

DEVELOPMENT SERVICES
Planning

X.X.XX

TITLE: **TELECOMMUNICATIONS INFRASTRUCTURE**

ADOPTED: OCM – Page

REVIEWED:

ASSOCIATED LEGISLATION: Planning and Development Act 2005

ASSOCIATED DOCUMENTS: State Planning Policy 5.2
Local Planning Policy 8.11

DELEGATION: The Chief Executive Officer, The Director Development Services, The Manager Planning Services are delegated authority to approve certain development applications. The development proposed complies with the site and development controls set out in the Town Planning Scheme No.4, the Shire's Local Planning Policies, and the acceptable development provisions of the Residential Design Codes.

APPLICATION: This policy applies to all land within the Shire of Broome. Responsibility for the application of this Policy lies with the Council, Chief Executive Officer and Authorised Persons

Previous Policy Number X.X.X

Objective:

1. To ensure that Telecommunications Infrastructure is developed in a manner that is compatible with the surrounding environment and will not adversely impact on the amenity of an area.
2. To establish suitable assessment criteria for the control and location of Telecommunications Infrastructure
3. To ensure compliance with all relevant health and safety standards in the provision of telecommunications infrastructure
4. To ensure that Telecommunications Infrastructure does not cause interference to any domestic or other commercial electrical appliance in the vicinity as a result of emission from the structure or any appliance connected or related to it.

Definitions:

Mobile telephone service provider: Means the holder of a carrier licence granted under Section 56 of the Telecommunications Act, 1997.

Low Impact Facilities: Means small radio communications antennae and dishes that are erected on existing towers or buildings and that are designed to be unobtrusive. Other types of low-impact facilities include underground and above ground housing, underground cables, public payphones and temporary emergency facilities.

Telecommunications Infrastructure: Means land used to accommodate any part of the infrastructure of a telecommunications network and includes any line, equipment, apparatus, tower, antenna, tunnel, duct, hole, pit or other structure used, or for use in or in connection with, a telecommunications network and includes Radio and Television Installations used for business purposes or commercial gain.

Sensitive Areas: Means existing and proposed residential areas.

Locality: Means within existing rural, industrial and commercial areas and large recreation grounds (such as playing fields, golf courses). Locality excludes land currently zoned or proposed to be zoned 'Residential', or within a 100 metre radius of residential areas and sensitive areas.

Policy:

The Shire of Broome regularly receives applications for Telecommunications Infrastructure within the Shire, and following the introduction of additional mobile telephone service providers to the market, it is expected to continue to receive such applications. There are currently no provisions in Town Planning Scheme No. 4 relating to Telecommunications Infrastructure, therefore this policy allows to ensure consistency in the assessment and guide the determination of such applications.

Facilities which are listed in the Telecommunications (Low-Impact Facilities) Determination 1997 fall outside State and local government control but are required to comply with the Commonwealth Telecommunications Code of Practice 1997. A copy of the Telecommunications (Low-Impact Facilities) Determination 1997 and Amendment No.1 1999 can be access via the following website - www.comlaw.gov.au

As a result this policy accepts that under the Telecommunications Act 1997 the following facilities are exempt from the requirement to obtain planning approval, however a building licence may still be required:-

- (a) A low-impact facility described in the Telecommunications (Low-Impact Facilities) Determination 1997 and Amendment No.1 1999, when installed by a Carrier;
- (b) Inspection and maintenance;
- (c) A temporary defence facility; and
- (d) A facility authorised by a Facilities Installation Permit issued under the Telecommunications Act.

Under sub-clauses 6(4), (5) and (7) of the Telecommunications Act 1997, the following telecommunications facilities cannot be low-impact facilities:

- (a) Designated overhead lines;
- (b) A tower that is not attached to a building;
- (c) A tower attached to a building and more than 5m high;
- (d) An extension to a tower that has previously been extended; and
- (e) An extension to a tower, if the extension is more than 5m high.

Accordingly, overhead cabling and new mobile telecommunications towers are not low-impact facilities and a facility in an 'area of environmental significance' cannot be a low-impact facility.

Policy Provisions

Location

1. Telecommunication facilities and associated equipment such as shelters and antennas, are encouraged to locate within existing rural, industrial and commercial areas, large recreation grounds (e.g. playing fields, golf courses) in order to provide network coverage.
2. Telecommunications infrastructure is not to be sited on land currently zoned or proposed to be zoned 'Residential', or within a 100 metre radius of residential or sensitive areas.
3. In order to provide for future co-location, new mobile telecommunications towers, including equipment sheds, are to be designed in such a manner as to permit at least 3 mobile telephone service providers if constructed to a maximum height of 35 metres, and co-location of at least five (5) separate mobile telephone service providers if erected at a height of 40 metres.
4. Mobile telephone service providers shall co-locate onto existing towers, other existing structures or replace existing structures wherever possible. Where there is an existing facility in the locality and the Mobile telephone service provider chooses not to co-locate onto that facility, the applicant will be required to demonstrate by means of certification from an appropriately qualified person, that the proposal cannot be co-located onto that facility for technical or structural reasons.

Design

5. Telecommunications Infrastructure is to be designed to have minimal impact on the streetscape, visual amenity of the surrounding built, natural conservation areas, places of heritage significance and natural environment of the locality.
6. All proposed facilities are to be located within the 'Inner Horizontal Surface' of the Broome International Airport Obstacle Limitation Surface and where necessary include warning lights and be otherwise marked for aircraft safety.
7. Mobile telephone service providers are required to use techniques to blend facilities into the environment in which they are located, including the use of natural, non-reflective, compatible colours and finishes and innovative tower designs.
8. Where a proposed facility is to be located on, or immediately adjacent to, an existing or proposed building or structure, care needs to be taken with its design and siting so as to integrate the development as far as possible with the building or structure to which it relates.

Techniques which may be used to minimise adverse visual impacts include:

- adjustment to the overall size (height and scale) of the facility;
- colour-matching with adjacent walls;
- creating an architectural feature of the facility, such as a spire or column;

- complementing facade treatment so as to maintain visual balance;
 - screening to minimise visibility of the facility from adjacent areas
9. When locating on an existing structure, the Telecommunications Infrastructure shall be coloured and fixed onto or within buildings to blend/harmonise with the colour and design of the building and where possible, should be screened from public places by the building, and should not protrude from a building into or above a public road reserve, pedestrian access way or other public space.
 10. The base of the tower and associated installations shall be screened by vegetation. A landscaping plan shall be submitted and implemented through the planning approval conditions.
 11. All decommissioned Telecommunications Infrastructure shall be removed and the site reinstated to an acceptable condition at the applicant's cost.

General

12. Planning Application Requirements

All planning applications for Telecommunications Infrastructure should be accompanied by the following:

- (a) A completed Planning Application Form
- (b) The required application fee
- (c) Location plans on a 1:50 or 1:100 scale showing the location of the facility and any existing or known facilities of the carrier and other carriers, within the Shire of Broome.
- (d) Site plans drawn to of scale 1:50 or 1:100 showing the existing and proposed improvements on the property, i.e. elevations, landscaping, watercourses and other natural features and levels at one metre contour levels.
- (e) Elevations - Council may require the submission of documentation showing sight lines demonstrating the level of visibility of the facility as viewed from adjacent properties or streets elevations of all proposed improvements on the site.
- (f) Colour photographs of the existing site and separate colour photomontages accurately depicting the proposed facility incorporated into the site.
- (g) Plans of the proposed mobile tower/monopole including the height, appearance, colour and location of equipment shelters.
- (h) A written submission detailing the following:
 - (i) the need for the facility;
 - (ii) details of co-location investigations, if applicable;
 - (iii) whether the applicant has notified other licensed carriers about the proposal and whether the other licensed carriers intend to co-locate on the proposed tower/monopole;

13 Advertising of Applications

Applications for new mobile phone towers/monopoles which do not comply with the requirements of the above policy, or which in the opinion of the Council likely to adversely impact the amenity of the locality or are within 100 metres of a child care facility, aged persons home, will be advertised in accordance with the provisions of the Town Planning Scheme.

Policy Statement

SHIRE OF BROOME TOWN PLANNING SCHEME No. 4 (TPS4)-LOCAL PLANNING POLICIES

This Policy is a Local Planning Policy adopted under the provisions of Clause 2.5 of TPS4. TPS4 is administered by the Council of the Shire of Broome as the responsible authority under the Scheme. TPS4 was gazetted and came into operation on the 21st December 1999. Planning policies adopted under TPS4 may only be amended or rescinded after the procedures set out in Clause 2.5 and 2.6 have been completed.

ATTACHMENT 2

SCHEDULE OF SUBMISSIONS – DRAFT POLICY – TELECOMMUNICATIONS INFRASTRUCTURE (15 March 2012 – 29 March 2012)						
No	Name	Affected Property	Date Received	Submission	Comment	Recommendation
				4. Definition of 'sensitive area' should be expanded to incorporate sporting grounds, childcare facilities and public pool areas.	4. The Acts bases location of infrastructure on broad land uses eg: industry/residential land uses. The Industry Code ACIF C564:2004 Deployment of Mobile Phone Network Infrastructure while it does not specify a distance at which infrastructure must be sited from community sensitive locations. All carriers are required to comply with the Australian Communications Authority's Radio communications (Electromagnetic Radiation - Human Exposure) Standard (2003). This incorporates substantial safety margins to address concerns for potentially sensitive groups in the community such as children, pregnant women, the infirm and aged.	Not Supported
2.	Belinda Dwyer	158 Reid Road	28 March 2012	1. Concerned about possible health risk i.e. cancer from the telecommunications infrastructure	1. Research undertaken by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) has reported that environment radiofrequency levels near base stations for the digital mobile phone network are extremely low. The ARPANSA study reported that the highest daily average level was well below one per cent of the Australian Communications Authority's public exposure limits and concluded that "given the very low levels recorded and the relatively low power of these types of transmitters, it is unlikely that the radiofrequency radiation from base stations would cause any adverse health effects, based on current medical research".	Noted
3.	Alison Morris	8 Wakayama Crescent	29 March 2012	1. Serious health effects related to EMF radiation 2. Definition of 'sensitive area' should be expanded to incorporate sporting grounds, education facilities, health facilities, childcare facilities and recreational facilities.	1. Refer to the response to submission 2 above 2. The Acts bases location of infrastructure on broad land uses eg: industry/residential land uses. The Industry Code ACIF C564:2004 Deployment of Mobile Phone Network Infrastructure while it does not specify a distance at which infrastructure must be sited from community sensitive locations. All carriers are required to comply with the Australian Communications Authority's Radio communications (Electromagnetic Radiation - Human Exposure) Standard (2003). This incorporates substantial safety margins to address concerns for potentially sensitive groups in the community such as children, pregnant women, the infirm and aged	Partially supported Not Supported

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No	Name	Affected Property	Date Received	Submission	Comment	Recommendation
				3. Buffers between sensitive areas and towers should be 1000m.	3. Neither the SPP 5.2 nor Industry Code (ACMA) specifies a separation distance from sensitive locations. ACMA states that if infrastructure is sited further away from a sensitive area it may need to operate at greater power to meet service requirements and this may result in higher exposure levels in that sensitive location. Commonwealth legislation specifies location based on land use. Based on the precautionary approach adopted by a number of local governments in Australia a 100m separation distance is proposed.	Not Supported
				4. Safety signage of the site and areas within 500m to reflect Electromagnetic Radiation	4. The Industry Code requires that warning signage be erected on the infrastructure	Not Supported
				5. Advertising should include public notices in local and state newspapers for a month, the signs to be 25m ² and public comment period be for 8 weeks. All people within 1km radius to be contacted and a public meeting held.	5. Sections 5.4 and 5.5 of the Industry Code require carriers to notify councils in writing and meet minimum consultation requirements when installing radio communications facilities at new sites that do not require a DA approval. The notification to Council must set out information including the carrier's proposed community consultation strategy for the site. Where an application for planning approval is lodged, if it is determined advertising is required this is undertaken in accordance with the provisions of 9.4.3 of TPS4.	Not Supported
				6. Trust Fund – Any rent received from telecommunications infrastructure should go to a trust fund for Shire to pay compensation to affected residents and workers	6. All income from such sites/facilities is treated as general revenue in accordance with current procedures	Not Supported
				7. Proposals for telecommunications infrastructure should receive unanimous decision from Council	7. Any development application is processed in accordance with the provisions of the Planning and Development Act 2005 and Shire of Broome Town Planning Scheme No 4. If an application for planning approval is referred to Council for a decision this requires a simple majority of Council	Not Supported



Australian Government

Australian Radiation Protection
and Nuclear Safety Agency

Fact Sheet 4

Mobile Telephone Communication Antennas and Health Effects

Current research indicates that no adverse health effects should be expected from exposure to the RF radiation from mobile phone base station antennas

There are mobile phone base station antennas on towers and buildings throughout Australia's populated areas. These antennas are part of the mobile (or cellular) telephone network and they emit radiofrequency (RF) radiation. This fact sheet provides information about the possibility of adverse health effects arising from exposure to this radiation.

Antenna Description and Operation

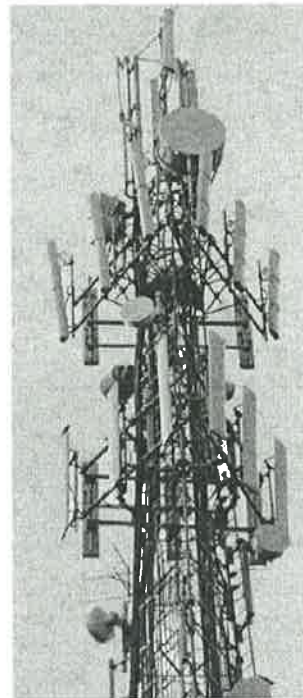
When a call is made from a mobile telephone, RF signals are transmitted between its antenna and the antenna at a nearby base station. The telephone call is then routed through the telephone network (cable or radio) to the destination telephone.

Mobile telephones emit signals at the frequency of around 800 megahertz (MHz) for the WCDMA (Wideband Code Division Multiple Access) network, 900 & 1800 MHz for the GSM (Global System for Mobile Communication) network, 1800 for the LTE (Long Term Evolution) network and 2100 MHz for the UMTS (Universal Mobile Telecommunications System) network, which is also known as 3G. These signals are picked up by antennas which are on the towers. The signals may also be transmitted between base stations and are in a higher frequency range, 15 to 23 gigahertz, and radiated as a very narrow beam by dish shaped antennas, also mounted near the top of the tower.

Radiofrequency Radiation

RF radiation, as well as ultraviolet radiation, visible light, infrared radiation and power frequency fields, are types of non-ionising radiation. These radiations, together with ionising electromagnetic radiation (X radiation and gamma radiation) make up the electromagnetic spectrum. See a graphic explaining the electromagnetic spectrum on ARPANSA's website at www.arpansa.gov.au/pubs/emr/spectrum.pdf.

When ionising radiations collide with biological material, they create positively and negatively charged particles, which may have adverse effects. Non-ionising radiations cannot create



such particles. As far as is currently known, RF radiation, for example, can only cause the molecules in biological material to vibrate and thereby generate heat.

Exposure Levels and Recommended Limits

The exposure levels of RF radiation are measured in watts per square meter or microwatts per square centimeter (abbreviated as $\mu\text{W}/\text{cm}^2$); one μW is a millionth of a watt. The maximum exposure levels measured adjacent to the base station towers are less than $2 \mu\text{W}/\text{cm}^2$.

These levels can be compared with $450\text{--}1000 \mu\text{W}/\text{cm}^2$, which are the exposure limits at the different mobile telephone frequencies for members of the public in the Australian Radiation Protection and Nuclear Safety (ARPANSA) RF Standard (see ARPANSA's website www.arpansa.gov.au/publications/codes/rps3.cfm).

Health Effects

Current research indicates that, at the exposure levels indicated above, RF radiation is not known to have any adverse health effects.

It is considered that rises in tissue or body temperature of about 1.0°C or more are required before any adverse effects will occur. In cases of pregnancy, rises in the temperature of the foetus of 2.5 to 5°C are necessary before defects are seen in the newborn. These temperature rises will not occur unless the exposure level is greatly in excess of the ARPANSA RF Standard mentioned above. Exposure to the low level of

RF radiation emitted from base station antennas will not, in fact, cause any noticeable temperature rise.

There are many reports in the literature of research on non-thermal effects, usually of a subjective nature. Studies that have investigated if RF radiation affects biological cells, other than by heating them, are inconclusive. In addition, the exposure levels used in these studies are higher than those mentioned above.

The present concern that people have about RF exposure is whether these non-thermal effects also include cancer. While human studies to assess the possibility that RF

exposure increases the risk of cancer are few in number, laboratory studies do not provide evidence to support the notion that RF fields cause cancer. Review groups evaluating the state of knowledge about possible links between RF exposure and excess risk of cancer have concluded that there is no clear evidence for any links. ARPANSA continues to closely monitor the research being conducted in this field.

Conclusion

No adverse health effects are expected from continuous exposure to the RF radiation emitted by the antennas on mobile telephone base station towers.