ENHANCING THE AUSTRALIAN DEFENCE FORCE CAPABILITY OF AID TO CIVILIAN COMMUNITIES AFTER NATURAL DISASTER AND/OR SEVERE WEATHER EVENTS

Submission to the 2015 Defence White Paper

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For note and advice: The author gives consent for the publication and distribution of this submission by the Department of Defence or any other recognised organisation or interest group deemed to have an interest in the contents of the following narrative.

EXECUTIVE SUMMARY

It is widely accepted within the Australian community that the Australian Defence Force will increasingly take on a direct reactionary capability in the deployment, support and/or direct intervention, prevention of escalation and restoration of support services within Australia and the wider global community. In the recent decade the world has experienced increasing high-impact natural disaster events that have resulted in widespread civil community disruptions and displacements due to the destruction and/or damage of civil engineering infrastructure and utility supply networks that effectively by characteristic will both place affected communities at risk of significant hardship and risk of exposure to health hazards associated with such large-scale incidents. Examples of such events have been off-shore in extreme-severe storm events in Haiti, New Orleans in the south of the United States of America, recent severe-category cyclone events in the north of Australia, tsunami events in Japan and numerous earthquake events throughout middle and northern Asia dictate that the ADF will ultimately become directly involved in undertaking humanitarian disaster relief operations on an unfortunately increasing frequency and the ability of the ADF and wider defence community to react, deploy and undertake specific humanitarian relief operations will be paramount to Australia’s participation in both operational and technical assistance to both domestic and off-shore disaster relief operations into the future.

The purpose of this paper is to identify and provide a focus on a latent disaster relief surge capability that is intended to highlight the potential of increasing the scope and effectiveness of the ADF reserve by attracting and recruiting specialised operational and technical skills from the civilian construction engineering, building services engineering and facilities management industries to provide enhanced skill-sets to the current ADF civil-aid and humanitarian relief operational capabilities. The emphasis of this paper is not to focus on equipment requirements for such operations but to provide an initiation of a think-tank for establishing a specialised ADF reserve unit and/or units that are comprised of personnel specifically target-recruited and selected for certain skill-sets that would be required to be utilised to rapidly assist civilian communities impacted by major natural disaster and weather events domestically, regionally and globally.

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OVERVIEW AND INTRODUCTION

The history of Australian military operations since Federation is interspersed with assistance to civil powers and the re-building of community support infrastructure and systems that have been required following cessation of hostilities. One of the best examples of such work can be found in the Australian military occupation of Japan immediately after the cessation of the Second World War. Australia committed units from all three branches of service to the British Commonwealth Occupation Forces (BCOF) in Japan into the early 1950s with the garrison units actively engaged within the overall United States of America military command in establishing a level of civil organisation and order within the defeated Japanese homeland. A significant undertaking of BCOF was providing technical and operational skills to literally restore services and re-build system networks and infrastructure within Japan that had largely been destroyed in concentrated allied aerial strategic bombing in the final stages of the war in the Pacific. To this extent programs for re-building road, rail and port transport and logistical systems as well as electrical power generation stations and networks and potable water and waste water generation and supply system infrastructure are recognised as one of the absolute positive aspects of Australia’s involvement of garrisoning the Japanese nation up to the completion of BCOF in 1952. Australian military engineers and technical trades personnel applied skill-sets that allowed the gradual re-building of Japanese civilian support capabilities and this factor displays the positive humanitarian impacts of re-building national infrastructure to effectively restore a devastated society retarded by the targeted destruction of vital services that directly impacted the ability of the community and the individual to function normally.

Another very pertinent example of the profoundly effective use of specialist construction and facilities establishment skills in military engineering is the long-standing and prestigious - almost iconic?! - mobile construction units operated by the United States Navy.

The United States Navy has historically operated specialist construction units (i.e. "SeaBees") in operational deployments with the core task focus of being capable of rapidly establishing temporary and/or semi-permanent base centres to directly support military operations. The best example of ADF civil engineering capabilities has existed within the RAAF’s airfield construction and engineering units however the concept of military engineering is based on the embedded organisational capability of directly enabling and supporting traditional offensive and/or defensive operations as opposed to the emerging requirement in the early 21st Century - and beyond - to expand the military operational capability policy mind-set of placing increasing focus on aligning humanitarian aid reaction to equal importance of military offensive and defensive operations.

IDENTIFYING REQUIRED SURGE CONTINGENCY CAPABILITY REQUIREMENTS

The ADF operates with embedded aid-to-the-civilian-community capabilities at unit and sub-unit levels and while aid to civil powers is a latent capability, the concerning rise of the increasing scale and complexity of human, social and infrastructure impacts in natural disaster and severe weather events necessitates that consideration to increase contingency capabilities for surge deployment of specialist civil, construction and facilities management skills that will have far more direct key skill-sets and experience due to direct civilian employment in specific disciplines that relate to commercial operations.
There exists an latent capability within the civilian facilities management, construction management and project management and building services engineering that the ADF needs to encompass as an opportunity to attract and recruit primarily as a rapid-response surge contingency that is land, air and sea-transportable, for the specialist purpose of deploying into areas impacted by events and circumstances that require direct and/or indirect ADF involvement in undertaking the site-establishment, repair, recovery, replacement and/or supervision, planning and co-ordination of the restoration of the following key examples of systems and infrastructure that would be expected to be directly and/or indirectly impacted by defined disasters, natural and/or "man-made" events and/or severe weather and geological events:

* Medical/Dental facilities and contingency capabilities
* Camp and marshalling facilities with embedded catering, logistical support, marshalling and administrative facilities
* Transport, logistics and supply-chain systems, infrastructure and networks
* Electrical power generation and distribution systems, infrastructure and networks
* Hydraulic utility processing, treatment and utility supply systems, infrastructure and networks
* Telecommunications and information technology systems, infrastructure and networks
* Mechanical services such as internal combustion engine electrical power generation plant and building Heating, Ventilation and Air-conditioning (HVAC) systems
* Vertical transportation plant and installations i.e. mechanical elevators and personnel and goods and services lifts and hoist systems

Many of the above key building services infrastructure assemblies, sub-assemblies, systems and primary engineered systems would not be considered as core knowledge and skill-sets of the ADF while also being recognised as the absolute priority to be recovered to normal and/or reduced operational capacity following a disaster event. This frank statement should provide an immediate foundation to place some level of consideration of the concept of the establishment of a specialist ADF reserve unit with diverse civil, structural and building services engineering skills that would not be reasonably and/or logically considered to be of core military engineering skills of permanent and reserve ADF units and therefore such a unit would provide the enhancing of existing and embedded military engineering skills that as previously noted and acknowledged, are directed to supporting traditional offensive and defensive operations.

The consideration as to a specialist ADF reserve unit being established is to include the organisational structure as to functioning as a single-service unit or tri-service unit.

IDENTIFYING THE REQUIRED SKILL-SETS

The broad skill-sets that form the basis of a specialist ADF reserve unit with high-end building services and civil/structural and construction engineering are align to the following:

* Civil and building construction engineering project management
* Civil and building construction site management and supervision
* Civil and building construction contract administration
* Building services engineering (electrical, mechanical and hydraulics and communications engineering disciplines)

* Senior facilities management, both technical and operational support (generically defined in the facilities management industry as "soft" services)

The above key skill-sets are currently recognised as providing senior and middle-level supervision and management in the construction and technical and operational management of commercial, industrial and public infrastructure capital and minor works projects and the concept of attracting and recruiting these skills into the ADF can, and will, enhance the existing military engineering skills by providing specialist capabilities that would create both operational and fiscal efficiencies and effectiveness for the wider ADF organisation and the Department of Defence in rapidly reacting to events while also noting that bringing such skills into the ADF will embed levels of current civilian contractor administration and management practices within ADF deployments as required to undertake specified works and services in the recovery and rebuilding after major natural disaster and severe weather events.

The concept of establishing a specific ADF reserve unit to undertake rapid deployment for the stated purpose is not provided as a requirement to re-structure existing ADF military engineering capabilities but to provide a relatively low-cost enhancement of ADF capabilities that would clearly increase the efficient and effective ability of the Australian government to contribute to local, regional or global events by which a rapid reaction is immediately required to stabilise and support impacted communities and the overall situation.

**ATTRACTING AND RECRUITING THE REQUIRED SKILL-SETS**

The rank and command structure of such a unit is to be likely based and established on existing permanent ADF units within the Royal Australian Engineers (RAE) and/or Royal Australian Mechanical and Electrical Engineers (RAEME) or the RAAF airfield engineering unit structure however there are primary factors that needs to be addressed as to the alignment of civilian skills and experience in relevant industrial disciplines and fields and embedment into the existing ADF rank and career structures.

The establishment of a specialist ADF reserve unit for humanitarian and disaster relief operations on the concept of attracting the requiring level of skill-set would certainly require an organisational acceptance of a particular skill-set being aligned to a specific rank band that recognises the following key factors:

* The individual specialist’s requirements to carry-out autonomous representative and liaison tasks and interactions with local authorities

* The individual specialist’s requirements to directly manage multi-tasking project and/or repair and restoration tasks within a very broad level of scope of managing and controlling ADF personnel, external contractors and utilities work teams and human resources of various organisational and operations participation levels

* The individual’s level of civilian industry employment status and skill-set

Given that the nature and characteristics of such a unit operational deployment is "specialised", the recognition and acknowledgement that the traditional entry level recruitment rank and training structure would need to be carefully considered in direct alignment normal processes of ADF rank and promotion and the obvious requirement for suitable reserve personnel in such a
unit to be correctly trained and indoctrinated in basic core and specialist military skills, particularly emphasising that the level of formal qualification, industry status and experience and skill-set would dictate that the only appropriate and logical methodology of attracting the required and most appropriate personnel who will inevitably and logically not have experience and/or exposure to the ADF and wider defence organisational environment due to being predominantly drawn from the private sector.

The existing specialist reserve recruitment system recognises skills within the legal, medical and dental professions and would certainly encompass the high-end specialist construction and facilities management skills required to be drawn from the civilian professional labour force. Again, as previously intimated within this paper; the ADF trains permanent military engineers within such categories as graduate junior commissioned officers within the Royal Australian Engineers (Corps), Royal Australian Electrical and Mechanical Engineers (Corps) and the RAAF airfield engineering specialisation however, re-emphasis is placed and focused on fact that the pool of these officers is directly related to core military engineering support functions and in most cases may not have direct employment and experience exposure to civilian commercial environments. This is not stated as a derogatory and/or condescending comment of opinion towards military engineering management but a logical and frank observation that the military engineering profession is focused on military operations and that junior officers entering and employed within the traditional military engineering units are subject to entering at junior military rank as appropriate to entry level and qualifications within the existing training structure.

It would be expected that civilian private sector construction and facilities management operators considered appropriate for such a raised and established ADF specialist reserve unit would be such industry experience and advanced skill so as to perhaps not be immediately attracted and/or interested in entering the ADF at trainee/cadet status and undertaking prolonged military skills training that necessarily impacts on their individual civilian careers and lifestyles. To this extent it would be considered that a policy of recruitment and entry of suitably qualified and experienced personnel to staff such a unit would require alignment of entry-level commissioned ranks to civilian industry status as per the following example of civilian skill-set to aligned ADF rank:

* Senior construction project manager (Superintendent) - Captain/Flight Lieutenant/Lieutenant (RAN)

* Construction project manager - Lieutenant/Flying Officer/Sub-Lieutenant (RAN)

* Senior facilities manager - Lieutenant/Flying Officer/Sub-Lieutenant (RAN)

* Building service engineer (Professional) - Lieutenant/Captain/Flight Lieutenant/Lieutenant (RAN)

The most suitable method of validating entry-level skills is to align with professional association membership such as the Institute of Engineers Australia, as an example.

The rank progression and advancement of specialist reserve construction and facilities management industry would obviously encompass acknowledgement and recognition that the command of such a unit would likely equate to a middle/senior-ranking officer and that career rank advancement of such specialist reserve members would be terminated at middle-level ranks of Major/Squadron Leader/Lieutenant-Commander.
The consideration of recruitment of para-professional construction trades supervisory personnel into such a unit presents a more complex recruitment and personnel management policy for the defence organisation given that the levels of proposed civilian industry experience to be sought for such a specialised reserve unit would dictate that high-levels of industry experience would be required to be directly aligned to an appropriate ADF rank that allows a specialist reservist to be capable of exercising a particular level of work process and procedure control and co-ordination authority in the field during an operational deployment, particularly if involved in supervising and/or overseeing indigenous and/or externally-contracted/deployed work teams. To this extent the following key factors are to be recognised in logically assessing the necessity to include suitably experienced para-professional civilian industry skills into the specialist ADF reserve unit:

* Construction industry foremen and supervisors will directly equate to alignment with ADF non-commissioned officer/senior-commissioned officer status

* Para-professionals are to be directly recognised by admission and membership of the relevant industry association and/or professional body/ies via attainment of vocational qualifications at advanced diploma/diploma levels that formally recognise attainment of para-professional technical qualifications at advanced trade/technician status.

Given the above concept, how does the ADF ensure that specialist reserve personnel at entry level are correctly integrated with ADF organisational principles of policy and procedure that will allow them to correctly integrate with the permanent and reserve ADF organisation and understand the correct and required protocols of military service? The broad solution to this factor is to directly align the recruiting and retention policy of such a highly-specialised unit to the existing specialist reserve recruiting policy and to certainly identify that such a unit would have a very defined scope of purpose and operation in providing capabilities for humanitarian operations in the wake of natural disasters that the ADF is deployed into to assist and/or undertake restoration of public services and infrastructure for relief and recovery.

IDENTIFYING SPECIFIC ENVIRONMENTAL HAZARDS AND ALIGNING TO REQUIRED TRAINING

The environments that present within a natural disaster wake are profound and recognised to present very hazardous potentials and probabilities that will be abnormal and extreme in adverse impacts on all individuals involved at the scene. In considering the establishment of a specialised building engineering unit to conduct immediate recovery and restoration of technical utility and infrastructure systems in devastated communities, the following key factors, based on recent experiences operating within natural disaster aftermaths, should be identified as to ensuring personnel recruited into such a unit are responsibly and appropriately trained and equipped to cope and manage such scenarios and event circumstances:

* Exposure to deceased persons, human body tissue and severely injured persons encountered within devastated and/or damaged environments

* Exposure to differing levels of displaced persons

* Exposure to deceased and injured animals

* Hostile operational environment with local/resident civilian communities that will be aggravated and possibly aggressive and overly-assertive, irrational, traumatised and possibly un-co-operative towards deployed civilian and military aid forces
* Widespread property looting and theft within the disaster impact zone and potential exposure to extreme levels of law and order enforcement by local authorities including being required to operate in locations after imposing of severe penalties by local law enforcement authorities with exposure to capital punishments for certain offences

* Language, local administrative and cultural communication difficulties that prolong and/or extend the actioning and completion of tasks

* Perceived/deemed/considered official and unofficial localised corruption, bribery and inappropriate, unethical practices and conduct

* Restricted abilities to complete required tasks with resultant impacts and adverse impacts on local community that escalate human suffering

The training of specialist ADF reserve personnel for such a role by which the core intention is to undertake specific technical and operational recovery and restoration tasks to support the impacted local community/ies would be required to include enhanced environmental safety and risk management training to counter the long-term organisational and impacts on individual participant well-being and stability.

CONCLUSION

There is credible consideration of establishing such a specialist ADF reserve unit that allows the infusion of certain skills from civilian industry into the defence capability portfolio that ultimately enhances contingency capabilities. This paper is submitted as a focus and identification document for potential development as considered of merit to the concept.

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