Introduction

The City of Karratha (previously the Shire of Roebourne) is located midway along the west coast of the country in the Pilbara region of Western Australia. It covers some 15,000 km² and has a population of about 25,000 people. Karratha is an economic powerhouse, its Gross Regional Product being some $18 billion, making it the 6th largest local economy in the country, after Brisbane, Sydney, Melbourne, Perth and the Gold Coast (National Economics 2013). This equates to 6% of Australia’s total GDP, leading to the City’s reputation as the ‘engine room’ of Australia’s economic growth.

Some of the world’s largest projects are located in the Pilbara. Currently there is $160 billion of construction occurring in the State, mostly in the Pilbara, and a further $108 billion is planned or possible (DME 2014). Resource investment in the 2013/14 financial year in WA was $47 billion and resource industry revenue in the same period was $121.6 billion. This included $73.7 billion iron ore exports and $24.2 billion hydrocarbon industry exports (LNG, oil, gas and condensate) – virtually all from the Pilbara.

Total resource company investment in the Pilbara since 1960 is estimated (in today’s dollars) at $1 trillion ($1000 billion). By 2017 the Pilbara will be earning 40% of Australia’s export income.
The Pilbara has the largest number of major resource projects in the country, yet it is without the protection of military, aircraft or ships stationed permanently in the area. This is of great concern to the overseas investors and companies who invest in the region. It is incredible that the Pilbara, so close to Asia and so critical to the well-being of the country, has fewer than 50 defence personnel stationed here, whereas massive defence investment, numbered in many thousands of defence personnel, are stationed on the east coast.

The City of Karratha is a fast-growing town. Established only in 1972, it has experienced the highest actual population growth rate of any regional capital in WA over the last decade. The State Government’s landmark Royalties for Regions program has invested strongly in the region, with hundreds of millions of dollars poured into Karratha to turn it from a resource company dormitory town, to a major national city, a place where people want to come and live. This phenomenal program has seen a range of new community buildings constructed. It has totally revised the city centre and the program remains in progress with a new $200M hospital, $50M theatre, $40M airport upgrade and many other projects in construction or planned. As demographer Bernard Salt has indicated (Today TV Program, 10 Aug 2014) Karratha is the best and most likely place for Australia’s newest city.

Defence has a significant role to play in Karratha. A permanent defence presence would act as a major deterrent to terrorists and other enemies of our country, would increase business and investor confidence, improve border security, and assist with emergency management and humanitarian scenarios. It would minimise the potential risk associated with our volatile South-East Asian trading partners and neighbours. In addition, a defence presence would assist in encouraging social and economic infrastructure investment, industry diversification and job creation for the Pilbara.

Objectives for the ADF

The 2000 White Paper established a framework of five strategic objectives but these essentially come down to:

- The defence of Australia;
- The security and stability of our region: the Southwest Pacific, Southeast Asia, East Timor and the Indo-Pacific
- Global security.

Apart from these objectives, the ADF is often involved in foreign aid programs and disaster relief. The placement of ADF resourcing, supply and training facilities in certain areas of the nation is also recognised as a side-line nation-building exercise where Federal money can assist struggling regional areas with the reliable income that comes from defence related expenditure.

With regard to the City of Karratha, there is considerable scope to fulfil a number of the ADF objectives: defence of the nation; security of the region and nation-building investment.
Current ADF Presence in the North-west

Army

The ADF currently has a local defence capability through the Pilbara Regiment, headquartered in Karratha at the Taylor Barracks. The manning in Karratha is about 30 full time Army personnel, with some 20 other full time personnel spread across the towns of Exmouth, Port Hedland, Newman, Tom Price, Carnarvon and Perth. In addition there are reservists in all these centres.

The Pilbara Regiment has as one of its purposes, Defence Aid to the Civil Community (DACC). This provides a 'local emergency' support from the Regiment as requested by the Senior Emergency Services Officer. There is no cost recovery. In the past it has been used to provide assistance to civilians and civil infrastructure during disasters but the number of personnel and resources available means this capacity is extremely limited.

Navy

There are no naval facilities in the area, though the recently combined Dampier and Port Hedland ports have made the new Pilbara Port the largest tonnage Port in the world. We are advised that Navy vessels do pass by the Pilbara coastline but they do not call in. In the past there was a trial stationing of a vessel at Dampier but the Navy refused to use existing slipway facilities and actually motored to Perth to perform crew changes – an extraordinarily expensive exercise when a large airport is located only a few kilometres from the port.

Air Force

The air force has two, essentially un-manned, bases at Learmonth (555 km distant) and Curtin (Derby 985 km distant). These have limited stores but can be rapidly up-manned from other bases in an emergency.

Infrastructure in the Karratha Vicinity

Karratha is the Oil and Gas capital of the north-west and based on revenue and export value, of Australia as a whole. The City is home the North West Shelf Project – when constructed, the largest project in the world - the Pluto LNG Project (both operated by Woodside) and is being adopted by the massive Gorgon Project as its supply base for supplies, goods and services. It is also the supply base for Varanus Island terminal and most other hydrocarbon assets of the North-west Shelf.

Karratha is also the home of Rio Tinto Iron Ore, one of the world’s top 3 producers who shipped 208 MT of iron ore in 2013. It is home to Australia’s largest salt producer, Dampier Salt Ltd, Australia’s largest magnetite producer, Sino Iron, and Yara Pilbara Fertilisers’ liquid ammonia and Ammonium Nitrate plants. The plant, infrastructure and port facilities of these projects are massive.

North West Shelf Oil and Gas facilities and fields are shown in Figure 3.

North West Shelf Iron Ore mines and railway lines are shown in Figure 4.
**Risks and Attack Scenarios**

In a time where terrorism is of major concern, it is considered that there has been inadequate attention to the vast facilities of the Pilbara which, with minimal resources, could be rendered out of action for months.

The remoteness of the many plants and facilities across the Pilbara makes any terrorist action relatively simple to execute. Terrestrial facilities can be accessed easily over the firm terrain. The lack of people across the area (the Pilbara as a whole contains only about 50,000 people over some 502,000 km²) and the long linear facilities (railway and pipelines) mean these can be easily accessed without being seen and simply cut with an explosive device.

Whereas a cut railway line can be repaired relatively quickly, an attack on a plant would be much more damaging. However, of greater exposure and importance are the ports and coastal developments which can be closely approached by small boats at sea. Hydrocarbon facilities on the coast, the islands and the numerous man-made offshore structures of the north-west shelf are particularly vulnerable. The oil and gas facilities are susceptible to attack because they contain large quantities of highly explosive fuel and are simple targets where a single rocket propelled grenade or shoulder launched missile could cause devastation. The fire that occurred on Varanus Island on June 3rd, 2008 cut Western Australia’s gas supply by 30% and cost the State $3 billion. A terrorist attack could have done much more damage. The Varanus facilities are one of the smaller developments in the region: an attack on the Karratha Gas Plant or one of the new facilities at Gorgon or Wheatstone would be much more devastating.

Asylum seeker boats have sailed past the Port of Dampier without being detected so it goes without saying that a small boat piloted by terrorists could travel through the area undetected and attack one of the hydrocarbon facilities.

And once the missile or grenade has caused the explosion, the damage is already done: air bases on the other side of Australia may transport their troops to Karratha in 5 or 6 hours; but by then the facility will be devastated. The cost in lost exports would be numbered in the tens of billions and the cost of lost infrastructure even greater.

**Force Structure and Preparedness**

**Proposed ADF Presence in Karratha**

It is considered that the following risks are critical in the City of Karratha and surrounding facilities:

- **Terrorist attack on a hydrocarbon (LNG, oil, gas or condensate) facility – coastal gas plant, offshore platform or pipeline**
- **Terrorist attack on a mining facility (port offloading, railway line or mine infrastructure)**
To provide a minimum defence capability in the north-west, it is proposed that the ADF needs:

- A naval deterrent force, based in Karratha, patrolling the north-west shelf oil and gas facilities
- A greatly expanded Pilbara Regiment based in Karratha
- Use of the Karratha area for training exercises, particularly amphibious training, plus defence force education courses.

**Naval Deterrence**

Protection of the massive Pilbara resource industry infrastructure is of vital importance to the nation and justifies increased naval activity in and around all offshore and coastal facilities. Deterrence is the cheapest and most effective option to provide security to the large oil and gas companies with facilities in the region.

Two Armidale Class vessels based in Dampier could patrol the north-west shelf oil and gas facilities, and also provide intelligence on other visitors to the area: drug runners, asylum-seekers etc. The vessels could crew change out of Karratha (the airport is the 8th largest in terms of passenger numbers in the county and will soon be international) and with a slipway available in King Bay, maintenance could also occur here.

**Navy Training**

There are two major Defence Ports in Australia: Perth, HMAS Stirling (Fleet Base West) and Sydney, HMAS Kuttabul (Fleet Base East), looking to the Indian and Pacific Ocean’s respectively. Apart from these two major Fleet Bases, there are 3 other Royal Navy Bases in Australia: Cairns (HMAS Cairns), Darwin (HMAS Coonawarra), and Waverton (HMAS Waterhen) in NSW). There are another 6 training, fleet air arm and communications bases – all on the east coast.

A base in Karratha, which is well located between Darwin (1752 km by air) and Perth (1252 km by air), would provide strategic balance over this 4300 km stretch of our undefended west coast.

The Navy is now taking delivery of the new Canberra Class Amphibious Assault Ship (also known as a Landing Helicopter Dock - LHD). These new vessels are large - displacement 27,500 tonne, LOA 231 m - and can carry 2000 troops, helicopters and water craft. Training is essential for these new amphibious vessels.

Currently, amphibious training for northern Australia occurs at Shoalwater Bay and Cowley Beach, both in Queensland: these have established Beach Landing Sites (BLS). Jervis Bay in NSW also serves as a fleet training area. Darwin is one possible training location along with the current training areas in North Queensland. However, there is a clear opportunity for Karratha to act as a naval amphibious training area.

Due to its location, unique coastline and huge infrastructure, the Karratha area would be ideal for amphibious training using the new LHD vessels and the older landing ships such as
the HMAS Tobruk and the Balikpapan Class Heavy Landing Craft. Mangrove stands, soft supra-tidal flats and landward crabhole country found around Karratha provide valuable alternative training scenarios to the beach environments of Shoalwater Bay and Cowley Beach. Karratha offers an environment that could support amphibious landing exercises for both the ADF and US Marine Rotational Force (MRF).

Army - Pilbara Regiment

The Pilbara Regiment is currently a surveillance group only, maintaining close links with the community and gathering intelligence on activities along the entire Pilbara Coast. It is not of a size to be able to provide quick response to any significant incursion or natural disaster.

It is considered that this Regiment should be increased in size, to perhaps 200 full time personnel. This would allow quick response forces to be deployed to several sites over the vast Pilbara in case of attack or emergency and would provide much higher security to land-based facilities.

The Pilbara Regiment has the capability to accommodate 70 persons in Karratha at the barracks. ADF leadership training and educational visits for at least this number of personnel could be accommodated in Taylor Barracks and larger groups can be accommodated nearby in the extensive and now largely empty construction camp facilities.

Why Karratha?

Apart from the strategic defence reasons outlined above, there are a number of very good reasons why ADF staff should be located in Karratha.

Location

Karratha is the largest settlement and is the most centrally positioned town servicing the Pilbara. Located 1500 km by road from Perth, Karratha is also central to the Pilbara coast, with the Shire of Ashburton to the west and south, and the Shire or East Pilbara and the Town of Port Hedland to the east and south south-east.

Liveability

Karratha is the capital of the Pilbara in both population and liveability. It is of a size suitable to provide the range of services necessary to keep a family happy. The City is located on the shores of Nickol Bay, it looks out onto the magnificent Burrup Peninsular (Murujuga) and has the islands of the Dampier Archipelago as its playground. Around the City there are hills and valleys which give it a natural beauty and within a couple of hours drive there are a range of river pools, old homesteads, two national Parks and many fascinating sites. The Pilbara is a beautiful area and Karratha is fortunate to have the best of it.
The City has some excellent facilities for young families: a variety of childcare, sporting and cultural facilities. The City has three swimming pools, many ovals, sports and entertainment halls, a magnificent combined gymnasium, basketball, squash, netball, swimming and business facility called the Leisureplex and four libraries. A new theatre and cultural centre is being constructed in the centre of town.

Health facilities are getting a radical overhaul with a beautiful new $200M hospital and a GP Superclinic. The City has just had the most expensive new High School built in the State completed. It has 8 primary schools, Catholic primary and secondary schools and a TAFE college with university courses provided by Central Queensland University, Curtin and UWA.

Karratha house prices have plummeted since the end of the mining boom and the cost of living is getting back closer to Perth.

**Conclusion**

The City of Karratha and the Pilbara region in general currently supports some $1 trillion worth of resource industry and related infrastructure which will generate about $200Billion of export income for Australia every year. This area is of immense importance to the nation and is close to the strategic hot-spots of South-east Asia and the Indian Ocean. However, it is remote and easily attacked so provides an ideal terrorist target. It is also essentially undefended, with no naval or air-force presence and a small surveillance crew of only 30 full-time army staff.

It is considered this situation must change.

Stationing of one or more Navy vessels at Karratha to patrol the many island, coastal and offshore facilities, plus a greatly increased Army presence is necessary if we are to responsibly protect our north-west coastline. A naval presence and increased numbers in the Pilbara Regiment would provide great security and would also provide local employment, diversifying our somewhat limited economy and assisting Australia build its next large city.

I would also invite a survey of the viability of Karratha/Dampier as an amphibious training area by the ADF.

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City of Karratha
Figure 2: Karratha – the liveable City
Figure 4: Simplified map of Pilbara Iron Ore mines and interconnecting railways.