presence in North West Australia. Activities under this plan should be coordinated with the Consultative Forums and other forums with industry participation such as the Australian Maritime Defence Council and the Offshore Oil and Gas Security Forum.

Offshore Territories

12. The Cocos (Keeling) Islands have significant military strategic value as a staging location for maritime air patrol and surveillance activities, given their position in the Indian Ocean and close to Southeast Asia.
13. Over time, increased resources for relevant agencies, not just Defence, will be necessary to strengthen Australia's presence in Antarctica and the Southern Ocean.

Recommendations

(12) Defence should upgrade the Cocos (Keeling) Islands airfield facilities to support unrestricted P-8 and UAV operations (and KC-30 operations with some restrictions, if cost-effective noting the larger footprint needed by this aircraft).

Current and Future Force Posture

14. Navy faces the greatest challenges in accommodating changes required by Force 2030 and needs a fresh master plan for its future basing to meet significantly greater demands on the capacity of wharves, dockyards and support facilities at Navy's bases.
15. Army is reforming its force structure and approach to preparing forces for operations through "Plan Beersheba". Army's current posture does not require significant changes.
16. Air Force bases are well-located, but many currently lack the capacity to fully support new platforms, and some air bases in Northern Australia face significant logistics constraints. Encroachment pressures on air bases can be managed and the Commonwealth and State and Territory Governments should ensure that air bases are protected from encroachment.
17. Introduction of the ADF's new amphibious capability is a major challenge that Defence faces in growing and sustaining Force 2030. There are some potential weaknesses relating to the ADF's ability to mount amphibious operations from Darwin, and some further work to be done at Brisbane.

Recommendations

Navy

(13) Defence should develop a more comprehensive long term master plan for meeting Navy's Force 2030 basing requirements, which also addresses the implications of increased US activities and presence in Australia.

(14) Defence should commence planning now on long term options for establishing a supplementary east coast fleet base at Brisbane for the Future Submarine and large amphibious ships. This work will complement the development of options for embarking forces on amphibious ships at Brisbane in the shorter term, as set out in Recommendation 29.

(15) Defence should proceed with its plans to homeport the Air Warfare Destroyers and LHDs at Fleet Base East in the short term but also develop additional options involving Brisbane and Fleet Base West as set out in Recommendations 14 and 16.

(16) Defence should develop options to expand wharf capacity and support facilities at Fleet Base West to:

- a. support major surface combatant capability and operations by:
 - I. providing adequate infrastructure and facilities, including missile loading and maintenance facilities, to homeport the Future Frigate class and forward deploy at least one Air Warfare Destroyer; and
 - II. ensuring such facilities are also able to be used for deployments and operations in Southeast Asia and the Indian Ocean by US Navy major surface combatants and aircraft carriers;
- b. support submarine capability and operations by:
 - I. enabling Fleet Base West to continue as the primary submarine homeport when the expanded Future Submarine fleet enters service; and
 - II. ensuring such facilities are also able to be used by US Navy submarines.

Defence should also monitor commercial dredging developments near Fleet Base West in consultation with the WA Government.

(17) Defence should plan to upgrade or expand bases to accommodate the OCV and replacement LCH, noting that scale and cost of work will depend on the final size of the OCV and LCH, including:

- c. upgrades or expansion of bases at Darwin and Cairns;
- d. upgrades at HMAS Waterhen in Sydney; and
- e. upgrades required at Fleet Base West to be able to support OCV mine countermeasures operations.

Army

(18) Defence should retain 1 Brigade's current disposition centred in Darwin.

(19) Defence should retain 7 Brigade in Enoggera, given its advantageous strategic location in Brisbane with DJFHQ, near 6 Brigade elements, the Amberley 'super-base' and the Port of Brisbane, and the significant expense required in developing a new base closer to Shoalwater Bay.

(20) Defence should consolidate 6 Brigade in South East Queensland, without compromising the retention of 7 Brigade at Enoggera in Brisbane.

Air Force

(21) Defence should upgrade bases at Edinburgh, Learmonth, Pearce, Tindal and Townsville to enable unrestricted operations by KC-30 and P-8 aircraft, noting that Darwin already meets these criteria and Curtin is a lower priority for upgrade.

(22) Defence should upgrade Curtin, Learmonth, Tindal and Townsville, with Scherger as a lower priority, to support future combat aircraft operations.

(23) Defence should assess fuel and EO requirements for forward air bases during high tempo air operations and identify potential risks, deficiencies and mitigation measures, as part of strategic logistics assessments (see Recommendation 34).

(24) To mitigate risks associated with increasing strike capabilities in the Asia-Pacific region, Defence should consider options for hardening and resilience improvements at forward main bases and bare bases including:

- a. physical hardening, dispersal and deception measures;
- b. emerging priorities such as electro-magnetic resilience; and
- c. force structure enhancements such as increased airfield repair capability.

(25) Government should ensure that Williamtown is protected from encroachment, in view of its strategic importance in generating air combat capability.

(26) Defence should develop options for reducing Air Force's footprint at RAAF Base Richmond after the retirement of the C-130H fleet by 2015 and the C-130J fleet by 2026. Richmond would need to continue to be able to support ADF air capabilities with a Defence precinct that could support domestic security operations in Sydney if required.

Joint Amphibious Capability

(27) Plans for developing an amphibious mounting base capacity at Townsville are appropriate and on track, noting the reliance on loading explosive ordnance by watercraft loaded at Ross Island Barracks.

(28) Defence should develop an alternative amphibious mounting option for Darwin that includes a roll-on, roll-off loading facility at East Arm wharf, rather than rely on embarkation and loading via watercraft.

(29) Defence should develop options to allow large amphibious ships to embark Army units based in Brisbane and (as a lesser priority) Adelaide, in addition to Townsville and Darwin.

Force Enablers

18. Strategic logistics presents some challenges for force posture. Priority areas to be addressed relate to the capacity of the strategic fuel and explosive ordnance supply chains, and maritime logistics, particularly facilities for loading explosive ordnance on Navy platforms.

19. Training areas are subject to constraints relating to large-scale amphibious training requirements, all-season access and surgical and aero-medical evacuation requirements.

Recommendations

Training Areas

(30) Defence should seek at least one additional training area capable of supporting full-spectrum integrated joint/amphibious and combined exercises, in all seasons, to address identified deficiencies and risks. These

deficiencies and risks should also be mitigated through the continued development of Defence's capacity to conduct simulated training.

(31) If acquiring a new training area proves impractical, then Defence should significantly enhance at least one existing area (Bradshaw, Cultana and/or Yampi Sound), accepting their constraints for large scale amphibious training and that Bradshaw and Yampi Sound are inaccessible in the wet season.

(32) Defence should explore options to enhance the Bradshaw and (as a lower priority) Yampi Sound Training Areas, as part of arrangements for increased foreign training in Australia.

(33) Defence should review its requirements for providing best practice surgical and aero-medical evacuation support for exercises in remote training areas, to guide employment of adequate capability enablers and appropriate risk mitigation measures.

Strategic Logistics

(34) Defence should assess the capacity of the logistics supply chain to meet strategic fuel and explosive ordnance requirements in Northern Australia in a range of contingencies. These assessments would complement work on:

- a. options for missile loading and maintenance at Fleet Base West as per Recommendation 16; and
- b. logistics risk mitigation for air bases as per Recommendation 23.

(35) Defence should conduct further study to identify explosive ordnance logistics risks for Navy and the joint amphibious capability and, if necessary, develop options for:

- a. establishing or upgrading at least one facility in Northern Australia and/or Brisbane to enable more reliable munitions loading for Navy's major fleet units; and
- b. establishing or upgrading facilities and arrangements for explosive ordnance loading, storage and distribution at mounting bases or ports in Northern Australia.

(36) Defence should proceed with plans to remediate Point Wilson for the importation of bulk explosive ordnance and develop options for using Port Alma as a back-up location.

Joint Situational Awareness

(37) Defence should develop options for a Strategic Fusion Integration Facility at Edinburgh, if further consideration determines that a dedicated facility is required.

Overseas Partners

20. Access to facilities and training areas in Australia has become more important to the United States' regional posture. During President Obama's visit to Australia in November 2011, the Australian Government and the US Administration announced two new US force posture initiatives: the rotational deployment of US Marines to Darwin and increased rotational visits by US Air Force aircraft to bases in Northern Australia.

21. Australia's relationships with regional partners, in both our immediate neighbourhood and the wider Asia-Pacific, provide opportunities for access to facilities and training activities offshore.

Recommendations

(38) Defence should continue to use activities in the Defence International Engagement Plan and international exercises planned in the Program of Major Service Activities to enhance operational flexibility.

Resources

22. Implementing many of this Review's recommendations would require significant investment in bases and facilities to allow the effective deployment and support of platforms and systems being acquired under Force 2030.
23. The Defence Estate Consolidation Project, which commenced in 2009, has been working to identify how further consolidation of bases and facilities could deliver a more affordable and sustainable Defence estate.

Recommendations

(39) The Defence Estate Consolidation Project should resume development of a detailed estate consolidation plan for Government consideration, including options for rationalisation, guided by Government decisions flowing from this Review.

Chapter One: Force Posture

- 1.1 On 22 June 2011, the Minister for Defence announced a review of Australian Defence Force (ADF) posture to ‘assess whether the ADF is correctly geographically positioned to meet Australia’s modern and future strategic and security challenges’ (see [Annex A](#) and a related map at [Annex B](#)). As announced by the Minister, the Review’s findings and conclusions will feed into the next Defence White Paper, currently scheduled to be considered by Government and published in the first quarter of 2014.
- 1.2 This is the first strategic review of force posture since the Cooksey Review of Australia’s Defence Facilities in 1988, which followed the 1986 Dibb Review and the 1987 Defence White Paper. Recent internal studies and reviews of Defence’s basing disposition have been driven more by the search for increased efficiency through rationalisation and consolidation than by assessments of strategic and operational requirements.
- 1.3 While fundamental determinants of Australia’s force posture – Australia’s strategic interests, key defence policy principles, our geography and the basic functions that bases serve – are enduring, it is timely, prior to the development of the next Defence White Paper, to consider the implications of:
 - a. major challenges and trends in Australia’s strategic environment, particularly the emergence of a more competitive multipolar order in the Asia-Pacific with the rise of China, India and other powers and the continuing strategic engagement of the United States;
 - b. military capability trends in the Asia-Pacific, including the proliferation of advanced, long range anti-access, power projection and strike capabilities;
 - c. the requirements of ADF capability development as set out in *Force 2030*, the 2009 Defence White Paper, including new major platforms and systems entering service in the near future (such as the Landing Helicopter Dock ships and KC-30 multi-role tanker-transport aircraft) and the longer term (such as the Future Submarines and the F-35 Joint Strike Fighter); and
 - d. expanding energy and resource sector development in Northern Australia, including offshore development in our North West and Northern approaches, and the impact of the ‘two speed economy’ on Defence’s infrastructure planning.
- 1.4 This Review has treated ‘force posture’ as a multifaceted concept, embracing:
 - a. bases (in their various manifestations such as major bases and home ports, forward operating bases and mounting bases), facilities and training areas; and
 - b. activities such as operational deployments, port visits, training exercises, international engagement activities, familiarisation visits and consultative forums which enable and demonstrate the ADF’s capacity to meet the strategic tasks required of it by the Government.

1.5 Defence's current force posture has been shaped by a range of factors and events, including the evolution of Australia's defence strategy since Federation, mobilisation for the First and Second World Wars, and trends in Australia's demographic and economic profile. Changes in Australia's defence strategy from the late 1960s to the 1980s resulted in rebalancing force disposition and posture towards Western and Northern Australia. In particular, the 1987 Defence White Paper led to the establishment of a 'Two Ocean Navy', an increased Army presence in Northern Australia, the completion of Air Force's 'Northern chain' of air bases and the permanent basing of fighter aircraft at RAAF Base Tindal.¹

The Functions of Bases

1.6 Determining the optimal geographic location for ADF bases depends on the functions they are expected to perform. Bases are not intended to be used as permanent defensive positions. The ADF would not plan to defend Australia by using bases as a static line of defence along our northern coasts, or by establishing fortified strong-points to protect major cities or infrastructure. Australia's colonies established coastal forts (such as Fort Denison in Sydney) to defend their capitals and other key ports during the nineteenth century, but this approach is not viable for modern defence strategy. Rather, bases are used to support a maritime strategy of manoeuvre, power projection and layered defence in Australia's Northern approaches. Australia's military strategy for defending Australia is addressed in Chapter Two.

1.7 ADF bases have two main functions: generating and sustaining capability, and mounting and supporting operations. Some bases are better suited for only one of these roles, or one particular element of a role such as training, while others can effectively fulfil both roles.

1.8 Generating and sustaining military capability requires bases to have a number of key characteristics. Bases must have sufficient facilities, infrastructure and training areas for their 'raise, train and sustain' activities, access to necessary industry support for platforms and systems and access to services for ADF members and their families. The importance of industry support and 'family friendly' locations that facilitate recruitment and retention is recognised in the strategic basing principles set out in the 2009 Defence White Paper (see Chapter Two).

1.9 Where possible, Defence has sought to achieve more efficient basing by consolidating units into large, multi-user bases, such as the 'super bases' at Amberley and Edinburgh which accommodate Army, Air Force and joint units. Consolidation has benefits for generating and sustaining ADF capability, but consolidating into a smaller number of bases can also carry risks related to vulnerability to attack in the event of a major conflict, potential logistics bottlenecks or the impact of increased activity levels on local communities.

1.10 The need for hardening and dispersal at base facilities as a precaution against attack has not been as pressing for Australia's force posture as it is for some other countries, given the absence of a direct military threat,

¹ A summary of the historical background to the current force posture, including key force posture conclusions from the 1986 Dibb Review and 1988 Cooksey Review, is provided at [Annex C](#).

the level of regional capabilities and our ability to rely on Australia's advantageous geography.

- 1.11 Forces that are ready to deploy over long distances in a timely manner do not necessarily need to be based near their prospective operating areas. Indeed, it is often more effective to keep permanent bases near support facilities, industry and training areas – provided the forces concerned are ready to deploy in a timely manner and to be sustained in the area of operations. Preparedness and logistics are thus key concepts in force posture.
- 1.12 Operational basing requirements differ between the Navy, Army and Air Force, reflecting their distinctive needs in conducting and sustaining operations.
- 1.13 Navy's major warships have the range and endurance to operate self-sufficiently at long distances from their home-port, with each vessel carrying the fuel, explosive ordnance, rations and spare parts that it requires for several weeks – which can be extended by replenishment at sea.
- 1.14 Major fleet bases, therefore, do not need to be close to potential operating areas, although distances will influence transit time and endurance. Navy's minor war vessels are more constrained in their endurance than major warships and therefore need bases closer to their operating areas.
- 1.15 For a more sustained presence in an operating area, Navy warships depend on either replenishment at sea from support ships such as HMA Ships *Success* and *Sirius*, or resupply in port. Fuel and rations can be sourced from commercial ports in Australia or overseas, depending on operational circumstances, but warships would need to return to a major base or facility to repair battle damage and replace expended missile stocks that cannot be loaded at sea.
- 1.16 Army's forces 'fight in the field' and do not conduct operations directly from their permanent bases in most circumstances. Rather, they deploy to an area of operations and establish forward operating bases as necessary. Deployed Army forces are then sustained by logistic support elements and protected lines of supply to a transport hub such as a port, airfield or railhead.
- 1.17 Amphibious operations require mounting areas for the assembly and embarkation of land forces, with adequate facilities to store and load a joint task force's equipment and supplies. Such bases should be close to relevant Army bases, but do not necessarily require the permanent home-porting of Navy's amphibious ships as long as those vessels can deploy to the mounting base in a timely manner when needed.
- 1.18 Air Force is particularly dependent on fixed bases for its operations, as its aircraft must conduct individual missions or sorties from airbases and be sustained by ground support units and facilities.
- 1.19 Air Force's permanent main bases are postured primarily for capability generation and sustainment, but some main bases – Darwin, Tindal and Townsville – are also well-located for air operations in our northern approaches and the immediate region. Air bases are also

important as locations for the deployment, staging or concentration of joint forces and logistics support.

- 1.20 Air Force's permanent bases are complemented by 'bare bases' in Northern Australia that can be used as forward operating bases. Air Force maintains expeditionary support units at its main bases to activate its bare bases or establish new forward operating bases when necessary. Aircraft can be sustained for some months while operating with their support units from a forward base.

Approach Taken

- 1.21 This Review has not sought to make strategic assessments about the Asia-Pacific security environment. Rather, as directed in its Terms of Reference, the Review has drawn on the security, strategic and capability judgements outlined in the 2009 Defence White Paper and current strategic guidance. It has analysed the impact on force posture of economic and demographic factors, including the resource boom and urban encroachment on Defence facilities. The Review has also taken account of expanding offshore resource development in our North West and Northern approaches, and issues regarding offshore territories, including the Cocos (Keeling) Islands, Christmas Island and the Australian Antarctic Territory.
- 1.22 The Review has formed judgements on the ADF's force posture requirements, relating both to its operational tasks and activities, and to its capability generation and sustainment needs, particularly the basing and infrastructure needs of new capabilities in Force 2030. It makes a number of recommendations in relation to these matters. A summary of the Review's judgements and recommendations as they relate to the Terms of Reference is provided at [Annex E](#).
- 1.23 While the recommendations in this report are expressed in the form, 'Defence should...', most of them would in fact require decisions by Government before Defence would have the authority and resources to implement them. In some cases, implementing recommendations would be the responsibility of Defence as a whole, while individual Services or groups would be responsible in other cases. Implementing some recommendations would require cooperation between Defence and other Government agencies, or with State and Territory Governments.
- 1.24 The Review has undertaken an extensive program of research, analysis, stakeholder engagement and consultation to assess ADF posture against current and future requirements. A summary of stakeholders consulted in the course of this Review is provided at [Annex E](#).
- 1.25 Public submissions to the Review were invited during August-September 2011. The Review Secretariat received 38 public submissions from State and Territory governments, local governments, industry groups and companies, Defence Families of Australia, the Returned Services League (SA Branch), the Australian Strategic Policy Institute, the Royal United Services Institute (NSW Branch) and thirteen individuals. A summary of submissions is provided at [Annex G](#).
- 1.26 The Review also commissioned a study from Deloitte Access Economics assessing Australia's long-term demographic and economic

trends, with a focus on northern Australia (see [Annex H](#)). The study's key findings are discussed in Chapter Three.

Parallel Work

- 1.27 *Force Structure Review:* Defence has commenced work on the Force Structure Review that will inform the capability judgements of the 2014 Defence White Paper. Accordingly, this Review does not offer recommendations in relation to force structure, though it does note that enabling capabilities are critical in determining the adequacy of bases, facilities and training areas.
- 1.28 *Defence Estate Consolidation Project:* The Review has been informed in part by the work currently underway in relation to base consolidation, through which Defence is assessing basing requirements and developing options for changes to Defence's estate over the next 25 years. Estate consolidation is discussed in Chapter Nine.
- 1.29 *US Global Force Posture Review:* This Review complements the work underway with the United States on its Global Force Posture Review initiatives involving Australia, specifically the implications for Australia's force posture of the initiatives announced during President Obama's visit to Australia in November 2011. It has also considered the potential for additional Australia-US force posture initiatives in the future.
- 1.30 *Cruise Ship Access to Garden Island Sydney Review:* The Review's considerations regarding berth space and possible encroachment pressures at Navy's Fleet Base East in Sydney have been informed by the work of the recent cruise ship access review. One of the options proposed by the cruise ship access review (Option Five) makes specific reference to this Review's recommendation regarding a possible supplementary fleet base at Brisbane.
- 1.31 *Security of the Offshore Oil and Gas Sector Review:* At the direction of the Minister for Infrastructure and Transport, the Inspector of Transport Security, Mr Mick Palmer, is undertaking a review of the security of offshore oil and gas facilities. He is to report to Government by 30 June 2012.
- 1.32 *Joint Study on Aviation Capacity for the Sydney Region:* The joint study of aviation capacity issues in the Sydney region recently reported to the Commonwealth and New South Wales Governments. Its report includes two recommendations on civil aviation demand for access to RAAF Base Richmond and RAAF Base Williamstown.

Chapter Two: Strategic and Capability Judgements

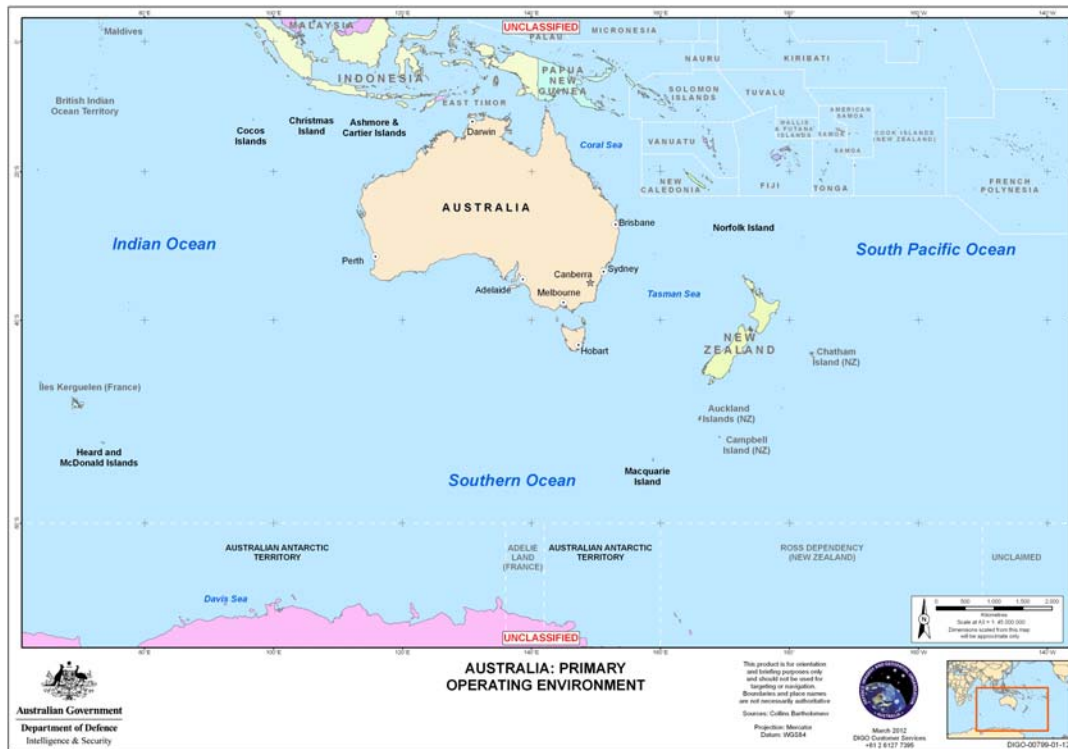
Strategic Judgements

- 2.1 As articulated in the 2009 Defence White Paper, Australia's defence policy continues to be based on 'the principle of self-reliance in the direct defence of Australia, and in relation to our unique strategic interests in our neighbourhood'. The capabilities to achieve this will provide us with a capacity to do more when required, consistent with our strategic interests and within the limits of our resources. This policy maintains alliances and international defence relationships that enhance our own security and allow us to work with others when necessary (WP 6.16).
- 2.2 Looking beyond our immediate neighbourhood, Australia's strategic outlook is shaped most fundamentally by the changing global distribution of power, particularly the shift of power to the Asia-Pacific with the rise of China, India and other powers and the continuing strategic engagement of the United States in the Asia-Pacific region (WP 4.2-4.4).
- 2.3 Strategic guidance assesses that the most likely tasks for the ADF for the next five to ten years are humanitarian assistance, disaster relief and security and stabilisation operations in East Timor and the South Pacific.
- 2.4 The following key strategic judgements, drawn from the 2009 Defence White Paper and current strategic guidance, have been drawn on to guide the conclusions of this Review:
 - a. a more competitive multipolar order is emerging with the shift of economic and strategic power to Asia; the Global Economic Crisis has accelerated this shift;
 - b. the margin of US strategic primacy in the Asia-Pacific is reducing as China rises, even more quickly than anticipated in the 2009 Defence White Paper;
 - c. the Obama Administration has recently announced a strategic 'pivot' in US national security priorities from the Middle East and Afghanistan to the Asia-Pacific²;
 - d. China has become a more confident power in the international system as its economy, military capabilities and influence have grown;
 - e. China has developed significant anti-access and area denial capabilities that constrain US military options in the western Pacific; China's power projection and sea control capabilities are currently more limited, but they are steadily expanding ;
 - f. India is gradually moving towards great power status; it remains committed to a high degree of independence in its diplomatic and defence posture; its security policies remain South Asia-centric, but will place increasing priority on the Indian Ocean and the wider Asia-Pacific;

² Major US announcements and statements have included President Obama's address to the Australian Parliament on 17 November 2011, Hillary Clinton's November 2011 article in *Foreign Policy* on 'America's Pacific Century'.

- g. securing sea lines of communication and energy supplies will be a strategic driver for both competition and cooperation in the Indian Ocean region to 2030, and Australia's defence posture will need to place greater emphasis on the Indian Ocean, as indicated in the 2009 Defence White Paper;
 - h. Southeast Asia is becoming more important to the wider Asia-Pacific strategic balance and great power competition than at any time since the 1970s;
 - i. the South China Sea remains a potential flashpoint in the Asia-Pacific region;
 - j. Indonesia is becoming an even more important partner for Australia; and
 - k. East Timor, Papua New Guinea and the South Pacific will continue to pose likely requirements for ADF stabilisation, humanitarian assistance and disaster relief operations, and rapid population growth is likely to increase the complexities and risks involved in future operations.
- 2.5 These developments underline the need for a force posture that can support ADF operations in Australia's Northern approaches, humanitarian assistance and disaster relief operations in our neighbourhood, stabilisation operations in the South Pacific and East Timor, and contributions to coalition operations in the wider Asia-Pacific.
- 2.6 With respect to direct military threats to Australia, strategic guidance considers the likelihood of Australia coming under direct military attack as low, but it also judges that a strong focus should remain on the principal tasks of deterring and defeating attacks on Australia, and contributing to stability and security in the South Pacific and East Timor.
- 2.7 Asian military modernisation is characterised by the development and proliferation of capabilities including ballistic missiles, cruise missiles, submarines, strike aircraft, electronic warfare systems, cyber operations and counter-space systems. This has implications for the potential vulnerability of bases and logistics infrastructure in the event of major conflict.

Figure 1: Australia's Primary Operational Environment, articulated in the 2009 Defence White Paper (WP 6.38), extends from the eastern Indian Ocean to the island states of Polynesia, and from the equator to Antarctica. It includes all Australian offshore and economic territories. It is not a fixed operating boundary for the ADF.



2.8 Regarding Defence International engagement, there is a need to enhance cooperation and engagement with the United States and regional partners to respond to a more competitive multipolar environment and the changing balance of capabilities in the Asia-Pacific region. The Review notes that this has force posture implications relating to ADF activities and exercises, and foreign military access to Australian facilities and training areas.

Australia's Military Strategy

- 2.9 The first of the ADF's four Principal Tasks, as articulated in Chapter Seven of the 2009 Defence White Paper, is to deter and defeat armed attacks on Australia by conducting self reliant military operations.
- 2.10 Australia's military strategy for this task, as outlined in the White Paper, is crucially dependent on the ADF's ability to conduct joint operations in the approaches to Australia – especially to achieve and maintain sea and air control in places of our choosing.
- 2.11 Our strategic geography requires principally a maritime strategy to achieve these aims. The sea-air gap and our Northern littoral approaches are at the centre of our Primary Operational Environment. Our geography affords us an opportunity to detect and respond effectively to hostile

military operations and incursions at sufficiently long ranges to prevent an adversary reaching the Australian mainland.

- 2.12 This maritime strategy, with its focus on controlling our sea and air approaches, does not imply a purely defensive or reactive approach to defending Australia. As the White Paper explains, the concept of a Primary Operational Environment should not be considered to impose a fixed operating boundary for the ADF. The ADF would seek to undertake proactive operations against an adversary's bases and staging areas, and forces in transit, as far from Australia as possible.
- 2.13 Our maritime strategy should not be misunderstood as a purely naval strategy. Australia's maritime strategy requires land and air forces to assist in controlling our littoral approaches, secure or deny bases and defeat any incursions on Australian territory.
- 2.14 As the White Paper states, Australia needs to maintain a strong capability to project military power from mounting bases and forward operating bases in Northern Australia and, if required, from strategically significant offshore territories which have enduring defence value. Our expansive strategic geography requires an expeditionary orientation on the part of the ADF at the operational level, underpinned by force projection capabilities for defending Australia.
- 2.15 After ensuring Australia is defended from direct attack, the second Principal Task is to contribute to stability and security in the South Pacific and East Timor, including disaster relief and humanitarian assistance and, when necessary, conducting stabilisation operations. It requires a force posture that allows the ADF to respond quickly to contingencies in our immediate neighbourhood and deploy forces in a timely manner, particularly from mounting bases in Northern and North East Australia.
- 2.16 A force structure and force posture that can meet the requirements of both Principal Task One and Principal Task Two requirements should also be able to make appropriate contributions to Principal Task Three (contributing to military contingencies in the Asia-Pacific region) and Principal Task Four (contributing to military contingencies in support of global security).

Operating Concept and Campaign Plan

- 2.17 Defence has recently given renewed attention to planning for potential Principal Task One requirements. This Review commends these efforts and encourages Defence to sustain this attention.
- 2.18 This Review commends the work underway in Defence to review its campaign plans which would provide a foundation to meet Principal Task One planning requirements. This planning should integrate arrangements for domestic security and border protection, and international engagement activities.
- 2.19 Shaping and deterrence activities need to be a strong focus of the campaign plan for Principal Task One, to reinforce the message that preparing to deter or defeat potential attacks against Australia is still the ADF's first priority task. Both the operating concept and the campaign plan should be validated through joint exercises and other activities.

Recommendations

(1) Defence should continue to review the joint operating concept for how the current joint force-in-being would deter and defeat attacks against Australia across a range of threat levels.

(2) Defence should review campaign planning for deterring and defeating attacks against Australia across a range of threat levels. Such a plan should:

- a. integrate current arrangements for domestic security and border protection;*
- b. have a strong focus on shaping and deterrence activities;*
- c. support a whole-of-Government approach to security; and*
- d. be validated through joint exercises and other activities.*

ADF Capability Judgements

2.20 The following key judgements on ADF capability, based on the 2009 Defence White Paper and current strategic judgements, have guided the Review's findings :

- a. Principal Task One (deterring and defeating attacks on Australia) and Principal Task Two (contributing to stability and security in the South Pacific and East Timor) are force structure determinants;
- b. Australia's strategic environment and interests require a focus on enhancing ADF maritime capabilities, in particular submarine/anti-submarine warfare and amphibious operations;
- c. introducing a joint amphibious capability will be a major transformation for the ADF. The ability to conduct security and stabilisation missions, humanitarian assistance and disaster relief in the South Pacific and East Timor will be priorities for this capability;
- d. cyber and space capabilities are increasingly important investment priorities; ballistic missile defence is currently a lower priority for Australia, although Asia-Pacific ballistic missile capabilities are increasing; and
- e. enablers are critical elements of both our force structure (for example, strategic lift, air-to-air refuelling, deployable medical capabilities) and our force posture (for example, forward air bases, port infrastructure, fuel and munitions storage) for the defence of Australia and overseas operations.

Strategic Basing Principles

- 2.21 In the 2009 Defence White Paper, the Government agreed on the following strategic basing principles (SBP) to meet the future needs of Defence:
- a. SBP One - Defence base locations should be aligned with strategic requirements and ensure critical capabilities are suitably dispersed for security reasons;
 - b. SBP Two - Defence should consolidate units into fewer, larger and sustainable multi-user bases aimed at increasing the alignment of functions at joint and Service level and their capacity to support operations;
 - c. SBP Three - Defence should aim to group bases near strategic infrastructure and industry to prompt knowledge sharing and innovation, and to maximise the effectiveness of industry support to the ADF;
 - d. SBP Four - where possible, Defence should locate bases in 'family friendly' areas that provide better employment and specialist medical and educational opportunities for families, and have the potential to reduce posting turbulence in order to improve retention; and
 - e. SBP Five - Defence should maintain an urban and regional disposition to enable the continued provision of part-time capability into the future.
- 2.22 Defence's strategic guidance for estate planning identifies alignment with strategic requirements and dispersal for security reasons as the primary strategic basing principle, with the other four principles subordinate to this. Prioritising these principles is important, as there can be tensions between them. For example, ensuring suitable dispersal of critical capabilities while aiming to consolidate units into a smaller number of multi-user bases.

Chapter Three: Economic and Demographic Trends

Energy Security in the Asia-Pacific

- 3.1 Energy security is a significant concern for Asia-Pacific economies. The International Energy Agency estimates a 35 to 40 per cent increase in global energy demand by 2035, with half of this coming from China and India. China is already the world's largest energy consumer and is projected to consume 70 per cent more energy than the United States by 2035. The rate of energy consumption growth will be even higher in India and Indonesia, albeit from a lower base than China.
- 3.2 Growing demand for critical resources such as energy, water and rare earth elements has heightened international concerns about resource security, but resource stress is unlikely to lead to conflict between nations while the global market functions effectively. Global markets provide a far more cost-effective means of obtaining resources than military force. The major powers in the Asia-Pacific are economically interdependent and have shared interests in maintaining the security of trade and energy supply routes through the Indian Ocean, as demonstrated by the multinational efforts to counter piracy in the Gulf of Aden and Arabian Sea. Some major powers such as the United States and China can also meet a large proportion of their energy demand from domestic production, but China's reliance on energy imports will increase significantly in coming decades.
- 3.3 Tensions over resources may exacerbate existing security problems such as territorial disputes. A loss of confidence in the reliability of global markets or a major conflict that threatened supplies to Asian and Western economies could increase the likelihood of strategic competition for resources.
- 3.4 Australia makes an important contribution to regional energy and resource security through our role as a major supplier. This highlights the importance of the security of Australia's energy and mineral resource assets, and regional perceptions of our ability to provide this security.

Growing Resource Development in Northern Australia

- 3.5 Australia is a leading energy and mineral resource supplier for major Asian economies and the value of our mining exports has more than tripled over the last decade, from \$55.6 billion in 2000-01 to over \$185 billion. These mining exports now account for 12.5 per cent of Australia's Gross Domestic Product.
- 3.6 It is important to appreciate the scale of northern resource development. For example, the Pilbara region alone accounts for 29 per cent of Australia's total merchandise exports, with Pilbara iron ore accounting for 60 per cent of the value of Australia's exports to China.
- 3.7 Some \$380.5 billion is currently invested in energy and resource project development in Australia, with over half in liquefied natural gas (LNG) projects, and \$35 billion in iron ore projects. As the world's fastest growing LNG exporter, Australia is estimated by the International Energy

Agency as likely to become the world's second largest LNG exporter after Qatar by 2015.

- 3.8 At present, LNG investment is heavily concentrated in the North West around the Carnarvon and Browse basins (shown in the map at Annex B), but there is also increasing investment in coal seam gas projects in central Queensland, with up to \$40 billion in projects proposed for the Bowen and Surat coal basins. As the list below highlights, the area encompassing offshore LNG projects is moving northwards, closer to Indonesia and East Timor. The implications for the security of offshore assets are discussed in Chapter Four.
- 3.9 Major LNG projects in Northern Australia include:
- a. the North West Shelf LNG project (\$27 billion) in the Carnarvon Basin and the Pilbara, which has been producing LNG since 1989;
 - b. the Gorgon LNG project (\$43 billion) in the Carnarvon Basin and the Pilbara, which is expected to begin production in 2014;
 - c. the QGC Curtis LNG project (\$15 billion) in the Surat Basin and Gladstone, which is expected to begin production in 2014;
 - d. the Wheatstone LNG project (\$29 billion) in the Carnarvon Basin and the Pilbara, which is expected to begin production in 2016;
 - e. the INPEX LNG project (\$25 billion) in the Browse Basin and Darwin, which is expected to begin production in 2017;
 - f. the Browse (James Price Point) LNG project (\$30 billion) in the Browse Basin and the Kimberley, which is expected to begin production in 2017; and
 - g. the Greater Sunrise LNG project (\$14 billion) in the Timor Sea Joint Petroleum Development Area, subject to negotiations with East Timor.

Long Term Economic and Demographic Trends

- 3.10 Deloitte Access Economics (DAE) was commissioned to study economic and demographic trends in Australia to 2040, with a specific focus on Northern Australia. The study is provided at Annex E. The following conclusions are drawn from the study.
- 3.11 The relative economic weight of the South-East States will decrease over time and by 2040 the North-West States (Queensland, Western Australia and the Northern Territory) are forecast to account for nearly 42 per cent of the Australian economy (currently 35 per cent). This will predominantly be output growth, with less employment and population growth. It is unlikely that this growth will translate into new large cities in Northern WA or the NT, although some existing cities have strong growth prospects.
- 3.12 Although regional centres are predicted to have faster population growth percentages than major centres, the absolute populations of capital cities continue to grow faster than the regional centres. For example, the Pilbara's population is expected to grow by 2.6 per cent annually to 2020 (compared to 1.2 per cent in Sydney), but off a base of only 50,000 people this amounts to an increase to only 64,000.

- 3.13 The diversity of regional economies in Northern Australia is important in determining their capacity to support a significant permanent ADF presence. The DAE study considers that Townsville, central Queensland regions (including Rockhampton and Gladstone) and the Gascoyne region in WA are diversified economies with strong industry and service sectors, in contrast to the Pilbara and Kimberley regions.
- 3.14 The DAE report highlights the challenges of Australia's 'two speed economy', including the imbalances created within States and regions experiencing a resources boom. For example, small businesses in regions like the Pilbara face serious challenges as property and living costs increase, but the local residential population remains limited. The DAE report indicates that Defence and Government are on the wrong side of the 'two speed economy'. This has implications for force posture investment, as described below.

The 'Two Speed Economy': Defence Implications

- 3.15 The resources boom has created a highly competitive environment with implications for ADF force posture, particularly in the North and West. Port, airport, road and rail infrastructure which is being used by the ADF, or might need to be in the future, is being used heavily by the energy and resource industries, and this commercial demand is certain to increase.
- 3.16 Rapid growth in the resources sector also places similar pressures on the availability and cost of skilled labour, industry support, housing and community services in the North and North West for the development, maintenance and operation of Defence infrastructure and facilities. Australia's mineral resources boom has seen increased exploration or mining activity in some regions, and higher air traffic resulting from 'fly-in, fly-out' (FIFO) employment, with the potential to impact on Defence air activities at Learmonth and Pearce in the long term.
- 3.17 In this competitive environment, the resource sector has 'deeper pockets' and quicker decision making processes than Defence and Government (or other industry sectors). This pressure is likely to add to the cost of some of the proposals emerging from this Review.
- 3.18 The development of new infrastructure in Northern Australia to support the energy and resources sector may also create opportunities for Defence. Potential future opportunities could include access agreements to new ports and airfields and influencing new infrastructure development to meet particular Defence needs.

Industry and Infrastructure Requirements for Generating and Sustaining Capability

- 3.19 Complex, technologically sophisticated ADF capabilities require bases with access to sufficient industry capacity to maintain and support ADF equipment, systems and platforms. Without a skilled and responsive workforce, reliable service providers and adequate facilities such as dockyards and workshops, bases would be unable to sustain ADF capabilities at the necessary levels of preparedness for operations that Government has directed.

- 3.20 Traditionally, technical support requirements have been seen as more demanding for the Navy and Air Force than for the Army, given the nature of their technologically complex systems. Naval and air capabilities need intensive support in specialised areas such as marine, aviation and electronic engineering and systems integration. The Army's capabilities and training activities, however, are becoming more technologically sophisticated, with the introduction of new armoured vehicles, helicopters, networked systems and instrumented training ranges.
- 3.21 Generally, industry and infrastructure capacity is more limited and less diverse in Northern Australia and the North West than it is in the major population and industrial centres in the South East and South West. This makes the cost of Defence basing in the North significantly higher, particularly in locations outside Townsville, Cairns and Darwin, which are the only urban centres in Northern Australia with populations of over 100,000 people. For example, Defence's experience with infrastructure projects suggests that construction costs in the Pilbara can be up to three times those of Perth.

Encroachment

- 3.22 Encroachment is a broad concept that includes land use and development, commercial activities and environmental constraints that impact on Defence's ability to use its bases, facilities and training areas, or that is otherwise sensitive to Defence's activities. Examples include residential development, industrial development, civilian use of military airfields or naval berths and the need to protect national parks, marine parks and indigenous heritage. Most bases and training areas, including offshore exercise areas, are subject to at least some pressure as a result of greater encroachment from residential, industrial and recreational areas, and increased commercial air travel, shipping activity or resource exploration activities.
- 3.23 Restrictions on noise, vehicle movements, airspace, the storage of explosive ordnance, the location of weapons ranges and the use of electronic systems, or increased public or commercial demand on infrastructure, can constrain the ability of the ADF to use a base or training area effectively.
- 3.24 Some current encroachment-related considerations include:
- a. noise restrictions and arrangements for jointly used facilities at RAAF Bases Darwin and Williamtown;
 - b. demands for wharf access by cruise ships at Sydney's Fleet Base East;
 - c. traffic through the suburbs surrounding the Army base at Enoggera in Brisbane;
 - d. civil competition for airspace around RAAF bases at Amberley, Pearce and Williamtown; and
 - e. restrictions on activities at Shoalwater Bay Training Area due to Defence's high standard of environmental stewardship and the training area's proximity to the Great Barrier Reef Marine Park.

- 3.25 The introduction of new platforms and systems under Force 2030 will increase some of these concerns. For example, the acquisition of heavier Army armoured vehicles, and possible changes in their basing disposition as 'Plan Beersheba' is implemented, will add to road use pressures around manoeuvre brigade bases in Brisbane, Darwin and Townsville. Increased use of tactical UAVs by Army units during training has implications for airspace management. The increased range and lethality of certain weapons systems will sometimes require expanded 'safety templates' at training areas and weapons ranges.
- 3.26 For the most part, encroachment challenges have proven to be manageable with the appropriate policy, planning and consultation between Defence, State, Territory and local governments, and local communities. All States and Territories welcome Defence's presence and have provided this Review with practical examples of their efforts to cooperate with Defence. These include:
- a. addressing encroachment issues through consultative forums which provide Defence with opportunities to work cooperatively with State and Territory Governments;
 - b. planning controls and other mechanisms to mitigate urban encroachment on ADF bases, particularly air bases like Edinburgh and Amberley (for example, planning legislation enacted by the South Australian Government and introduced by the Queensland Government); and
 - c. working with local communities and local governments to manage issues of concern at specific bases (for example, traffic management at Enoggera, aircraft noise at Williamtown).
- 3.27 Engagement with State, Territory and local governments, local communities and industry should occur as early as possible as part of proactive, long term planning. This is particularly important given the competitive pressures of the 'two speed economy' and the rapid pace of decisions related to resource development.
- 3.28 Defence's annual Consultative Forums with State and Territory Governments serve an important role and should be the leading mechanism for functional engagement on estate planning and encroachment issues. Forums that deal with specific bases and forums where Defence engages with industry such as the Offshore Oil and Gas Security Forum should report relevant issues to the State and Territory Consultative Forums to ensure awareness and coordinated action on estate planning and encroachment. The need for closer consultation with industry is also addressed in Chapter Four at paragraph 4.34.
- 3.29 State and Territory Governments should identify, through the Consultative Forums, any major private sector infrastructure developments with implications and/or opportunities for Defence. A proactive approach by Consultative Forum participants, and Defence Support Group region managers, will be necessary to identify opportunities with sufficient lead time for effective decision making and planning.

Recommendations

(3) Defence's annual Consultative Forums with State and Territory Governments should be the peak forums for functional engagement on estate planning and encroachment issues. Subordinate engagement forums and Defence- industry forums should report key issues to the State and Territory Consultative Forums to ensure awareness and coordinated action on estate planning and encroachment. Defence, and State and Territory Governments, should take a proactive approach to identify any major private sector infrastructure developments with implications and/or opportunities for Defence.

Chapter Four: Securing Australia's North

- 4.1 As the 2009 Defence White Paper observes, securing Northern Australia presents challenges for defence planning because of the region's expansive size, its relatively underdeveloped infrastructure and its substantial economic resources. The economic importance of Northern Australia has increased since the 1970s and 1980s, when our defence policy began to prioritise the ADF's ability to defend the North and its maritime approaches, with the mineral resources boom and the emergence of the 'energy belt' located across Northern Australia and its approaches. As the White Paper stated, 'many of our key resource extraction facilities are remote and would be vulnerable to interference, disruption or attack' in the event of a direct military threat to Australia (WP 6.40).
- 4.2 The potential for terrorist attacks against oil, gas and other resource industry infrastructure in the North and North West is an important consideration, but the level of vulnerability to such attacks can be exaggerated. Possible targets in the North West would not be easy to access, although the risk is slightly higher in the Timor Sea due to proximity to Indonesia and East Timor. In some respects, onshore facilities are more susceptible than the less accessible offshore platforms. Offshore platforms can, however, be more vulnerable to border protection challenges relating to both people smuggling and quarantine.
- 4.3 Primary responsibility for dealing with more likely security risks lies with industry, law enforcement and domestic security agencies rather than Defence, although the ADF could be required to assist with specific counter-terrorist incidents (for example, offshore siege resolution operations) or in responding to major natural disasters.
- 4.4 This Review has consulted with the Inspector of Transport Security, Mr Mick Palmer, on his inquiry of the security of offshore oil and gas facilities. Defence will need to consider that inquiry's findings after it reports to Government in June 2012 when addressing the issues regarding posture in the North and North West raised by this Review.

A National Approach to Security in the North

- 4.5 The Australian Customs and Border Protection Service (ACBPS) has the primary role in providing offshore security in the North West against non-military threats, with State and Territory police having law enforcement responsibilities for onshore facilities and coastal waters out to three nautical miles offshore. Defence plays a major supporting role particularly with its patrol boat, maritime patrol aircraft, Regional Force Surveillance Units, sealift, airlift and intelligence capabilities. The ADF also has specialist counter-terrorism capabilities in the areas of intelligence, surveillance and reconnaissance, precision targeting and recovery operations.
- 4.6 Under Force 2030 plans, the *Armidale* class patrol boat will be replaced with an Offshore Combatant Vessel (OCV) and the AP-3C maritime patrol aircraft will be replaced with the P-8A, supplemented by high-altitude, long-endurance UAVs. ACBPS are also acquiring new *Cape*

class patrol vessels that are larger and significantly more capable than the previous *Bay* class vessels. It is expected that the full fleet of *Cape* class vessels will be operational by 2015-16.

- 4.7 ACBPS expects the tempo of its operations will continue to increase in the maritime domain (with expanding resource exploitation, and ongoing domestic security threats from people smugglers and illegal fishing) and that it will continue to draw on support from other Government agencies, including Defence.
- 4.8 Consultation between Defence and ACBPS on their respective facilities requirements is critical, as ACBPS often uses naval bases for berthing its vessels. The expected increase in ACBPS demand for berth space after it introduces its new *Cape* class vessels will have implications for capacity at naval bases in Northern Australia (HMAS *Coonawarra* and HMAS *Cairns*), as these bases face significant challenges in meeting the needs of Force 2030, as described in the Navy section of Chapter Six.
- 4.9 ACBPS is developing a Future Operating Concept that will guide its operational and investment planning. Defence should engage with ACBPS to determine how this concept and new capabilities may affect the level of access to Defence bases and facilities that ACBPS will seek out to 2030 and beyond.

Recommendations

(4) Defence should continue to consult closely with ACBPS to determine how its Future Operating Concept and new capabilities may affect the level of access sought to Defence bases and facilities out to 2030 and beyond. [This recommendation provides context for Recommendation 6 and Recommendation 17]

The ADF Presence in Northern Australia

- 4.10 Under Operation RESOLUTE, the ADF maintains a considerable presence in support of Border Protection Command to provide security for Northern Australia, including the North West and offshore facilities. From October 2010 to October 2011, under Operation RESOLUTE:
 - a. 2520 AP-3C hours were flown (noting 1850 hours are programmed per year), with 320 flights - including 173 flights from Learmonth and 31 flights to/from Cocos Island;
 - b. Patrol Boats were force assigned to RESOLUTE for 2707 days including 2063 days at sea and 644 days ashore;
 - c. Patrol Boats visited Darwin, Dampier, Port Hedland, Exmouth, Broome, Cocos Islands, Christmas Island, Gove, Weipa, Cairns, Mackay and Brisbane (and Indonesian ports in Jakarta, Bali, Cilicap, Kupang and Ambon);
 - d. Army's Regional Force Surveillance Units conducted 208 patrol days: 89 days by 51 Far North Queensland Regiment, 95 days by the North-West Mobile Force (NORFORCE) and 24 days by the Pilbara Regiment;
 - e. in support of these Regional Force Surveillance Unit patrols, Navy Landing Craft Heavy committed 61 days, Landing Craft Medium

committed 106 days, and Air Force supported with two C-130 sorties; and

- f. Transit Security Elements were embarked on Australian Custom Vessels for a total of 244 days with a further 272 embarked days for specialists – primarily communications related.

4.11 In addition, ACBPS provided the following patrol effort in the North West region during Financial Year 2010-11:

- a. 78 days by Australian Customs Vessel *Archer River* within 12nm of the coast;
- b. ten days of combined patrols between the Australian Customs Vessel *Archer River* and the WA Police;
- c. 20 days by *Bay* Class Australian Customs Vessels; and
- d. 6794 air hours by Coastwatch Dash-8 aircraft contracted by ACBPS with 1179 flights between the Pilbara and Kimberley.

Enhancing the ADF Presence

4.12 Despite this level of activity across the north as a whole, there is a perception in the resource sector and local communities in the North West that the ADF has an insufficient presence. Concern is sometimes expressed that the current level of ADF presence is not commensurate with the large and rapidly growing economic importance of resource development in the North West. This is partly the result of the less visible offshore focus of operations against people smuggling and illegal fishing in accordance with Government priorities.

4.13 There is, in fact, a greater level of ADF activity in the Northern approaches than is realised by many in the community. Nevertheless, an enhanced and more visible presence in the North West is warranted. This is needed to shape international perceptions (particularly to dissuade any perception that our vital national assets could be ‘easy targets’) and to reassure the Australian community and industry that this vital region is adequately protected. It would also help ensure the ADF’s familiarity with the North West’s operating environment and vital assets and infrastructure.

4.14 An enhanced presence can be achieved through targeted initiatives involving existing bases and infrastructure, exercises, operational activities, planning and civil engagement.

4.15 It is important that the ADF presence in the North West should include shaping and deterrence activities relevant to ADF Principal Task One (deterring and defeat attacks on Australia) in addition to peacetime security tasks such as border protection. Campaign planning should provide guidance for these activities (see Recommendation 2).

Bases and Civil Infrastructure

- 4.16 Establishing new major bases in the North West is not necessary for an enhanced presence in that region, as long as the ADF can deploy and support operations from its current bases and use existing facilities and infrastructure such as ports, airfields and roads when necessary. Defence should conduct regular assessments of civil infrastructure and logistics capacity which might be called upon to support operations in the North and North West in a range of contingencies.
- 4.17 Air Force bases are well positioned to support the ADF presence in the North and North West, with main bases at Darwin, Tindal and Pearce, and base bases at Curtin and Learmonth. RAAF Base Learmonth is a key base for operations in the North West approaches and its capacity should be enhanced to enable protracted, unrestricted operations by KC-30, P-8 and Wedgetail Airborne Early Warning and Control (AEW&C) aircraft, as well as air combat aircraft (see Chapter Six for further discussion on Northern air bases).
- 4.18 Establishing new naval bases in the North West to support an enhanced ADF presence is not required because the Navy maintains its ability to deploy vessels and support operations from Fleet Base West and Darwin, and can use suitable civil port facilities to support forward operations.
- 4.19 Port Hedland and Dampier are major ports with extensive capacity and can accommodate additional Navy ship visits (see paragraph 4.26). An important point regarding access to commercial ports such as these, however, is that Defence is not charged for using berths, so port operators incur an opportunity cost when making berths available to the ADF. Berth space is increasingly in demand, and in many cases berths are privately owned or leased to provide dedicated infrastructure for mineral exports and supporting offshore resource development, although ADF access would take priority in an emergency.
- 4.20 Dampier has very limited berth availability for Navy vessels at its general purpose cargo wharf due to the high demands of commercial shipping and offshore support vessels, and issues with fuel supplies and adverse weather that affect patrol boats. The Review notes that the Navy's experience with maintaining a Logistic Support Element for patrol boats in Dampier/Karratha during 2007-2009 led it to conclude that it was not an effective location for a permanent facility.
- 4.21 The WA Government is studying the potential for the development of a marine industry Common User Facility (CUF) in the Port Hedland area, similar to the Australian Marine Complex CUF at Henderson, near Fleet Base West. This proposed new CUF would serve growing demand in the North West, particularly from the resources and offshore oil and gas sector, for marine industry support infrastructure. Although existing facilities at Darwin and Perth-Fremantle can meet Navy's maintenance and sustainment needs, a commercially viable CUF in the Pilbara could provide additional options for sustaining our maritime presence in the North West.
- 4.22 Navy vessels use Broome as a rest and resupply port during their patrols in the North West. Despite challenges created by its high tidal

range, Broome offers berth access, reliable fuel delivered by pipeline to the berth, direct air links to Darwin and ready access to community facilities. Broome is also used by ACBPS vessels and is an operating base for Coastwatch aircraft.

- 4.23 Defence should examine, in consultation with ACBPS, options for enhancing facilities at Broome as a forward operating base. This should be pursued as part of a coordinated approach in collaboration with other agencies with maritime security responsibilities including the WA Police and WA Fisheries Patrol. Further commercial development of Broome Port is likely in the medium to long term and this may create opportunities for Defence.
- 4.24 In a major contingency requiring the defence of the North West, the ADF would need to use civil infrastructure to conduct and sustain operations. Defence should maintain a continually updated assessment of civil infrastructure and the available logistics capacity to support operations in the North West in a range of contingencies. As noted at paragraph 3.18, the private sector's development of new infrastructure in Northern Australia could provide new opportunities for Defence.

Recommendations

(5) Defence should upgrade RAAF Learmonth to enable protracted, unrestricted operations by KC- 30 and P- 8 aircraft.

(6) While permanent Navy bases in the North West are not operationally necessary, Defence should examine, in consultation with ACBPS, options for enhancing facilities at Broome as a forward operating base.

(7) Defence should maintain a continually updated assessment of civil infrastructure and the available logistics capacity to support operations in the North West in a range of contingencies.

Exercises and Operational Activities

- 4.25 More exercises and activities would enhance the ADF's preparedness for operations in this region of Australia and its maritime approaches. Regular exercises should be conducted with a focus on maritime security and vital asset protection. This need not require an additional series of major exercises, but could rather be incorporated into the existing Program of Major Service Activities and the Talisman Sabre exercise series in particular. The opportunities for enhanced training in the North West presented by the rotational presence of US Marines in Darwin should be acknowledged. The use of simulated exercises and 'wargames' where appropriate will help minimise the costs and practical difficulties of exercising in the remote North West.
- 4.26 Increased aircraft and ship visits to airfields and ports in the North West would help maintain the ADF's familiarity with that region and boost the visibility of the ADF's presence. Navy has recently reviewed its ship transit plans to provide additional time for its vessels to make their presence more visible to the operators of ports - Broome, Dampier,

Exmouth and Port Hedland – and offshore facilities in the North West, including short familiarisation visits to these ports and facilities where feasible. This initiative will help to improve awareness and appreciation of Navy’s level of activity in the North West among local communities and industry, and help maintain Navy’s familiarity with the environment and its infrastructure.

- 4.27 As part of Navy’s increased presence in the North West, it would be useful to conduct more mine countermeasures survey activities. The protection of ports and offshore energy assets against mining would be an important objective in the event of a direct military threat and such survey work would be another visible demonstration of the ADF’s presence and commitment to defending Northern Australia.
- 4.28 Defence should maintain a program of senior officer and staff study visits, including participation by Defence civilian leaders and officials from other Government agencies, to improve awareness and familiarity with the North West. These visits by senior officers and officials would also support Defence’s consultation and engagement with local authorities and industry.

Recommendations

(8) Defence should enhance its familiarity and preparedness for operations in the North West through:

- a. joint exercises, including land forces such as RFSU units, and other relevant Government agencies, with a focus on contingencies involving maritime security and vital asset protection;***
- b. more simulated exercises and ‘wargames’ to minimise the costs and practical difficulties involved with exercising in the North West;***
- c. increased aircraft and ship visits to airfields and ports; and***
- d. a program of senior officer and staff study visits (including Defence civilian leaders and officials from other Government agencies) to improve awareness and familiarity with the North West.***

Regional Force Surveillance Units

- 4.29 The Army’s Regional Force Surveillance Units (RFSUs) contribute to security and engagement with local communities in the North and North West. Most RFSU personnel are members of the Army Reserve but, unlike most Reservist-based formations in the Army, the RFSUs conduct operations on a regular basis (see paragraph 4.10d).
- 4.30 However, the RFSUs face capability generation and sustainment challenges due to their remote location. While NORFORCE and 51 Far North Queensland Regiment are managing these issues, the Pilbara Regiment is challenged in sustaining an effective capability. The Pilbara has a limited local recruiting pool and there are significant costs for Regular Army personnel and their families posted to the region (for example, cost of living and lack of access to childcare).

- 4.31 Defence and Army should develop an action plan to improve the sustainability of the Pilbara Regiment and other RFSUs as a matter of urgency. This Review has identified several possible options for addressing these difficulties; if these are not considered cost-effective, Army should develop other options.
- 4.32 The Pilbara Regiment has a Perth-based squadron and there may be opportunities to expand on this to supplement RFSU recruiting from local communities. More flexible recruitment approaches might include establishing additional sub-units recruited from metropolitan areas, including those in South East Australia, 'industry-sponsored reserves' recruited from the North West's fly-in, fly-out workforce, or opening more roles in the RFSUs to women. Defence should also review conditions for posted personnel and their families, especially in the Pilbara Regiment.
- 4.33 Army could establish improved training relationships for the RFSUs through more frequent and systematic involvement with the Army's force generation cycle (see paragraph 6.36 for discussion of the force generation cycle under 'Plan Beersheba'). Reserve brigade units could be used to supplement or 'round out' regional surveillance activities.

(9) Defence should develop an action plan to improve the sustainability of the Pilbara Regiment and other RFSUs. Possible measures could include:

- a. more flexible recruitment and personnel practices such as the Perth-based squadron of the Pilbara Regiment (for example, additional squadrons or troops recruited from metropolitan areas, including those in South East Australia; 'industry-sponsored reserves' recruiting from the fly-in, fly-out workforce; and the opening of more roles in the RFSUs to women);*
- b. improving conditions of service for posted personnel and their families, especially in the Pilbara Regiment;*
- c. improving training through more frequent and systematic involvement with the Army's force generation cycle; and*
- d. using Reserve brigade units to supplement or 'round out' regional surveillance activities.*

Civil Engagement and Government Coordination

- 4.34 An enhanced presence would need to be part of a well-coordinated approach that includes regular engagement and cooperation with State and Territory authorities, local communities and industry. An effective approach to security in the North West requires close consultation between Government and industry, which should be coordinated with the relevant State and Territory Consultative Forums and other forums with industry participation such as the Australian Maritime Defence Council and the Offshore Oil and Gas Security Forum.
- 4.35 Senior representation is an important aspect of successful consultation and engagement with other governments, industry and the community. The Review notes that Commander Northern Command (NORCOM), based in Darwin, plays a valuable engagement role in the

Northern Territory, as does Commander 3 Brigade in Northern Queensland.

- 4.36 At present, there is no regular star-ranked ADF officer posted to Western Australia (although Commander 13 Brigade in Perth is a reservist Brigadier). Defence should address this by establishing an appropriate one star Navy appointment in WA. The Commodore holding this position would, in addition to their relevant capability management role, act as a senior representational officer for broader civil engagement, interagency coordination and international engagement efforts with regional partners. This would reflect the prominence of the ADF and Navy presence in Western Australia and the increasing importance of the Indian Ocean.
- 4.37 Responsibility for senior representation in the North West regions of WA could be assigned to either this position or Commander NORCOM, noting that the Gascoyne, Kimberley and Pilbara regions lie within NORCOM's current Area of Responsibility. This delineation of responsibility can be resolved by Defence.
- 4.38 Defence should take steps to communicate better the level of ADF activities and presence in North West Australia to counter perceptions that the North West is undefended, for both deterrence and reassurance purposes.

Recommendations

(10) Defence should create a new one star Navy appointment in WA to act as a senior representational officer for broader civil and interagency coordination and international engagement, in view of:

- a. the prominence of the ADF and Navy presence in Western Australia; and*
- b. the increasing importance of the Indian Ocean.*

Responsibility for senior representation in the North West regions of WA could be assigned to either this position or Commander NORCOM, noting that the Gascoyne, Pilbara and Kimberley regions lie within NORCOM's current Area of Responsibility.

(11) Defence should develop a plan to communicate better the level of ADF activities and presence in North West Australia, for both deterrence and reassurance purposes. Activities under this plan should be coordinated with the Consultative Forums and other forums with industry participation such as the Australian Maritime Defence Council and the Offshore Oil and Gas Security Forum.

Chapter Five: Australia's Offshore Territories

Cocos (Keeling) Islands and Christmas Island

- 5.1 The 2009 Defence White Paper directed that Defence should maintain the capability to project military power, if required, from 'strategically significant offshore territories' (WP 6.42).
- 5.2 The Cocos (Keeling) Islands have significant military strategic value as a staging location for maritime air patrol and surveillance activities, given their position in the Indian Ocean and close to Southeast Asia.
- 5.3 The Cocos Islands airfield is in poor condition and needs to be lengthened and strengthened to support the larger and heavier P-8A Poseidon after it replaces the AP-3C Orion from 2017. At present, Global Hawk UAVs could operate from Cocos Islands, but the condition of the airfield and its limited infrastructure impose constraints.
- 5.4 The Department of Finance and Deregulation has funded limited repairs for the airfield in 2012, but this work will not allow P-8 aircraft to operate without significant fuel and payload restrictions. Fuel stocks and other facilities such as accommodation on the islands are limited and more intensive use of the airfield would require major upgrades.

Recommendations

(12) Defence should upgrade the Cocos (Keeling) Islands airfield facilities to support unrestricted P-8 and UAV operations (and KC-30 operations with some restrictions, if cost-effective noting the larger footprint needed by this aircraft).

- 5.5 Christmas Island remains a valuable location for supporting border protection operations by refuelling Navy vessels and staging aircraft.

Australian Antarctic Territory and the Southern Ocean

- 5.6 The 2009 Defence White Paper assessed that challenges to our national interests in the Southern Ocean and Antarctica are highly unlikely to require substantial military responses until at least 2030. Beyond 2030, greater pressure on fish stocks in that region is likely, and mineral resource extraction in Antarctica may become economically viable if energy prices increase significantly.
- 5.7 Increased pressure on resources may see interest in engagement in the Antarctic continent. The Antarctic Treaty System, which demilitarises the continent, remains the centrepiece of Australia's presence in Antarctica. The Protocol on Environmental Protection to the Antarctic Treaty (Madrid Protocol) prohibits any activity relating to mineral resources, other than scientific research, on the continent. That Protocol cannot be amended before 2048 without unanimous agreement of Antarctic Treaty parties.
- 5.8 The ADF's role in Antarctica and the Southern Ocean will be to support fisheries protection efforts, conduct search and rescue activities

and provide logistic assistance to the Australian Antarctic Program (AAP) scientific presence in Antarctica.

- 5.9 Currently, the ADF provides an officer on a rotational secondment to the Australian Antarctic Division as an Antarctic base manager. Defence might consider posting additional personnel to support this role in the future as a practical contribution to our scientific presence that also provides useful professional experience.
- 5.10 Depending on future Government decisions regarding investment in the AAP and its support, the ADF might also provide more regular air transport assistance for Australia's scientific presence, similar to the role of the US and New Zealand air forces in supporting their countries' presence in Antarctica.
- 5.11 The Review recognises the difficulty of sustaining an enhanced presence in our Northern approaches concurrently with contributions to a national presence in our Southern approaches. Over time, increased resources for relevant agencies, not just Defence, will be necessary to strengthen Australia's presence in Antarctica and the Southern Ocean in the face of likely future challenges.
- 5.12 A recent investment decision that will contribute to Australia's future presence in the Southern Ocean is the Government's acquisition of the Offshore Support Vessel MSV *Skandi Bergen*, which will initially provide capability for ADF humanitarian assistance and disaster relief operations. The *Skandi Bergen* (which is the sister ship of Australian Customs Vessel *Ocean Protector*) will be transferred to ACBPS after the Navy's Landing Helicopter Dock ships enter service and will be able to undertake surveillance patrols in the Southern Ocean.

Chapter Six: The Current and Future Force Posture

Overall Assessment of the ADF's Force Posture

- 6.1 Although Australia's changing strategic environment does not necessitate widespread changes in the location of the ADF's bases, ADF posture needs to be adjusted to meet current and future needs.
- 6.2 While there is much that is commendable in the ADF's current force posture, there are also some significant weaknesses and risks that will become more pressing over coming years. These mostly relate to the capacity of ADF bases, facilities and training areas to support current and future capabilities, particularly in Australia's North and West, and our ability to sustain high tempo operations in Northern Australia and our approaches, the immediate neighbourhood and the wider Asia-Pacific region.
- 6.3 This Review's recommendations should help to ensure an appropriate focus on the key issues and proposes options for further improvements to our force posture. Defence is already working to address many of the weaknesses and risks we have identified.

Navy

Navy Force 2030

- 6.4 Navy's Force 2030 capability development and sustainment requirements pose some of the greatest challenges for ADF posture and basing. From 2014-15, the Navy will begin introducing into service its new *Canberra* class Landing Helicopter Dock (LHD) amphibious vessels, which at approximately 28,000 tonnes and 230 metres long are the largest ships that it has ever operated, and the *Hobart* class Air Warfare Destroyers (AWDs), which are also larger than their predecessors. The Landing Ship Dock (LSD) HMAS *Choules* (approximately 16,000 tonnes and 176 metres long) has already entered service. In the longer term, the six *Collins* class submarines are planned to be replaced by 12 Future Submarines and the *Anzac* class frigates, patrol boats, minehunters and heavy landing craft will all be replaced with larger platforms.
- 6.5 This growth in the scale of Navy's basing requirements will place significantly greater demands on the capacity of wharves, dockyards and support facilities at Navy's main bases and associated industry facilities. These demands cannot be met without a more comprehensive, long term approach to planning and investment in Navy's future basing and infrastructure. These challenges will become pressing over the next five to ten years, before Force 2030 is fully delivered.
- 6.6 There is also a need to engage actively with commercial port authorities, as Navy's infrastructure requirements are not always considered in their future development plans. As noted previously in relation to the issues of resource sector competition, ensuring timely recognition of Defence interests requires early and frequent engagement between Defence and the relevant authorities.

The Future Submarine and Large Amphibious Ships

- 6.7 The acquisition of 12 Future Submarines will require additional facilities for the Navy's expanded submarine force, including the requirements of an expanded submarine workforce. While Fleet Base West remains a highly effective submarine homeport (see paragraph 6.22), an additional submarine base – located on the east coast – might be warranted to support maritime training on the east coast and provide operational flexibility. The flexibility provided by an additional base would assist in generating and sustaining this crucial capability, which has faced some significant personnel and materiel sustainment pressures in recent years. Further consideration of the submarine force's strategic and operational requirements, capability sustainment needs and costs, and the amount of berth space required will be necessary, however, before making a decision to establish an additional base.
- 6.8 Navy is studying east coast submarine basing options to supplement Fleet Base West. Its initial assessments identified Sydney (at either Fleet Base West or HMAS *Waterhen*), Brisbane, Jervis Bay, Newcastle and Westernport Bay as potentially suitable locations for an additional submarine base. Key criteria for determining the location for an additional submarine base include:
- a. access to maintenance and support facilities;
 - b. industry capacity;
 - c. ability to facilitate crew training;
 - d. attractiveness for recruitment and retention;
 - e. distance to potential operating areas;
 - f. environmental and hydrographic factors such as tidal range; and
 - g. preferably, location in a Nuclear Powered Warship approved port to enable visits by – and optimise interoperability with – US submarines.
- 6.9 The development of a supplementary east coast base could also provide a long term basing option for Navy's large amphibious ships. The ADF's new amphibious capability will present a number of force posture challenges in relation to the basing of large amphibious ships and the requirements of mounting amphibious operations (see the discussion of joint amphibious capability at paragraphs 6.74-6.79).
- 6.10 Large amphibious ships (LHD and LSD) should be home-ported at a location where the ships can:
- a. be maintained and sustained most effectively and efficiently;
 - b. deploy within required timeframes to mounting bases at Brisbane, Darwin and Townsville to embark Army manoeuvre and enabling force elements for amphibious operations; and
 - c. deploy to training areas suitable for exercising joint amphibious capability.
- 6.11 An east coast homeport for the Navy's large amphibious ships is therefore appropriate given the locations of relevant Army units and training areas (especially Shoalwater Bay Training Area), although it is not essential for the large amphibious ships to be home-ported in the same

location as the Army forces they will embark. This is because Army elements of an amphibious task force will generally require time to assemble and ready themselves for embarkation, thus allowing sufficient transit time for the amphibious ships. Fleet Base West is not a preferred location for the LHD/LSD fleet given that there are no regular Army manoeuvre brigades in Western Australia.

- 6.12 It would also be advantageous for the LHD/LSD fleet to be based outside the 'cyclone belt', to avoid the risk of damage to the ships themselves or their homeport facilities (noting the Navy base in Darwin was heavily damaged by Cyclone Tracy in 1974). With appropriate preparedness levels, this should not compromise their ability to conduct timely disaster relief operations in Northern Australia and our immediate neighbourhood. For example, the Navy's amphibious ships were able to respond in a timely manner to support the ADF deployment to East Timor in 2006 (Operation ASTUTE). The inability to deploy amphibious ships from Sydney to North Queensland during Operation YASI ASSIST in early 2011 reflected maintenance and sustainment failures rather than an inherent inability to respond from Fleet Base East.
- 6.13 In the short term, given its excellent infrastructure and support capacity, and the current lack of alternatives, Fleet Base East in Sydney Harbour is the only viable option for LHD/LSD home-port basing. In the longer-term, an alternative location on the east coast might offer operational advantages through closer proximity to Army units and potential operating areas, while also enhancing capability sustainment requirements and relieving pressure on Navy's continued use of Fleet Base East.
- 6.14 Possible east coast locations for a supplementary fleet base might include Brisbane, Jervis Bay, Newcastle, Townsville or Westernport Bay. Jervis Bay was considered as an alternative location for Fleet Base East in the 1990s and continues to offer many advantages for Navy. Experience suggests, however, that the environmental constraints associated with Jervis Bay Marine Park would preclude it as a viable option for a major base. There are also environmental constraints at Westernport Bay, and as well its location would lengthen transit times to Northern operating areas and amphibious mounting bases. Newcastle is now the world's largest coal export port and its port's eastern basin is required for commercial activity. Imminent development of remaining waterfront facilities in the Hunter River has effectively eliminated Newcastle as a potential Fleet Base option. Like Newcastle, Townsville is constrained as a homeport location by growing commercial activity, but also by its level of industry capacity and its location in the 'cyclone belt'.
- 6.15 This Review therefore considers that Brisbane is the most promising location for a new fleet base on the east coast that would be an appropriate home-port for both the Future Submarine and the large amphibious ships. In contrast to possible alternative locations, Brisbane has the advantages of:
- a. the necessary physical space and industry support capacity for development as a fleet base for submarines and large amphibious ships;
 - b. an advantageous geographical location for transit to potential operating areas for both submarines and amphibious ships, to

amphibious mounting bases at Darwin and Townsville, and to Shoalwater Bay Training Area (see paragraph 7.1 for its importance to generating amphibious capability);

- c. 'strategic coincidence' from the presence in Southeast Queensland of Army's Deployable Joint Force Headquarters which is the dedicated deployable headquarters for amphibious operations (see paragraph 6.36), 7 Brigade, elements of 6 Brigade and RAAF Base Amberley;³
 - d. a location outside the 'cyclone belt';
 - e. attractiveness for Navy recruitment and retention; and
 - f. status as a Nuclear Powered Warship approved port which can accommodate visits by allied nuclear powered vessels.
- 6.16 Any decision to proceed with a new fleet base at Brisbane as a long term goal would require planning to begin in the short term, given commercial demand for future capacity growth at the Port of Brisbane and the need for Defence's future requirements to be incorporated in the port's expansion plans as early as possible.

Figure 2: Satellite map of the Port of Brisbane showing the Fisherman Islands wharf facilities in the centre. A supplementary fleet base could be developed at a new reclaimed land site extending further into Moreton Bay from the current facilities and linked to the Port of Brisbane by a causeway (Source: Geoscience Australia).



³ The small Navy establishment at Bulimba Barracks could be a useful location for supporting the development of a supplementary fleet base in Brisbane and the associated adjustments in Navy's organisational structure and postings.

6.17 Regardless of the final decision regarding a supplementary fleet base, Defence should also ensure access to an appropriate site in Brisbane for embarking Army forces and related equipment and supplies on large amphibious ships. This requirement is explored in more detail in this chapter's section on joint amphibious capability at paragraphs 6.74-6.79.

Fleet Base East

6.18 Fleet Base East in Sydney Harbour remains a highly effective homeport location for Navy vessels. It is an appropriate homeport for the *Hobart* class AWD, particularly given the specific industry support requirements of its Aegis Combat System and the lack of alternatives in the short term, although it should not be the only naval base capable of supporting extended AWD deployments. The Captain Cook Graving Dock is a fundamental component of Navy ship repair and maintenance on the east coast and a driver for an enduring Navy presence at Fleet Base East.

6.19 However, encroachment and commercial sector pressures – including the cruise ship industry's requests for berth access – could present increasing challenges in the future, particularly for accommodating large ships such as the LHD and LSD at Garden Island in Sydney. These pressures are a further reason for considering a supplementary fleet base in the long term.

6.20 The *Independent Review of the Potential for Enhanced Cruise Ship Access to Garden Island* sets out five options for accommodating enhanced cruise ship access to Garden Island. Options include establishing dedicated naval wharf space and infrastructure at Glebe Island (Option Three), investing in a new wharf at Garden Island (Option Four) or transferring Navy's Amphibious and Afloat Support Group to a new fleet base facility (Option Five). Any option for enhanced cruise ship access to Garden Island in Sydney should not come at the expense of the primacy of Defence access or operational outcomes.

6.21 A supplementary fleet base would complement, and relieve pressure on, Fleet Base East. It is important to note that, if an additional fleet base were developed, there would be increased operating and management costs for Defence and Navy involved with maintaining three major fleet bases. The cruise ship access review's report concludes that it is unlikely that a new fleet base could be fully operational before around 2025. It estimated a cost of at least \$1 billion for establishing a supplementary base (at Newcastle rather than Brisbane, and not including Future Submarine basing as proposed in this Review) able to accommodate the large amphibious ships. The full costs of developing a supplementary fleet base for the Future Submarine and the large amphibious ships at Brisbane would be higher than this figure.

Fleet Base West

6.22 Fleet Base West at HMAS *Stirling* is well-located for maritime operations in Australia's Western and Northern approaches, and has excellent access to industry support and a maritime exercise area. HMAS *Stirling* will continue to be a highly effective homeport for submarines and frigates. It would be strategically advantageous to develop the

capacity for AWDs to be forward deployed from Fleet Base West, given its Indian Ocean location and proximity to Southeast Asia. These regions are where AWD capabilities are more likely to be deployed in a contingency requiring advanced maritime air defence capabilities.

- 6.23 Expansion of Fleet Base West's wharf capacity and support facilities will, however, be necessary for it to meet the increased demands of Force 2030 involving new submarines and frigates, and as a forward deployment base for the AWD. Developing missile loading and guided ordnance maintenance facilities at Fleet Base West would be advantageous for sustaining operations and supporting training activities (see also paragraphs 7.27-7.28).
- 6.24 Expanded warf capacity and support facilities could also support US Navy vessels.
- 6.25 At present, transit by submarines and surface ships from Fleet Base West is limited to a single channel. Commercial dredging and sand mining may present an opportunity to open a second shipping channel into Cockburn Sound. A second channel would provide greater operational flexibility for the ADF and visiting allied vessels as well as commercial shipping. Defence should monitor developments in consultation with the WA Government.
- 6.26 Fleet Base West could also support an enhanced US naval force posture in the Indian Ocean. Fremantle has previously been used by the US Navy as a location for 'sea swap' crew rotations for its destroyers.

Northern Navy Bases

- 6.27 The naval bases at Darwin and Cairns are good homeport locations for supporting minor vessels operating in our Northern approaches. But wharfage and support capacity at these bases is already near its limits, their facilities having been designed to support the smaller *Fremantle* class patrol boats (42 metres long) that preceded the current *Armidale* class (57 metres long). This limited capacity can also constrain these bases' ability to support major vessels when this is necessary.
- 6.28 While both bases face some similar challenges, HMAS *Cairns* is somewhat less constrained than HMAS *Coonawarra* in its capacity for expansion. In addition, Defence has a lease arrangement that provides a very high level of access to the adjacent sugar wharf in Cairns.
- 6.29 Without at least some expansion of capacity at these bases, they would be unable to accommodate the future Offshore Combatant Vessel (OCV) if it has a significantly greater length and displacement than the *Armidale* class⁴ or the replacement heavy landing craft (LCH) which is also expected to be larger than the current *Balikpapan* class LCH. The scale and cost of the expansion that would be necessary depends on the final size of the OCV and future LCH, which is yet to be determined, but it should be possible to commence forward planning based on reasonable assumptions. If major expansion is required to accommodate

⁴ The 2009 Defence White Paper stated that the OCV 'will be larger than the current *Armidale* class patrol boats, with an anticipated displacement of up to 2,000 tonnes' (WP 9.20). The displacement of the OCV could be substantially less than 2,000 tonnes, but is likely to still be larger than the *Armidale* class patrol boats.

significantly larger vessels, the feasibility of enlarging HMAS *Coonawarra* in Darwin and HMAS *Cairns* will need to be assessed against alternative sites in those locations.

- 6.30 Navy's northern bases, particularly HMAS *Coonawarra*, are also used by ACBPS vessels, noting that ACBPS vessels have a contractor-based support model that differs from Navy's model. ACBPS is expected to continue to use Defence facilities as it modernises its capabilities with new, larger *Cape* class patrol vessels and its access to civil ports is affected by resource sector competition. As per Recommendation 4, Defence should consult closely with ACBPS to determine the level of access that ACBPS will seek out to 2030 and beyond.
- 6.31 Darwin provides an important Northern base for refuelling Australian and visiting allied naval vessels. The Review notes that Defence plans to replace its current naval fuel installation at Stokes Hill Wharf, which was established before the Second World War, with a new facility and wharf at HMAS *Coonawarra* (development of the new fuel installation has not yet been approved). The new wharf would enable refuelling and logistics support for all current and planned future Navy ships, including the Navy's LHDs and visiting US large amphibious ships.

Mine Counter Measures and Hydrographic Capability

- 6.32 Effective mine countermeasures operations will be necessary to protect Navy's fleet bases and northern bases, and key commercial ports, in the event of a major conventional threat to Australia. Navy must be able to deploy its current *Huon* class mine hunters and clearance diver teams, and the future OCV in its mine countermeasures role, to separate and widely dispersed operating areas concurrently, potentially including Australia's southern and eastern littorals.
- 6.33 HMAS *Waterhen* in Sydney remains an effective location for generating, sustaining and deploying mine countermeasures capability. Some facility upgrades will probably be necessary for it to accommodate the OCV, again depending on the future vessel's size. The bases at Darwin and Cairns, and Fleet Base West, also need to be able to support mine countermeasures operations by the OCV (for example, changing an OCV's modular mission configuration from a patrol to mine countermeasures role when required). These bases would be particularly important for mine countermeasures operations to protect offshore energy assets and key ports in the North and North West.
- 6.34 HMAS *Cairns* remains an effective homeport for Navy's hydrographic survey ships, and there will be advantages from collocating OCVs serving in the patrol and hydrographic role at Cairns.

Recommendations

(13) Defence should develop a more comprehensive long term master plan for meeting Navy's Force 2030 basing requirements, which also addresses the implications of increased US activities and presence in Australia.

(14) Defence should commence planning now on long term options for establishing a supplementary east coast fleet base at Brisbane for the Future Submarine and large amphibious ships. This work will complement the development of options for embarking forces on amphibious ships at Brisbane in the shorter term, as set out in Recommendation 29.

(15) Defence should proceed with its plans to homeport the Air Warfare Destroyers and LHDs at Fleet Base East in the short term but also develop additional options involving Brisbane and Fleet Base West as set out in Recommendations 14 and 16.

(16) Defence should develop options to expand wharf capacity and support facilities at Fleet Base West to:

- a. support major surface combatant capability and operations by:
 - I. providing adequate infrastructure and facilities, including missile loading and maintenance facilities, to homeport the Future Frigate class and forward deploy at least one Air Warfare Destroyer; and*
 - II. ensuring such facilities are also able to be used for deployments and operations in Southeast Asia and the Indian Ocean by US Navy major surface combatants and aircraft carriers;**
- b. support submarine capability and operations by:
 - I. enabling Fleet Base West to continue as the primary submarine homeport when the expanded Future Submarine fleet enters service; and*
 - II. ensuring such facilities are also able to be used by US Navy submarines.**

Defence should also monitor commercial dredging developments near Fleet Base West in consultation with the WA Government.

(17) Defence should plan to upgrade or expand bases to accommodate the OCV and replacement LCH, noting that scale and cost of work will depend on the final size of the OCV and LCH, including:

- a. upgrades or expansion of bases at Darwin and Cairns;*
- b. upgrades at HMAS Waterhen in Sydney; and*
- c. upgrades required at Fleet Base West to be able to support OCV mine countermeasures operations.*

Army

'Plan Beersheba'

6.35 As a result of 30 years of investment and repositioning, Army is well-positioned for operations in support of the ADF's principal tasks and the range of peacetime national tasks. Army's basing disposition has shifted significantly since the 1980s, when the RFSUs were established across Northern Australia and 1 Brigade began moving units from Sydney to Darwin (noting that 3 Brigade has been based in Townsville since 1967 and 7 Brigade is based in Brisbane).

- 6.36 Army is reforming its force structure and approach to preparing forces for operations through 'Plan Beersheba'. Under 'Plan Beersheba', the Army will be structured to include:
- a. a Deployable Joint Force Headquarters (DJFHQ) as the principal deployable operations headquarters and centre of amphibious expertise, providing a dedicated command and control element for amphibious operations;
 - b. three multi-role, combined arms manoeuvre brigades (1, 3 and 7 Brigades), with a more even distribution of armoured vehicles between the three brigades, which will progress through a rotational force generation cycle;
 - c. an infantry battalion (2 RAR) of 3 Brigade in Townsville specialising in the amphibious role, under DJFHQ;
 - d. centralised enabling capabilities structured within 6 Brigade (combat support and ISR), 16 Brigade (Army Aviation) and 17 Brigade (combat service support);
 - e. Reserve brigades within 2 Division with defined roles to augment the multi-role manoeuvre brigades; and
 - f. Special Operations Command forces.

6.37 Previously, 3 Brigade in Townsville – structured as a 'light' brigade – was designated as Army's Ready Deployment Force for overseas operations, with the other manoeuvre brigades at lower levels of readiness. In the new force generation cycle, each manoeuvre brigade will rotate at 12 month intervals through three stages of readiness ('readying', 'ready' and 'reset'). The location of the 'ready brigade' will therefore change during the cycle and each brigade will need to be able to mount and deploy for operations from its home base location. This has particular implications for mounting joint amphibious operations (as described at paragraphs 6.74-6.79).

1 Brigade

6.38 1 Brigade, with the majority of its forces in Darwin and the 7 RAR battlegroup based in Adelaide, is well-postured for its priority tasks. Its presence in Darwin, in addition to acclimatising and familiarising forces with conditions in Northern Australia and other tropical, monsoonal environments, reflects Australia's commitment to defending the North and contributing to the security of our immediate neighbourhood. While the lack of all-season training areas in the Northern Territory is an

acknowledged constraint (see paragraph 7.9), it is more cost-effective to travel to an all-season training area such as Cultana Training Area in South Australia when required than to permanently relocate to new base facilities.

- 6.39 The recently announced plan for a rotational US Marine Corps presence in Darwin – gradually building up to deployments of a Marine Air Ground Task Force (MAGTF) – and its opportunities for cooperative training should also be considered. This includes the potential for improved support for Bradshaw Field Training Area, through shared facilities and US enabling capabilities such as deployable medical teams and helicopters or tilt-rotor aircraft. Such improvements would mitigate some of the constraints on training by 1 Brigade’s units in Darwin.
- 6.40 The US Marines’ use of facilities at Robertson Barracks should not require any investment by Australia in new infrastructure. For example, US personnel can use existing transit accommodation during their training rotations and V-22 tilt-rotor aircraft could operate alongside Army helicopter units at Robertson’s airfield.

7 Brigade

- 6.41 There has been some consideration within Army of relocating 7 Brigade from Enoggera in Brisbane to address perceived urban encroachment issues related to its future use of heavier armoured vehicles, and to base the brigade nearer the Shoalwater Bay Training Area.
- 6.42 This Review would not support relocating 7 Brigade. 7 Brigade enjoys strong ‘strategic coincidence’ stemming from its collocation with DJFHQ and 6 Brigade enablers, and its proximity to RAAF Amberley and a potential amphibious mounting location at the Port of Brisbane. Its location in Brisbane is also consistent with the strategic basing principle of consolidating force elements together where strategically appropriate.
- 6.43 7 Brigade’s level of access to training areas and ability to operate heavy vehicles do not present problems that would justify losing the advantages listed above by leaving Brisbane. 7 Brigade can deploy to Shoalwater Bay well within the required three day timeframe specified by Army in its guidelines for manoeuvre brigade access to major training areas, and it is close to Wide Bay Training Area, which is smaller but more frequently used. In contrast, the cost of establishing a new base closer to Shoalwater Bay would probably exceed \$2 billion and new barracks purpose-designed for 7 Brigade have recently been constructed as part of a redevelopment at Enoggera at a cost of approximately \$200 million.
- 6.44 The Queensland Government is working with Defence on major road upgrades to alleviate local concerns about traffic congestion around Gallipoli Barracks. Defence personnel account for less than five per cent of traffic on adjacent roads, although construction work at the base has added to recent congestion.
- 6.45 If the movement of heavy vehicles between Enoggera and 7 Brigade’s main training areas becomes a problem, Defence should consider maintaining an establishment of armoured vehicles and related equipment and stores near Shoalwater Bay Training Area. This pre-positioning approach would be similar to the Singapore Armed Forces’

equipment storage arrangements in Rockhampton that facilitate its use of Shoalwater Bay Training Area.

- 6.46 At present, 2RAR in Townsville is the designated battalion specialising in amphibious operations under DJFHQ as the centre of expertise for these operations. Depending on progress in implementing 'Plan Beersheba' and introducing the joint amphibious capability, it may be feasible in the medium term to designate a 7 Brigade battalion as the Army's specialised amphibious battalion, to consolidate relevant expertise in Brisbane with DJFHQ.

6 Brigade

- 6.47 Army is in the process of consolidating 6 Brigade, which is currently dispersed between Adelaide, Brisbane, Cabarlah and Sydney (excluding its RFSUs in Northern Australia). 6 Brigade comprises a variety of diverse units that provide intelligence, surveillance, target acquisition and reconnaissance (ISTAR), electronic warfare, ground-based air defence, and construction engineer support to DJFHQ and Army's manoeuvre brigades. These units, or elements of them, would be allocated to DJFHQ or manoeuvre brigades as required during operations. 6 Brigade is grouped together for capability generation and would not conduct operations as a single entity.
- 6.48 6 Brigade's consolidation in Southeast Queensland is proceeding well, but any further relocation from Adelaide, Cabarlah and Sydney should not put pressure on 7 Brigade to relocate from Enoggera. The Amberley 'super base' would seem to be a better alternative location, noting 6 Brigade's engineer units are already relocating to Amberley. Kokoda Barracks at Canungra may also be another appropriate location in Southeast Queensland for some 6 Brigade units if neither Amberley nor Enoggera can accommodate them.
- 6.49 This Review considered the option of consolidating 6 Brigade's electronic warfare (EW) unit, 7 Signals Regiment, and UAV capabilities to the Edinburgh 'super base', where other EW/ISR and Defence Science and Technology Organisation (DSTO) support elements are located. The Review has concluded, however, that these units should be consolidated in proximity to DJFHQ in Southeast Queensland given their operational role in support of DJFHQ.
- 6.50 The Review has also considered the most appropriate location for the Defence Force School of Signals' EW Wing, currently located at Cabarlah, to ensure efficient EW capability generation. The EW Wing could either be consolidated with the rest of the Defence Force School of Signals at Watsonia in Melbourne, or the EW Wing and the rest of the Defence Force School of Signals could be consolidated with other joint EW elements at Edinburgh. The Edinburgh 'super base' would appear to be the most advantageous location for consolidating EW capability, but further deliberation is required within Defence before any decision is taken.

16 Brigade

- 6.51 16 Aviation Brigade is currently dispersed across four bases, with its headquarters in Brisbane, troop lift helicopter regiments in Townsville and Sydney, and an armed reconnaissance helicopter regiment in Darwin. The Army Aviation Training Centre, which is not part of 16 Aviation Brigade, is based in Oakey.
- 6.52 Implementing 'Plan Beersheba' is likely to present some challenges in finding the right balance between efficient centralisation of Army's aviation capabilities and supporting the three multi-role manoeuvre brigades. Further study is needed in light of experience over time to determine if any significant changes in Army Aviation basing will be required.

Special Operations Forces

- 6.53 Special Operations Command forces are primarily based in Perth at Campbell Barracks and Sydney at Holsworthy Barracks, with Reserve elements based in Melbourne and Sydney. The Perth and Sydney 'hubs' for Special Operations capability each generate a Tactical Assault Group and have access to nearby training ranges and air and naval bases. This posture appears appropriate for current and future requirements.

Army Reserve

- 6.54 Army Reserve forces have an important role in supporting the regular manoeuvre brigades under 'Plan Beersheba'. Consistent with Strategic Basing Principles Two and Five (paragraph 2.21), Defence should maintain an urban and regional disposition that enables the continued provision of Reserve capability into the future, while pursuing opportunities for consolidation.

Recommendations

(18) Defence should retain 1 Brigade's current disposition centred in Darwin.

(19) Defence should retain 7 Brigade in Enoggera, given its advantageous strategic location in Brisbane with DJFHQ, near 6 Brigade elements, the Amberley 'super-base' and the Port of Brisbane, and the significant expense required in developing a new base closer to Shoalwater Bay.

(20) Defence should consolidate 6 Brigade in South East Queensland, without compromising the retention of 7 Brigade at Enoggera in Brisbane.

Air Force

Air Base Locations

- 6.55 Air Force's main bases are well-located to generate and sustain capability, with good access to industry support, training facilities and ranges, while having the ability to deploy forces quickly to its forward bases when necessary. RAAF bases at Darwin, Tindal and Townsville, and the 'bare bases' at Curtin, Learmonth and Scherger established during the 1970s and 1980s, are well located to deliver critical air combat and strike capabilities to Navy and Army in the form of air control and offensive support, and to conduct strike missions (although some bases, particularly Curtin and Scherger, have limitations from a logistics perspective).
- 6.56 Air Force has bases close to Army's manoeuvre formations in Brisbane, Darwin, Townsville and Adelaide and the Special Operations hubs in Perth and Sydney from which it can deliver airlift for operations. RAAF Amberley and Richmond remain effective permanent bases for generating the majority of Air Force's airlift capability (C-17s and C-130s).
- 6.57 Current plans for the basing of the future fixed-wing battlefield airlifter envisage interim basing at Richmond before permanent basing at Amberley. While Caribou aircraft were based in Townsville to be nearer to potential operating areas and the Army's ready deployment brigade (under the old pre-'Plan Beersheba' structure), the Caribou's replacement will be faster and have a longer range. As a result, permanent basing in Townsville should not be necessary.
- 6.58 Air Force also needs Southern bases for maritime patrol, search and rescue and potential airlift operations in the Southern Ocean and Antarctica. Edinburgh and Pearce are well-placed for this role. Edinburgh remains an effective operational and capability sustainment base for the maritime patrol aircraft fleet, with its advantages including the collocation of a major DSTO establishment that supports air operations and ISR capability.

Upgrading Air Base Capacity

- 6.59 While air bases are well located, some bases, particularly in the North and West, need to be upgraded to meet new aircraft requirements and support protracted high tempo combat operations. At present, almost all Air Force bases are restricted in their ability to support operations by the KC-30 tanker-transport (which has the most demanding requirements) and P-8 maritime patrol aircraft, as these large and heavy aircraft require longer, stronger runways.
- 6.60 RAAF Base Darwin is the only air base that can support operations by both the KC-30 and P-8 at their maximum weight. The most significant constraints that would affect operational or capability generation requirements are at:
- a. Edinburgh, as the home base for maritime patrol aircraft;
 - b. Learmonth, as a key base for air combat, strike and maritime patrol aircraft in the North West;

- c. Pearce, as an important base for operations in our Western and Southern approaches; and
 - d. Tindal, as the main fighter base in Northern Australia.
- 6.61 Defence should upgrade bases at Edinburgh, Learmonth, Pearce, Tindal and Townsville to enable unrestricted operations by KC-30 and P-8 aircraft, noting that Darwin already meets these criteria and that Curtin and Scherger are lower priorities for upgrade.⁵
- 6.62 Curtin and Scherger have similar capacity limits to Learmonth, but logistics constraints at these two bare bases may limit the utility of investing in lengthening and strengthening their airfields.

Sustaining Air Bases – Logistics

- 6.63 Fuel storage and supply is a critical limiting factor for air bases. The effectiveness of forward bases depends on their ability to supply sufficient fuel to conduct operations at high tempo over a protracted period (months rather than days or weeks) and maintain a reliable supply chain to sustain these operations (see also paragraph 7.20).
- 6.64 This is currently problematic at RAAF Tindal and the bare bases, due to limited fuel storage, remoteness and the vulnerability of fuel resupply by road during the wet season. This is a particular problem for the bases at Curtin and Scherger. Similar considerations apply to explosive ordnance storage and supply.

Resilience, Hardening and Security of Air Bases

- 6.65 The need to protect the sensitive capabilities of new advanced aircraft will also bring new demands for security at main and forward operating bases, with associated increases in personnel to provide physical security and manage sophisticated, secure information systems. For example, some facility and security enhancements would be required at forward bases to allow the F-35 to be operated and sustained from these deployed locations. Air Force is examining how to satisfy these demands with a cost effective mix of deployable facilities and enhanced fixed base infrastructure.

US Air Force Access

- 6.66 One of the two major force posture initiatives announced by the Australian and US Governments in November 2011 involves closer cooperation between the RAAF and the US Air Force and increased rotational visits by US aircraft to bases in Northern Australia (see also paragraphs 8.2-8.6 in Chapter Eight). This initiative will see more regular visits by US bombers, tanker aircraft and surveillance aircraft, including Global Hawk UAVs, and equipment in Northern Australia..

⁵ Edinburgh, Pearce and Townsville are already scheduled for strengthening and extension works as part of the P-8 acquisition, which would provide full capacity for the P-8 (and very substantial capacity for the KC-30 at Edinburgh and Pearce).

Civil Aviation Access and Encroachment Issues

- 6.67 The air bases at Darwin and Townsville are joint user airfields, with Air Force responsible for the provision of Air Traffic Services to both military aircraft and civilian regular public transport users. In addition, leases enable civil aircraft to operate from operational bases at Tindal and Williamtown, and bare bases at Curtin and Learmonth.
- 6.68 Qantas expressed its aspiration, during this Review's consultation process, for Williamtown to become a joint user airfield. The question of access to Edinburgh through either joint user or lease arrangements was also raised, although this was a lesser priority for Qantas. Air Force considers Edinburgh and Williamtown, along with Amberley, to be three key capability generation and sustainment bases - in contrast to Darwin and Townsville, which are not 'home' bases for large numbers of aircraft - and, in view of their criticality, does not support them becoming joint user airfields.
- 6.69 This Review does not recommend changing Williamtown's status to a joint user airfield. Looking out to 2030 and beyond, Williamtown is likely to face increasing demands for civil aviation access due to increasing air traffic in the Sydney and Hunter regions. This is supported by the recent *Joint Study on Aviation Capacity for the Sydney Region* which points out (in Recommendation 11 of its report) that any expansion of civil air services at Williamtown should not compromise its primary function as an Air Force fighter base. It recommended a joint Australian-NSW Government study to determine Williamtown's capacity for future civil aviation use. This recommendation also stated that Commonwealth and State Government action was needed to protect Williamtown and Newcastle Airport from encroaching urban development.
- 6.70 Residential concern about aircraft noise at Williamtown is a sensitive issue, but should be manageable with regular consultation, constant monitoring and active management through Air Force's plans for reducing future noise impact.
- 6.71 As the scale of ADF presence at Amberley increases, including the potential further consolidation of 6 Brigade units, it is essential to ensure sufficient land and airspace is available to meet future needs. This will require active management of encroachment pressures, regular consultation with state and local authorities and long term planning.
- 6.72 The joint study on the Sydney region's aviation capacity recommends (in Recommendation 14 of its report) that the Department of Infrastructure and Transport take action to progressively open Richmond to a level of civil air traffic using the existing east-west runway alignment. It would be possible to reduce Air Force's footprint at Richmond after the retirement of the C-130H fleet by 2015 and the C-130J fleet by 2026, and thus allow the base to be used by a civilian operator. Richmond would continue to support ADF air capabilities as well as Sydney's civil aviation needs and retain a Defence precinct that could support domestic security operations in Sydney if required.
- 6.73 There may be future requests for the Scherger bare base to become a joint user airfield, as Weipa's existing civil airfield is understood to be located above a bauxite deposit and its long term future has been questioned. If this occurs, joint user arrangements could be a feasible

option given that ADF use of Scherger is very limited, as long as ADF access for exercises and operations is not unduly compromised.

Recommendations

(21) Defence should upgrade bases at Edinburgh, Learmonth, Pearce, Tindal and Townsville to enable unrestricted operations by KC- 30 and P- 8 aircraft, noting that Darwin already meets these criteria and Curtin is a lower priority for upgrade. [See also Recommendation 12 regarding Cocos Islands]

(22) Defence should upgrade Curtin, Learmonth, Tindal and Townsville, with Scherger as a lower priority, to support future combat aircraft operations.

(23) Defence should assess fuel and EO requirements for forward air bases during high tempo air operations and identify potential risks, deficiencies and mitigation measures, as part of strategic logistics assessments (see Recommendation 34).

(24) To mitigate risks associated with increasing strike capabilities in the Asia-Pacific region, Defence should consider options for hardening and resilience improvements at forward main bases and bare bases including:

- a. physical hardening, dispersal and deception measures;*
- b. emerging priorities such as electro-magnetic resilience; and*
- c. force structure enhancements such as increased airfield repair capability.*

(25) Government should ensure that Williamtown is protected from encroachment, in view of its strategic importance in generating air combat capability.

(26) Defence should develop options for reducing Air Force's footprint at RAAF Base Richmond after the retirement of the C- 130H fleet by 2015 and the C- 130J fleet by 2026. Richmond would need to continue to be able to support ADF air capabilities with a Defence precinct that could support domestic security operations in Sydney if required.

Joint Amphibious Capability

6.74 Introduction of the ADF's new amphibious capability is one of the biggest challenges Defence must face in growing and sustaining Force 2030. It will involve the acquisition and sustainment of new complex platforms and equipment - particularly the LHDs, new landing craft and troop lift helicopters; developing new doctrine and command and control arrangements; and rigorous training to generate necessary levels of capability and expertise in amphibious operations. The ADF recognises the scale of transformation that will be necessary to develop an effective joint amphibious force and is devoting significant effort to meeting the

challenge, but Defence acknowledges that it is yet to fully understand all the requirements and risks that it needs to manage.

- 6.75 Brisbane, Darwin and Townsville, as the locations of Army's manoeuvre brigades and DJFHQ, will be critical mounting bases for amphibious operations. In Townsville, measures are well advanced for assured access to a suitable wharf for loading personnel and equipment, although loading ammunition and explosive ordnance must be carried out by watercraft loaded at Ross Island Barracks.
- 6.76 The amphibious mounting concept for Darwin involves loading fuel and stores from separate sites (HMAS *Coonawarra* and East Arm wharf respectively), and embarking Army personnel and vehicles at East Arm by landing craft, as the LHD cannot use its side loading doors at the existing East Arm wharf due to high tidal ranges. There is a good case for investing in a more operationally efficient port loading solution with a new roll-on, roll-off pontoon and associated wharf area located at East Arm.

Figure 3: Darwin harbour, showing HMAS Coonawarra and East Arm wharf.



- 6.77 There are no current plans for facilities to embark forces at Brisbane, despite the presence of DJFHQ, 7 Brigade and 6 Brigade elements, or at Adelaide, where elements of 1 Brigade are based. Complementing amphibious mounting base capacity in Darwin and Townsville with the capacity to embark Army forces at Brisbane and Adelaide would provide greater flexibility and resilience for the ADF's joint amphibious capability.
- 6.78 At Brisbane, previous Defence studies indicate that forces could be embarked at Pinkenba wharf, near the Joint Logistics Unit (Southern Queensland) facility at Damascus Barracks, which would also provide a useful site for vehicle marshalling. Further study is required to confirm if the LHD can use its side loading doors at Pinkenba and if any investment in an upgraded facility would be required. Similarly, a previous study

that indicated commercial wharf facilities in Adelaide can accommodate LHD loading requirements needs to be validated.

- 6.79 The Review notes that Joint Logistics Unit (Southern Queensland) will be consolidated at Amberley under the Defence Logistics Transformation Program. The Review does not recommend changing the plan for the unit's consolidation, but it would be prudent to determine the potential value of the Damascus Barracks site for mounting amphibious operations before making any further decisions about the site's future as part of the Estate Consolidation Review.

Recommendations

(27) Plans for developing an amphibious mounting base capacity at Townsville are appropriate and on track, noting the reliance on loading explosive ordnance by watercraft loaded at Ross Island Barracks.

(28) Defence should develop an alternative amphibious mounting option for Darwin that includes a roll-on, roll-off loading facility at East Arm wharf, rather than rely on embarkation and loading via watercraft.

(29) Defence should develop options to allow large amphibious ships to embark Army units based in Brisbane and (as a lesser priority) Adelaide, in addition to Townsville and Darwin.

Mobilisation Planning

- 6.80 The 2009 Defence White Paper acknowledged that in some circumstances, however, the strategic environment might deteriorate so significantly that the force-in-being, including Reserves, would be insufficient to meet Australia's defence needs, even if latent capabilities within Defence were surged. In such circumstances, we might need to draw on significantly greater contributions from the national economy and society (WP 10.22).

- 6.81 A substantial national mobilisation effort would require additional planning for the employment of national assets such as transportation systems, logistics capabilities and hospital and health support services. As directed in the last White Paper, Defence will pursue adequate mobilisation planning in order to have appropriate strategies in place, and to assess the issues associated with mobilisation (WP 10.24). This Review will help inform this planning.

Chapter Seven: Force Enablers

Joint Training

Training Areas

- 7.1 Despite Defence's large estate holdings, including some very large manoeuvre training areas, there is a surprising scarcity of training areas capable of supporting large-scale joint and combined exercises, including training for amphibious operations, in all seasons. At present, Shoalwater Bay Training Area (SWBTA) is the premier training area for these requirements. SWBTA is heavily used by the ADF and foreign (particularly Singaporean and US) forces and has little capacity for additional activity. Under the current treaty-level Memorandum of Agreement signed in 2009, Singapore is allowed exclusive use of SWBTA for 45 consecutive days per year until the end of 2019. In 2010, Singaporean Armed Forces access was extended to 65 days per year until 2012, and this was recently extended further to 2015.
- 7.2 Defence advises that significant works are required at SWBTA, including upgraded roads, new Urban Operations Training Facilities and new live fire areas, to allow more effective and realistic amphibious training. Funding should be allocated to these upgrades to support the new amphibious capability once it is being exercised.
- 7.3 The current lack of suitable alternatives to Shoalwater Bay for large-scale training that can concurrently exercise all elements of a major amphibious operation constrains ADF capability. The lack of alternatives also constrains training access for US and Singaporean forces.
- 7.4 Acquiring a new, large 'greenfield' training area in a suitable, all-seasons location would be ideal, and for an amphibious large scale exercise alternative to SWBTA, a necessity. This would be very difficult, however, given pressures from encroachment and competing land use, resource development, environmental constraints and indigenous heritage issues. Developing a cost-effective 'greenfield' option would also require strong, sustained support from the Government and the relevant State or Territory and local governments. No prospective alternative training area that provides all the advantages of SWBTA has been identified.
- 7.5 Consequently, Defence needs to optimise its use of existing training areas for joint amphibious operations training. While training areas other than SWBTA do not have the capacity for concurrently exercising all elements of large-scale joint amphibious operations, training on this scale is less frequent than training that exercises the components of joint amphibious operations.
- 7.6 Smaller coastal training areas at Cowley Beach (QLD) and Stony Head (TAS) provide effective locations for conducting beach landings, although their restricted size constrains Army forces from conducting manoeuvre training at these areas. Point Stuart (NT) is a non-Defence site where landings can be conducted, with the ability to conduct subsequent battlegroup-scale manoeuvre training at Mount Bunday Training Area.

- 7.7 Enhanced use of other large training areas – particularly Cultana Training Area (SA), but also Bradshaw Field Training Area (NT) and, to a lesser extent, Yampi Sound Training Area (WA) – may alleviate some of the training pressure on SWBTA. These three training areas are constrained in their capacity for amphibious beach landings and, in the case of Cultana, are unsuited for naval task force training as a part of an amphibious operation. Nevertheless, significant components of amphibious training can be conducted at Cultana and both it and Bradshaw are good locations for manoeuvre training.
- 7.8 Defence is negotiating to expand Cultana to provide a manoeuvre training area that does not suffer from the remoteness or wet season restrictions of Bradshaw or Yampi Sound. The acquisition of the expansion area may be completed by the middle of 2012.
- 7.9 Bradshaw and Yampi Sound are, however, distant from permanently manned ADF bases and cannot be used during the wet season. Only Bradshaw has a level of infrastructure development to support exercises, but it requires further infrastructure to support large scale joint and combined exercises. The increased presence of the US Marines from 2012 makes the case for development of Bradshaw more pressing. Defence should explore the possibility to enhance the capability of Bradshaw. Yampi Sound is even more remote than Bradshaw and it is a lower priority.
- 7.10 A specific issue identified by the Review is that Army is constrained in its use of Bradshaw for large-scale training partly because of the time required for aero-medical evacuation to the nearest surgical facility, which exceeds the safety guidelines in ADF doctrine. To enable greater use of Bradshaw in the future, options for addressing this problem could include:
- a. using a surgical facility on board an LHD deployed offshore (noting that this is an expensive and difficult capability to stand up and can only be sustained in major exercises);
 - b. using US deployed surgical capability during combined exercises, as part of arrangements for increased US access to training areas in the Northern Territory;
 - c. increasing funding for contracted private surgical support;
 - d. expanding existing regional medical services in partnership with a State or Territory Government; or
 - e. expanding deployable surgical capabilities within the ADF (the primary driver for this investment would be to ensure adequate medical enablers for ADF combat and stabilisation operations, but it would also bolster capacity for humanitarian assistance and disaster relief).
- 7.11 Defence should review its requirements for providing best practice surgical and aero-medical evacuation support for exercises in remote training areas, to guide employment of adequate capability enablers and appropriate risk mitigation measures.
- 7.12 Continued development of Defence’s capacity for simulated training is critical to enhancing ADF training in a cost-effective manner. The Review supports the Chief of the Defence Force’s Directive of 26 September 2009

that directs Defence to make maximum use of simulation opportunities as appropriate. Simulation is also another important way to mitigate the limitations and risks associated with training areas identified by this Review.

Maritime Exercise Areas

- 7.13 ADF maritime exercise areas are located offshore near key naval and air bases in Adelaide, Darwin, Learmonth, Perth and Sydney. There is, however, no maritime exercise area in the North East.
- 7.14 The lack of a maritime exercise area in the North East is not a significant deficiency with the availability of the Eastern Australian Exercise Area near Sydney. Having such an area would be advantageous for joint training near Shoalwater Bay and a potential supplementary submarine base at Brisbane, but creating a new maritime exercise area would be difficult due to commercial shipping and environmental considerations.

Recommendations

(30) Defence should seek at least one additional training area capable of supporting large-scale joint/amphibious and combined exercises, in all seasons, to address identified deficiencies and risks. These deficiencies and risks should also be mitigated through the continued development of Defence's capacity to conduct simulated training.

(31) If acquiring a new training area proves impractical, then Defence should significantly enhance at least one existing area (Bradshaw, Cultana and/or Yampi Sound), accepting their constraints for large scale amphibious training and that Bradshaw and Yampi Sound are inaccessible in the wet season.

(32) Defence should explore options to enhance Bradshaw and (as a lower priority) Yampi Sound Training Areas, as part of arrangements for increased foreign training in Australia.

(33) Defence should review its requirements for providing best practice surgical and aero-medical evacuation support for exercises in remote training areas, to guide employment of adequate capability enablers and appropriate risk mitigation measures.

Strategic Logistics

- 7.15 Strategic logistics presents some critical risks and constraints for the ADF's ability to sustain high tempo operations beyond a few months in Northern Australia and our approaches, the immediate neighbourhood and the wider Asia-Pacific region. The priority areas to be addressed

relate to the capacity of the strategic fuel and explosive ordnance supply chains, and maritime logistics, particularly limited facilities for loading explosive ordnance on Navy platforms.

Strategic Fuel Issues

- 7.16 Australia, as an International Energy Agency member state, has a treaty obligation to hold oil stocks equivalent to a minimum of 90 days of the prior year's average daily net oil imports. This treaty obligation was established to bolster the resilience of the global oil market in the event of a major supply disruption on the scale of the 1970s 'oil shocks'. Until 2009, Australia comfortably met this obligation, but as a consequence of our growing level of petroleum imports, Australia is now non-compliant. Australia is currently the only IEA country that is non-compliant and the only net importer within the IEA that relies solely on industry stocks to meet our 90 day obligation. Australia does, however, hold stocks equivalent to over 80 days of imports.
- 7.17 The 2011 National Energy Security Assessment⁶ concluded that Australia's non-compliance is not a threat to domestic energy security, as commercial stockholdings have not declined in absolute terms. The Government is, however, considering options to respond to our non-compliance (2011 NESAs, p.13).
- 7.18 Australia currently has seven commercial fuel refineries, but the Shell refinery at Clyde in Sydney is scheduled to close in 2013. The 2011 National Energy Security Assessment assesses that the growth in Asia-Pacific refinery capacity is likely to put pressure on Australia's domestic refining capacity in the 2020s, as domestic demand is increasing met by imports from overseas refineries (2011 NESAs, p.10). Future reductions in Australia's domestic refining capacity would not necessarily pose risks for ADF fuel supply in most circumstances, but could be significant if the global fuel supply chain was under major stress.
- 7.19 Fuel supply is a critical factor in the sustainability of our force posture. This Review has noted key potential risks affecting Northern bases such as:
- a. the storage capacity of some air bases, especially the bare bases, noting the increased fuel consumption requirements of Force 2030; and
 - b. the dependence of Curtin, Learmonth, Scherger and Tindal on fuel supply by road, which could be challenging during protracted high tempo operations, with some routes also vulnerable to closure during the wet season.
- 7.20 While the fuel supply chain can meet current requirements and more likely operational requirements, its resilience under the stress of major operations is less certain and KPMG is conducting further study into this question.

⁶ The 2011 National Energy Security Assessment and related documents can be accessed online at: http://www.ret.gov.au/energy/energy_security/national_energy_security_assessment/Pages/NationalEnergySecurityAssessment.aspx

Deployable Refuelling Capabilities

- 7.21 Deployable refuelling capabilities are critical components of ADF force structure. The sufficiency of these capabilities will be assessed by the Force Structure Review rather than this Review, but their capacity is a consideration when assessing our force posture.
- 7.22 The most flexible option for refuelling naval surface groups is ensuring their access to afloat support capabilities that can provide replenishment at sea. At present, the ADF has two replenishment ships.
- 7.23 The KC-30 multi-role tanker-transport will be an essential enabler for air operations, through air-to-air refuelling and aerial resupply of fuel to forward bases. The Review notes that the five KC-30 aircraft would need to meet heavy demands in the event of concurrent high-tempo operations.

Naval Munitions Loading

- 7.24 The Review has identified a number of issues relating to loading or unloading of munitions and explosive ordnance at ports. These issues affect the particular requirements for Navy's major fleet units, the new amphibious capability and bulk imports of explosive ordnance.
- 7.25 The main explosive ordnance loading facility for Navy's major surface combatants is located at Twofold Bay near Eden in Southern NSW. As noted previously, Fleet Base West does not have a missile loading and maintenance facility, but it does have a dedicated ammunition wharf and associated munitions storage facilities.
- 7.26 Options for enhancing fleet logistics capacity – particularly missile loading and maintenance – at Fleet Base West should be investigated, given its potential importance as a logistics hub for Indian Ocean maritime operations.
- 7.27 The limited availability of explosive ordnance loading facilities in Northern Australia to support maritime forces poses some risks for force posture.
- 7.28 Defence should consider options for establishing or upgrading at least one facility in Northern Australia (including Brisbane) to enable more reliable munitions loading for Navy's major fleet units. Brisbane, Cairns, Darwin, Port Alma and Townsville could be considered as potential sites.

Munitions Imports

- 7.29 The Point Wilson Explosives Area in Victoria was previously used to receive Defence's imports of explosive ordnance, but has been closed since 2008 due to the deterioration of its wharf. Since 2008, Defence has used Port Alma for importing bulk explosive ordnance. The Review supports Defence's proposal to remediate Point Wilson for the importation of explosive ordnance, noting that Port Alma is a useful back-up location.
- 7.30 Defence is currently conducting a feasibility study into the potential for further use of Port Alma for importing or loading explosive ordnance. The Queensland Government's Bajool Explosive Reserve near Port Alma

could be a useful facility if Defence identified further opportunities at Port Alma, but the facility is not currently suitable for intensive use by Defence.

Loading Explosive Ordnance for LHDs

7.31 Defence also plans to use Point Wilson for regular loading and unloading of the LHDs' 'baseline' explosive ordnance holdings. Additional explosive ordnance for land forces would need to be loaded at ports in Northern Australia to conduct major amphibious combat operations. Further study into this logistics concept for the new amphibious capability is required to identify risks and options for their remediation. Depending on the results of further study, it could be prudent to establish new facilities and arrangements for explosive ordnance loading, storage and distribution to support the new amphibious capability at mounting bases or other ports in Northern Australia, such as Brisbane, Port Alma and/or Townsville.

Recommendations

(34) Defence should assess the capacity of the logistics supply chain to meet strategic fuel and explosive ordnance requirements in Northern Australia in a range of contingencies. These assessments would complement work on:

- a. options for missile loading and maintenance at Fleet Base West as per Recommendation 16; and*
- b. logistics risk mitigation for air bases as per Recommendation 23.*

(35) Defence should conduct further study to identify explosive ordnance logistics risks for Navy and the joint amphibious capability and, if necessary, develop options for:

- a. establishing or upgrading at least one facility in Northern Australia and/or Brisbane to enable more reliable munitions loading for Navy's major fleet units; and*
- b. establishing or upgrading facilities and arrangements for explosive ordnance loading, storage and distribution at mounting bases or ports in Northern Australia.*

(36) Defence should proceed with plans to remediate Point Wilson for the importation of bulk explosive ordnance and develop options for using Port Alma as a back-up location.

Joint Situational Awareness

Strategic Fusion Integration Facility

- 7.32 There has been discussion within Defence about the case for developing a new Strategic Fusion Integration Facility, to examine the capability enhancements of integrating intelligence and situational awareness data produced by multiple sources (for example, over-the-horizon radar, satellite imagery, signals intelligence and ISR data from platforms such as Wedgetail AEW&C and P-8 maritime patrol aircraft).
- 7.33 If such a facility is required, Edinburgh is the most appropriate location as an established centre for joint ISR capability.

Recommendations

(37) Defence should develop options for a Strategic Fusion Integration Facility at Edinburgh, if further consideration determines that a dedicated facility is required.

Chapter Eight: Overseas Partners

US Force Posture

- 8.1 For many decades, through the joint defence facilities, Australia has made significant contributions to the US alliance and international security by hosting or supporting critical US strategic capabilities, including intelligence, ballistic missile early warning and communications systems. Australia also regularly hosts US forces for visits and training exercises, including the major Talisman Sabre exercise series. Australia and the United States have worked closely together in developing the Joint and Combined Training Capability to reduce the costs and improve the quality of our bilateral training activities and the ADF's joint training.
- 8.2 Australia and the United States are seeking to align their respective force postures in ways that serve shared security interests. The United States is looking to develop a more flexible and resilient military posture in the Asia-Pacific, and access to facilities and training areas in Australia has become more important to its regional posture. During President Obama's visit to Australia in November 2011, the Australian Government and the US Administration announced two new US force posture initiatives: the rotational deployment of US Marines to Darwin and increased rotational visits by US Air Force aircraft to bases in Northern Australia. As a third priority, Australia and the US will look in the future to greater US Navy access to HMAS *Stirling*.
- 8.3 The deployment of US forces to Australia will be funded by the United States and the costs of US participation in Australian exercises will be shared, consistent with existing practice. Any further Australian financial contribution to these initial deployments will be absorbed within the existing Defence budget. With further scoping, Defence will assess whether there is a requirement for further investment under any future phases of activity.
- 8.4 Australia's policy of 'Full Knowledge and Concurrence' would be expected to apply to any future US request for increased US presence or activities in, through, or from Australian territory, in keeping with the successful approach adopted for the Joint Defence Facilities (Pine Gap, and the former joint facilities at North West Cape and Nurrungar). Permanent US military bases will not be established in Australia.

Singaporean Training in Australia

- 8.5 Singapore's small geographic size makes it difficult for the Singapore Armed Forces (SAF) to conduct training exercises, so the SAF undertake a significant proportion of their training in other countries, including Australia.
- 8.6 Singapore has agreements with Australia for the use of SWBTA and access to training facilities at RAAF Base Pearce and the Army Aviation Centre at Oakey. The SAF also conducts training at other locations such as Tamworth, Nowra, Woomera and Mt Bundey, and participates in multilateral exercises with the ADF in Northern Australia such as the Pitch Black air combat exercise series.

8.7 Continued Singaporean use of SWBTA should be manageable without compromising the primacy of ADF needs, noting the measures to enhance training area availability recommended by this Review. Levels of SAF training at Oakey and Pearce continue to be manageable.

New Zealand, the South Pacific and East Timor

8.8 Australia's relationships with East Timor, Papua New Guinea and most Pacific Island countries (with the current exception of Fiji) are sufficiently robust to allow access to military and civilian facilities and infrastructure in the immediate neighbourhood.

8.9 Australia can also use facilities and infrastructure in New Zealand and French New Caledonia to support our operations in the South Pacific, subject to the same caveats.

8.10 The new amphibious capability will provide additional options for cooperation and engagement activities in the South Pacific and East Timor, including bilateral or multilateral training exercises with regional security forces. Maintaining an enduring joint amphibious presence in the South Pacific region through regular deployments will also provide the ADF with practical experience and training opportunities, which could further mitigate constraints affecting joint amphibious training in Australia.

8.11 New Zealand is an important ally for Australia, particularly for operations in the South Pacific and East Timor. A major recent development in the relationship with force posture implications is the implementation of the ANZAC Ready Response agreement.

The Asia-Pacific

8.12 Australia's access to the Royal Malaysian Air Force (ex-RAAF) Butterworth air base in Malaysia continues to support our maritime surveillance operations in maritime Southeast Asia and the eastern Indian Ocean. Maritime surveillance operations from Butterworth are likely to become more important given strategic trends. Butterworth has also been used to stage regional HA/DR operations, such as Operation SUMATRA ASSIST during 2004-05. It is also a valuable asset for training and defence engagement with Five Power Defence Arrangements partners, through the rotational deployment of Rifle Company Butterworth and other activities.

8.13 Air Force relies on regional government bodies and open source geospatial data to maintain awareness of the condition of regional airfields in the immediate neighbourhood and the wider Asia-Pacific.

Recommendations

(38) Defence should continue to use activities in the Defence International Engagement Plan and international exercises planned in the Program of Major Service Activities to enable and facilitate ADF access to overseas bases, facilities and training areas.

Chapter Nine: Resources

Funding

- 9.1 Implementing many of this Review's recommendations would require significant investment in bases and facilities to allow the effective deployment and support of platforms and systems being acquired under Force 2030.
- 9.2 In some cases, investment has been provided for as part of an approved project in the 2009 Defence White Paper and Defence Capability Plan. These include:
- a. airfield upgrades at Edinburgh, Pearce and Townsville for the P-8 maritime patrol aircraft (AIR 7000 Phase 2B);
 - b. main base facilities at Tindal and Williamtown, and forward operating bases at Edinburgh, Learmonth, Pearce and Townsville for the F-35 (AIR 6000 Phase 2A/B);
 - c. lengthening the wharf in Townsville for LHD loading; and
 - d. enhancing fuel storage capacity in both Darwin and Townsville.
- 9.3 The next Defence White Paper will be an appropriate process for costing the recommendations in this Review and prioritising them in the context of other possible investments in Defence. The recommendations could be considered in terms of those that can be implemented relatively quickly (and broadly within Defence's current resource envelope); upgrades required to enable the potential capabilities of Force 2030; and new initiatives arising from this Review that would require very considerable investment.

The Defence Estate Consolidation Project

- 9.4 Studies and reviews of Defence's basing disposition over the last 15 years have been driven by the need to improve efficiency through rationalisation and consolidation. Since 1997, Defence has disposed of more than 280 properties - nearly 25 per cent of the Defence estate. These properties were no longer making a substantial contribution to ADF capability, were in a condition beyond cost-effective repair, or were easily identified as being surplus to Defence's needs given their limited utility.
- 9.5 The Defence Estate Consolidation Project, which commenced in 2009, has been working to identify how further consolidation of bases and facilities could deliver a more strategically-aligned, affordable and sustainable Defence estate. The project has been in abeyance pending this Review.
- 9.6 The outcomes of this Review should provide guidance for the Defence Estate Consolidation Project and ensure that its proposals for consolidation are consistent with strategic requirements. Depending on the final recommendations of the project, the number of bases and facilities could be reduced. While some facilities that are no longer needed by Defence could be disposed of, others could be retained by the

Commonwealth as multi-user Government facilities rather than as Defence facilities.

Recommendation

(39) The Defence Estate Consolidation Project should resume development of a detailed estate consolidation plan for Government consideration, including options for rationalisation, guided by Government decisions flowing from this Review.