

EXMOUTH AREA DEFENCE SITES PROTECTION Local Planning Policy 6			
POLICY OWNER:			
DEPARTMENT:	Executive Services		
CREATION DATE:		REVIEW SCHEDULE:	
RELATED PROCEDURES:			
RELATED FORMS:			
RELATED POLICIES:			
LEGISLATION:			
DOCUMENT CONTROL			
DATE REVIEWED:	REVIEWED BY:	CHANGES (IF ANY):	APPROVED BY COUNCIL:

Local Planning Policy 1- Colour Palette for Developments

POLICY STATEMENT

The Department of Defence in conjunction with the Shire of Exmouth seeks to create a Protection Plan to reduce any potential impact on and around Defence Areas, as a result of land use and development.

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POLICY OBJECTIVES

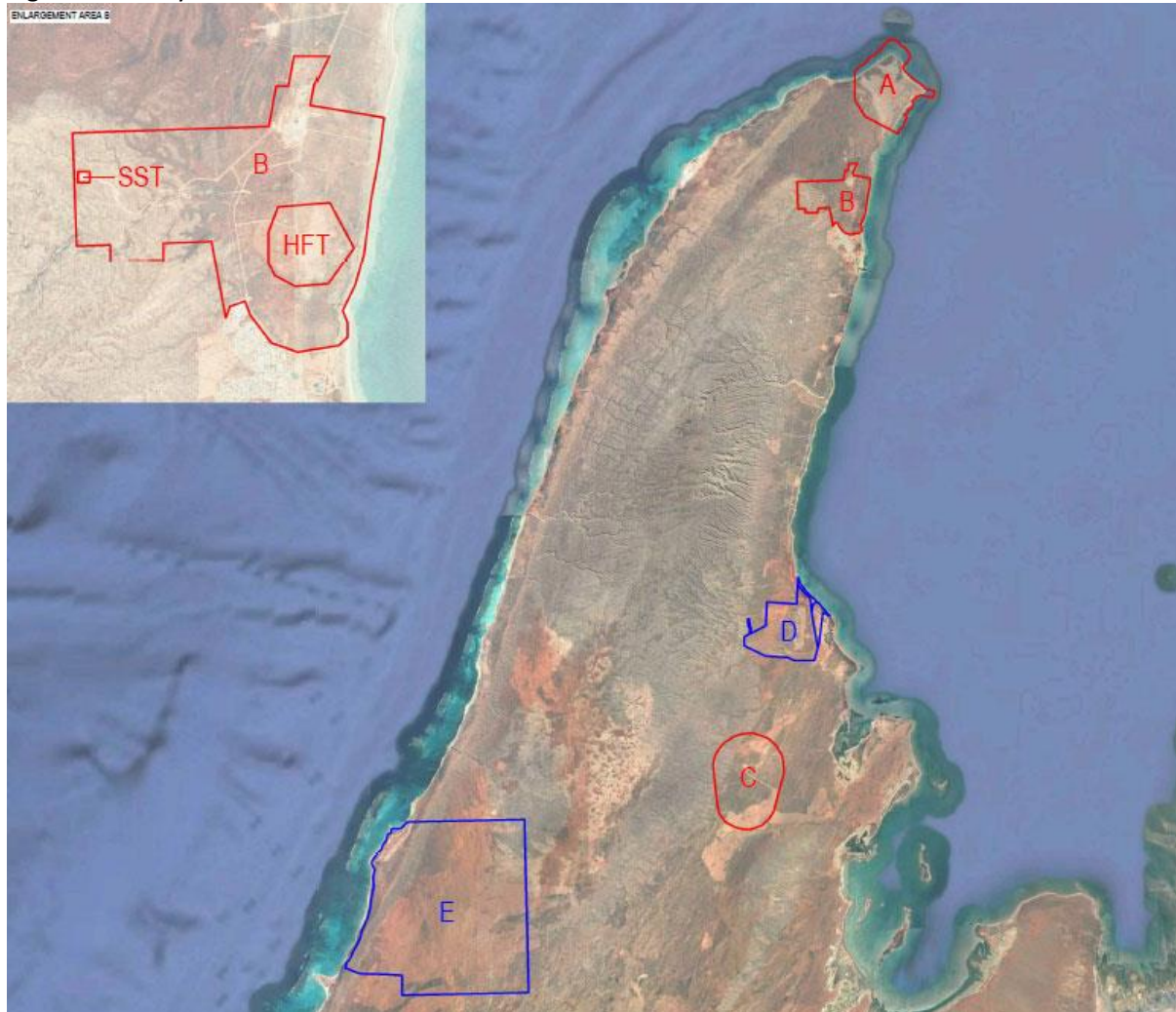
1. To ensure that land use and development does not adversely impact defence sites and infrastructure as identified at figure 1 below as Area A, B, C, D and E.
2. To liaise Department of Defence regarding land use and development near the identified areas.
3. Include land uses in the area that compliment and pose no negative impact to the sites.

POLICY

Harold E Holt Navy Communications Stations are located near Exmouth in the Gascoyne Region of Western Australia (See Figure 1 below) and is separated into the following broad areas: Area A, Area B, Area B High Frequency Transmit and Area C Space Surveillance Telescope, consisting of a total land area of 86.645 km².

Site Protection provides considerations of potential negative impacts on the capability of the Space Surveillance Telescope (SST), C-Band Radar, Very Low Frequency (VLF) Towers and High Frequency (HF) Transmit and receive sites located at the Harold E. Holt Naval Communications Station (HEHNCS) in Exmouth, Western Australia.

Figure 1: Policy Areas



This LPP aims to ensure that no land use conflicts with Defence operations. The Defence sites in this LPP are of strategic importance with significant Defence capabilities for the Commonwealth and partner countries. Defence request that any development that has the potential to impact on these sites be referred to Defence for assessment to ensure that any impacts are mitigated through the planning process.

Any sensitive development should require consultation with Defence, in particular any developments that propose to:

- a. change zonings,
- b. establish any industrial activity or plant,
- c. construct certain large metal structures, or
- d. construct a hospital, radio station or any other development sensitive to the risks identified in this LPP.

Attachment A to this LPP, identifies the negative sources to capability and protection buffers for Areas A, B and the Telescope which may include a significant change in noise, light or dust pollution in Area A, B, B HFT and SST may not be permissible.

Attachment B is a Guidance Fact Sheet in relation to the HF Receiver Station.

SOURCES OF NEGATIVE IMPACT TO DEFENCE

Area A _ VLF Towers

Radiation - VLF radiates a high-power Radio Frequency; therefore, any access inside the VLF perimeter is not permitted

- Radio frequency and/or Hand Held Radio - High Power Radio Frequency may affect radio reception and transmission. The VLF signal would only be affected if there was another transmitter radiating at high power within 2-5khz of the allocated VLF frequency
- Electromagnetic Interference - High Power Radio Frequency and Detonators (explosives) that operate electrically are not permitted within 30km of the VLF transmitter.
- Air Space use including Drones - Restricted air space R122 (surface to 3,000ft and 2.0NM Radius).
- To operate closer, permission is required and can only occur when transmitter is NOT operational.

Area B – C Band Radar

- During maintenance there is a very low probability that Radiant Light, lasers and glare will affect the boresight camera
- Radiation will affect operations depending on band of frequency and will also affect maintenance if maintenance requires transmit/receive of radar and within frequency band
- Radio frequency and/or Hand Held Radio will affect operations depending on band of frequency and will also affect maintenance if maintenance requires transmit/receive of radar and within frequency band. Commonly used walkie-talkies will not affect C-Band radar due to band/power used
- Unlikely for Electromagnetic Interference to affect the radar, dependent on the strength of EMI
- Dust Emissions will have minimal effect on radar performance, however in relation to maintenance, may cause issues with boresight camera if in use (Dependent on amount of dust).
- Smoke will have no effect on radar performance, however in relation to maintenance, could cause issues with boresight camera if in use.

Space Surveillance Telescope - SST

- Radiant Light –SST - The Exmouth Gulf region was selected as the site for the SST due to its distance from populated areas and its low light and particulate pollution. During SST operational hours, there are four aspects to consider with lighting in the vicinity of SST:
- Shielding of Fixtures - the effective shielding of fixture reduces sky glow, light trespass, and glare. All lights where possible must be pointed downward with the light bulb fully covered by a solid object with only light emitting from the bottom of the fixture.
- Spectrum of light sources - The lower the temperature of light the least negative impact to the SST capability it has. Lights should have temperature of no more than 3000 Kelvins.
- Amount of Light - Limit should be 50,000 lamp-lumens per acre (or 35,000 fixture lumens per acre). Lights where safe to do so should be turned off when not in use (timer/sensor) and only turn on as required as and no brighter than necessary.
- During SST operational hours, cars are to remain outside of the SST compound and not drive towards the SST past Well 18.

Lasers and Glare

- MIL – STD- 461C - Electromagnetic Emission and Susceptibility Requirements for the Control of Electromagnetic Interference

Dust Emissions

The more dust particles there is in the air, the less effective the performance of the Space Surveillance Telescope will be. In addition to having an impact on seeing conditions, dust will also collect on the SST optical surfaces, which will impact SST performance due to a reduction in reflectivity and an increase in scatter. This will also likely increase the frequency required for mirror recoating.

- No activity (e.g. Excavations, Quarry, major dirt bike event, etc) that produces a large amount of dust within the vicinity of SST during the evening/night.

Smoke

Smoke particles in the air, have the potential to effective the performance of the Space Surveillance Telescope by reflecting ambient light.

Air Space use including Drones

Drones must conform to the following guidelines, so as not to potentially impact imagery.

- 0-400m from site no fly zone
- 400-600m from site max altitude of 200m above sea level
- 600-800m from site max altitude of 250m above sea level
- Greater than 800m no restrictions.

Area C - High Frequency Receiver site

To serve as a protective buffer around the Rough Range HF Receive Station, Defence has developed a site protection plan to aid in minimising radio frequency interference with protective zones.

Defence developed an internal guidance fact sheet for Officers to use that identifies 1) the location of the HFMOD site and 2) a method of assessing development proposals in order to ensure that they do not create land use conflict with the HMOD site.

Area D – RAAF Base Learmonth

Defence notes that the Exmouth South Structure Plan acknowledges the strategic and Defence significance that RAAF Learmonth and Airport has within the region. This objective also includes a reference to an indicative aircraft noise buffer and acknowledges that RAAF Learmonth and Airport and surrounding area is affected by building and structure height limits under the Defence (Areas Control) Regulations (D(AC)R)1989. Defence is responsible for the ANEF for RAAF Base Learmonth and is supportive of the inclusion of an indicative buffer area in the absence of an updated ANEF.

The D(AC)R has been replaced by the Defence Aviation Areas (DAA) Regulations 2018, any future reference should be to the DAA, further details can be found via the following link.

<https://www.legislation.gov.au/Details/F2018L00356>

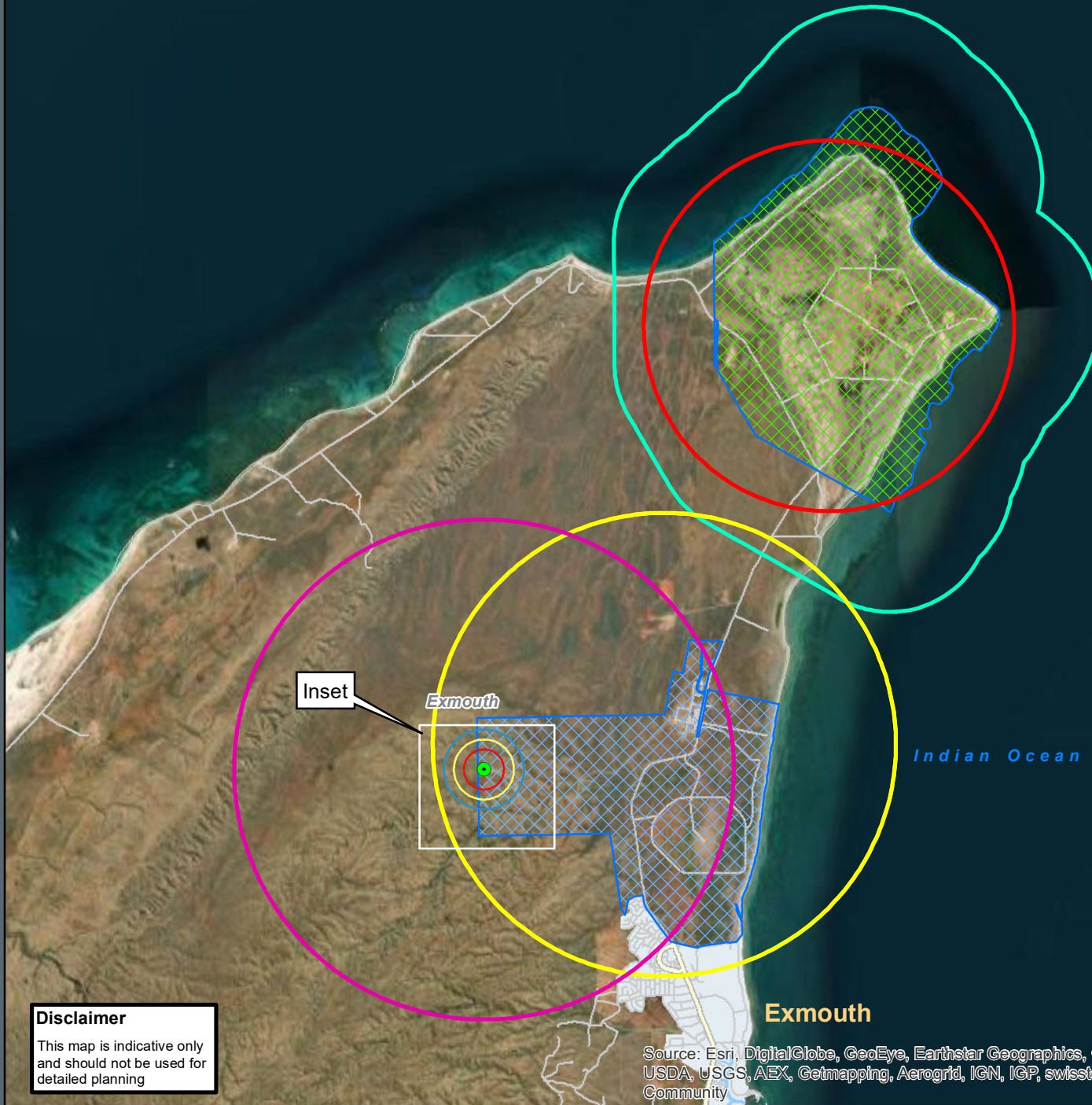
REFERRALS ADDRESS FOR DEPARTMENT OF DEENCE IS AS FOLLOWS:

land.planning@defence.gov.au

STATUTORY ENVIRONMENT

Shire of Exmouth Local Planning Scheme No.4

Planning and Development (Local Planning Schemes) Reg



- HEH Area A
- HEH Area B
- Space Surveillance Telescope
- SST - Drone Buffer
 - 0-400m No fly
 - 400-600m Max altitude 200m ASL
 - 600-800m Max altitude 250m ASL
- SST - Dust Emission 5km Buffer
- R 125A & R 125B - Restricted Airspace
- R 122 - Restricted Airspace
- Area A - EM Noise - 2km Buffer

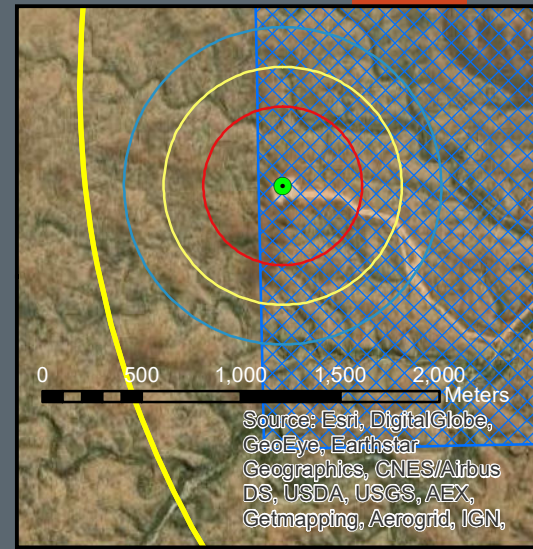
Inset
Exmouth

Indian Ocean

Exmouth

Disclaimer
This map is indicative only and should not be used for detailed planning

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



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HIGH FREQUENCY MODERNISATION (HFMOD) FACILITY LEARMONTH – DEVELOPMENT ASSESSMENT GUIDANCE

There are currently four HFMOD sites strategically positioned across Australia, including the Learmonth High Frequency Modernisation (HFMOD) site situated at North West Cape. In connection with the central Network Management Facility situated in Canberra, the HFMOD sites form a nation wide High Frequency (HF) communication network.



The HF communication network provides timely, accurate information in the form of secure voice, data and image transfer to all Defence personnel during operations and training undertaken at a national/international level. As such, it is important that the HF communication network is not compromised by incompatible development.

All types of development have the potential to cause radiofrequency interference with the HF communications network, specifically the Learmonth HFMOD site. However, certain types of development have a greater likelihood to cause interference than others. As such, it is important that the Council is provided with information guidance on what development types may be detrimental to the operational integrity of the Learmonth HFMOD site.

LEARMONTH HFMOD FACILITY SITE PROTECTION PLAN

Defence refers to the Learmonth HFMOD Site Protection Plan to determine development restrictions around the Learmonth HFMOD facility. The site protection plan includes a map (see overleaf) that illustrates three safeguarding zones around the Learmonth HFMOD site. Each zone is within certain proximity to the base and recommends restricted land uses for development that may cause significant interference to the HFMOD site and subsequently impact upon the integrity of communications network.

At present, land within Zone A and Zone B is primarily Commonwealth owned, therefore there is no requirement to adopt recommended restricted land uses within these areas. However, it is recommended that all infrastructure proposals situated in these zones are sent to the Department of Defence for assessment at ipsi_land_planning@defence.gov.au

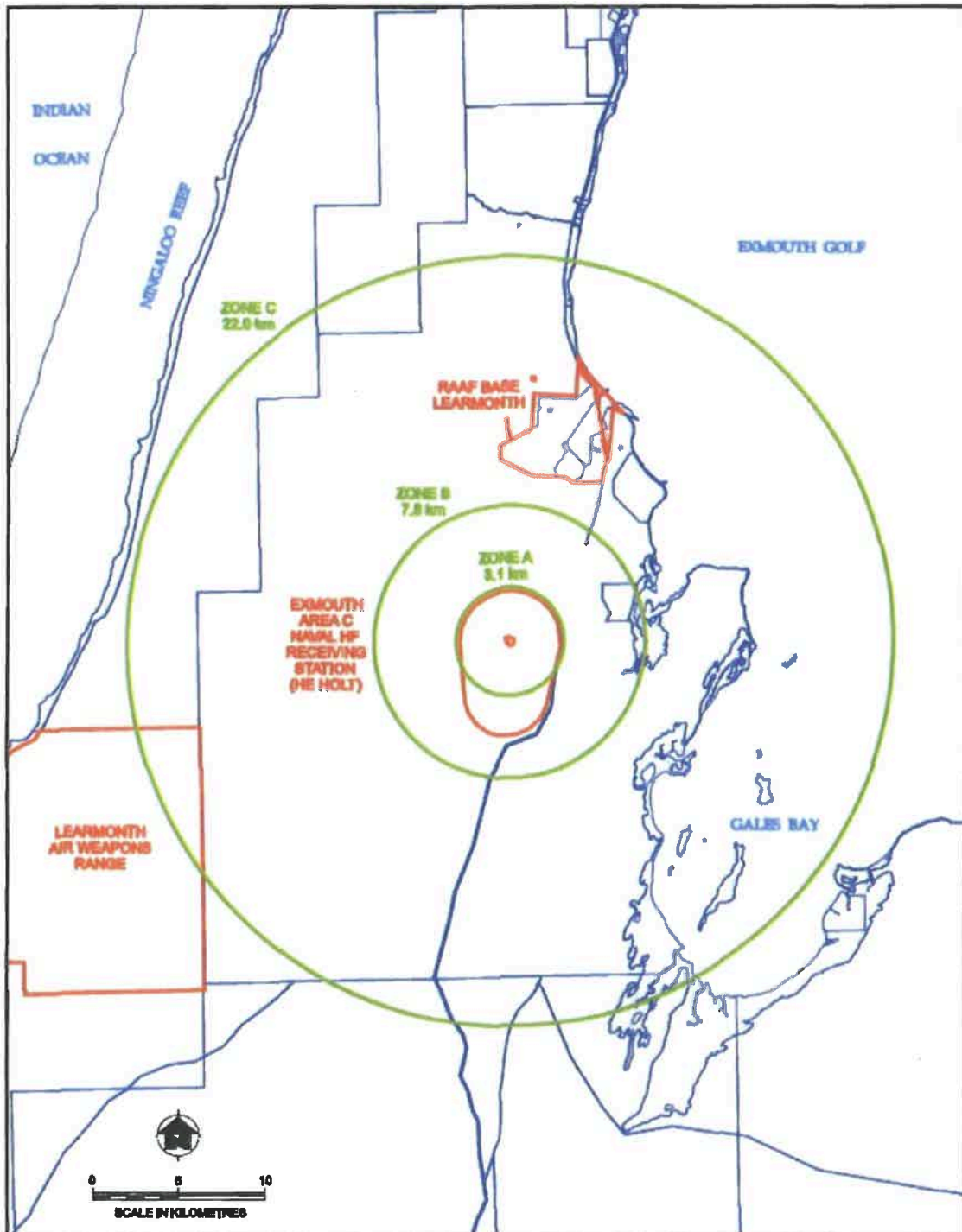
Land within Zone C consists largely of freehold land and therefore ad-hoc development may occur which could potentially jeopardise the integrity of the HFMOD site. As such, Defence recommends that the following land uses should be restricted within Zone C:

- General and Light Industry;
- Motor Repair Stations;
- Medical and Veterinary Clinics (particularly specialist centres which contain X-ray and scanning equipment);
- Electrical Railways; and
- Power reticulation at 66kV. This refers to arterial power lines that are used to transfer power between terminal stations within a power grid.

Alternatively, if these development proposals are located within Zone C, it would be appreciated if the Council could send them to Department of Defence at ipsi_land_planning@defence.gov.au for further assessment.

HIGH FREQUENCY MODERNISATION (HFMOD) FACILITY LEARMONTH – DEVELOPMENT ASSESSMENT GUIDANCE

LEARMONTH SITE PROTECTION ZONES, LEARMONTH



CONTACT

For further advice on land use strategies and development proposals situated near the Learmonth HFMOD site, please email ipsi_land_planning@defence.gov.au