Building on Beersheba

Future Capability
Discussion Paper Ten:
Generating the Joint Land Force
Part Two

Strategic Plans Branch
Army Headquarters
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Executive Summary

Just as Army modernises its equipment and force structures, it must continually look to improve training and education solutions, training areas and infrastructure to generate the joint land force effectively and efficiently. It will be through Army’s people where the joint land force will most likely gain a competitive advantage in the future; therefore, further investment in education and training is necessary to provide a ‘cognitive edge’ and develop military professionals. Additionally, Army will continue to embrace the revolution in synthetic training. This will include the conduct of realistic, joint collective training that will enhance training outcomes and reduce costs. Army must also consider the proximity of each Combat Brigade location to training areas large enough to accommodate the full suite of joint land forces. Deploying forces over large distances to train is costly. Moving unit locations closer to the training areas may represent value in the long term. Additionally, the incorporation of simulation and permanently positioned training fleets in the vicinity of training areas with supporting infrastructure may provide an effective and efficient force generation option.
Background

1. Generating a credible joint land force to provide a wide range of strategic response options to Government requires more than maintaining essential capabilities, adaptable force structures and adequate personnel numbers. Pivotal to successfully generating this land force is the supporting infrastructure and facilities, accessible training areas and realistic training and education.

2. Plan Beersheba has enhanced the efficiency of the 36 month force generation cycle, and integrated the regular-reserve-civilian total force in the generation and deployment of joint land force capabilities. However just as Army modernises its equipment and force structures, it must maintain and upgrade workplace facilities, infrastructure and training to generate the joint land force effectively and efficiently. Army's facilities, training areas and the facilities development program influence the Army's ability to force generate in the future.

3. Training is critical for the joint land force to prepare for operations. Army may no longer have technological superiority or overmatch in combat power and is likely to be outnumbered. Therefore, to neutralise an adversary’s advantage, Army must generate intelligent, resilient, agile and adaptable soldiers as part of an effective team. This can be achieved through enhanced training and education. Building and sustaining an advantage based on the capabilities of Army’s people is where the joint land force is most likely to gain a competitive edge and ensure the best return on investment of limited national resources. Training and education and supporting facilities and infrastructure have a central role to play in this regard.
Strategic Environment

4. The *Future Land Warfare Report 2014* emphasises that the nature of military interventions and operations has become inherently unpredictable since the end of the Cold War. This has made it difficult to predict the character of future warfare. Operations over the past fifteen years have posed new questions concerning future employment, equipment and doctrine. The emerging regional and global outlook suggests that land forces will continue to play a decisive role in the security of modern states against all adversaries. The five specific yet converging meta-trends (crowded, connected, constrained, collective and lethal) that define the strategic operating environment out to 2035 will influence the generation of the joint land force in the future, driving a revolution in training and education solutions and supporting infrastructure requirements.

5. Australia’s strategic environment has changed considerably during the first fourteen years of this century. In an era when Australia focused on operations in the Middle East, nations across the Indo-Pacific region have seen unparalleled economic and population growth. Importantly, this transformation has not only increased the influence of soft power across the region, but also translated to substantial growth in regional military power affecting the relative weight of Australia’s joint land force. Whilst Australia has enjoyed many of the benefits of rapid regional growth, increased competition for funds within Defence and across the public sector is likely to continue in the future, driving Government to seek more affordable military options. Therefore, Army can no longer rely on achieving advantage through potentially costly technological solutions but instead must invest wisely in training and education and supporting infrastructure and facilities.

6. The Army is the most experienced it has been since Vietnam, yet any advantage this provides now will dissipate quickly if we continue to benchmark the joint land force against past opponents. Army must look beyond its recent operations to generate the joint land force for future contingencies. Soldiers must have an understanding of the nature of warfare with an ability to think and act competently across the spectrum of operations. Improvement and innovation through training and education are essential enablers of this competency.
Key Issues

7. **Education.** In 2012 less than half the officers in Army possessed a tertiary qualification. By comparison, over 82% of US military officers held a minimum of a bachelors degree, with 39% of those also having a masters degree or higher. The difference between the Australian Army and our ally is significant. Furthermore, Army during its recent period of sustained operations has reduced the variety of training and education opportunities that were used to foster intellectual diversity within the officer corps. Valuable overseas exchanges, external training and education serials at home and abroad have all been reduced. Army, as a consequence, increasingly relies on individuals to continue their professional development in their own time. Coupled with the indifference to formal educational qualifications, this lack of opportunity has further reduced development of Army’s intellectual capacity.

8. Army must build upon its educational levels, firstly across the officer corps and then amongst soldiers. Whilst improvements in this respect can be easily measured by the number of professional academic credentials held, Army must look at deeper educational reforms to ensure it develops its people fully. Army needs intellectually and academically rigorous courses to educate military professionals for the joint land force. Such professionals must be prepared for uncertainty, complexity and ambiguity when planning, executing and leading contemporary and future military operations. They must be capable of making sound decisions, acting effectively and understanding the implications of their decisions and actions. Education is one way to enable adaption to unique situations, different to and beyond that in which a person has been trained. Therefore, further investment in education is required to establish and maintain a ‘cognitive edge’.

9. **Collective Training.** Army must undertake a comprehensive and ongoing collective training regime to enhance performance and generate the joint land force. This is achieved through the Foundation War Fighting Training Management Framework, which is validated against the preparedness requirements for operations derived from Government direction. This framework enables the establishment of standardised training progression throughout the force generation cycle and integrates simulation and live training. The Foundation War Fighting Training Management Framework approach to the use of simulation will require facilities co-located with Combat Brigades to achieve success. This approach is preferred to a single location as it provides flexibility to test systems and people over temporal and physical domains and allows for greater access to resources for Combat Brigades.
10. **Simulation.** The capacity to undertake training through synthetic means (simulators in particular) revolutionised through developments in the gaming industry, as well as improvements in the fields of 3D graphics and immersive holographic technology, occurred while Army was preoccupied with operations abroad. As a result, Army missed the transformation in how training and education is conducted and distributed through technological developments. Army now needs to exploit these technologies.

11. Army must continue to use live, virtual and constructive simulation in training to support the development of a more efficient and effective training solution. Simulation offers many benefits. For example, if simulation is used by Army for low-level training at the individual level, valuable resources can be saved for high-level collective training serials. Further, it can reduce skill-fade between live training events, thereby improving training progression. Finally, simulated force-on-force exercises allow higher levels of proficiency to be reached that are not possible in live training exercises, or can only be experienced in combat. They also provide opportunities for immersion in likely future operating environments, particularly the urban littoral environment. Utilising simulation improves the generation of the joint land force by providing more realistic and cost-effective training opportunities.

12. Army must enhance future training opportunities by allowing soldiers to train with simulated specialist joint or interagency enablers that would otherwise not be available during exercises. Army strives to conduct one quarter of its training through live, virtual and constructive simulation. This increased use of simulation will be necessary as part of a more efficient training solution, but will require further investment. Additionally, a cultural shift is needed in Army to realise training efficiencies through synthetic means.

13. Army strives to integrate its collective synthetic training and simulation systems in a combined training environment. It requires systems capable of supporting combat-team, battle-group and Combat Brigade exercises in a joint environment. Collective training of this type is common amongst our British, Canadian and American allies.

14. **Simulation Infrastructure.** Army requires ongoing investment in simulation infrastructure and networks as part of the force generation system to enhance capability, reduce training costs and minimise environmental impacts. Army seeks to develop a common synthetic training environment, which will help achieve a standardised single service and joint synthetic training scenario. This will improve synthetic and simulation interoperability and help to standardise synthetic tools, services, principles and data.
15. **Training Domain.** Army, as a contributor to the digitised joint land force, will require access to both space and cyber domains. Dependency on this access, brings with it inherent vulnerabilities. Disruptions to networks are certain to occur; therefore, Army must plan for this eventuality and act to sustain effective operations in degraded environments. This planning and action must be practised during all levels of training to expose soldiers to these vulnerabilities, whether on a training range or via simulation in barracks. Similarly, Army’s training scenarios must incorporate an enemy with modern intelligence, surveillance and reconnaissance that can detect signatures across the electromagnetic spectrum. At present, Army has not faced network disruptions during its operations but this will change. These anticipated contingencies must be reflected in training environments to prepare and generate the joint land force adequately.

16. **Base Infrastructure.** Defence bases and facilities provide Army with the ability to secure, maintain and generate joint land forces. Army will maintain and upgrade workplace facilities and infrastructure to ensure Army can continue to generate and support the joint land force. Working accommodation needs to be continually upgraded and maintained to meet changing capability, workplace health and safety and building code requirements to ensure facilities remain safe and support capability. Another important consideration is the in-ground infrastructure and services capacity, which needs to be considered when facility changes are required. Whilst Army has fared well over the last ten years through projects such as the Enhanced Land Force, further works are required to realise Plan Beersheba objectives and achieve further efficiencies in generating the land force. The requirement to upgrade and maintain base infrastructure and services should be a key consideration in the Army modernisation process.

17. **Training Area Development and Urban Environment.** Army capability is tested and realised on training areas. However a majority of training areas have not had the investment required to sustainably accommodate new vehicle and weapon systems; the numbers of personnel to use the site; or ‘urban environment’ upgrades to prepare Army for the likely future operating environment. While various urban operation training facilities allow for discrete, small-force training activities, Army must now look to immerse larger force elements in an urban environment for the duration of a training activity. Significant investment is required across all major training areas to ensure their long term viability.
18. **Proximity of Training Areas.** Army aspires to employ a more efficient live training solution, which will enable resources to be focused on those land force elements in the readying and ready phases. This will reduce training costs by targeting the generating forces that need it most. However, more can be done to realise training efficiencies. As deploying forces over large distances to conduct training is costly and will increase as Army is equipped with more protected and armoured vehicles, training solutions must consider the proximity of training areas sufficiently large enough to accommodate the full suite of joint land forces.

19. The most efficient option is for the Combat Brigades to be located within a sufficiently large community with the demographic and infrastructure to support a force of that size and their families, while being close to a training area that can accommodate all joint land force capabilities. The Townsville-based Combat Brigade has a sustainable training model, being close to a training area capable of sustaining joint land manoeuvre using all available weapons including artillery, tanks and close air support. Unfortunately, this is not the case for the other Combat Brigades. Developing training areas closer to Combat Brigade locations is unlikely; therefore, this training solution will require a review of force posture or a combination of simulation and permanently positioned training fleets near training areas with supporting infrastructure to provide an effective and efficient force generation option.

**Constraints**

20. **Infrastructure Approval Process and Capacity.** Defence base and training facilities are primarily delivered and supported by the Defence Support and Reform Group. This centralised management approach creates an environment where Army competes with other Services for the financial and workforce resources to establish and maintain infrastructure and facilities. Due to the approval process and the inherently lengthy nature of construction, the establishment of major new facilities is typically delivered in the medium to long term. Although funding sources may be provided through a number of mechanisms, the Defence Support and Reform Group has a finite capacity to manage this planning and delivery process. While individual services may seek to provide funding directly to support the delivery of facilities for structural initiatives, Defence Support and Reform Group workforce capacity constraints may delay the delivery of facilities. Such finite financial and workforce capacity requires the Services to prioritise proposed projects against those programmed.
21. The associated infrastructure development timeframes and resource limitations present a challenge to providing facilities for Army to generate the joint land force. While interim or ad hoc facilities measures may be employed to allow for force restructuring, these often require additional resources to enact and may represent an inefficient and sub-optimal mechanism for supporting structural change. Infrastructure and training area implications must, therefore, be incorporated and comprehensively assessed as part of force modernisation. With the exception of the most minor facility modifications, little opportunity exists for expediting current timelines and overcoming resource constraints.

22. **Ongoing Support to Simulation.** Synthetic training requires ongoing support to infrastructure to ensure that systems remain relevant throughout the anticipated service life. Information Technology equipment can rapidly become obsolete. As spares become unobtainable, simulation hardware cannot be maintained and repairs become uneconomic compared to replacement. Additionally, operating systems and software require regular upgrades. Army must ensure that all synthetic training systems incorporate resilient structures capable of upgrade and technological advancement.

23. **Environmental sustainability.** A long history of sound environmental management by Defence has resulted in strong environmental values across the Training Area Estate. Therefore, the effects of any increase in training tempo or use of vehicles must be mitigated to ensure Army’s environmental management reputation is maintained. Thus, Army will require high quality and well maintained infrastructure on training areas to uphold our environmental standards.