



# Telecommunications Facilities

## ***An introduction to Telecommunications Facilities***

*Telecommunications facilities, particularly mobile phone facilities, are of concern to the public because of the perceived effects of electromagnetic radiation ("EMR") on human health and the visual impact of mobile phone towers.*

*This fact sheet includes information on the [Telecommunications Act 1997 \(Cth\)](#), including the types of structures regarded as telecommunications facilities. Telecommunications carriers (the entities owning or controlling the infrastructure) are responsible for compliance with the Act. The main industry Codes relevant to the installation of telecommunications infrastructure deployment are also discussed.*

## **What are telecommunications facilities?**

Telecommunications facilities are the structures and equipment which make up a telecommunications network. Telecommunications facilities as defined under the *Telecommunications Act 1997 (Cth)* include mobile phone transmission towers, masts, antennae and underground and overhead cables.

## **Mobile Phone Base Stations**

A mobile phone carrier system provides coverage to its customers by setting up a series of mobile phone transmission facilities commonly called 'base stations'. The base station's transmitter uses antennas to communicate with the user's phone, relaying signals to a master switch which then sends signals to another base station and then to the phone.

A base station commonly comprises:

- Antennas (generally mounted between 7m and 35m high on buildings or poles);
- Cable for power to the base station (unless solar-powered); and
- An equipment shelter (a box that contains the electronic transmitter components).

Antennas that are commonly used outdoors include:

- Panel antennas (approximately 2m high and 30cm across, usually arrayed in three sectors, some metres from each other, or in multiples of three);
- An omni-directional antenna;
- Deer antlers (found on public infrastructure such as traffic lights or bus stops, and used in cities); or
- A yagi (an antenna that offers coverage over a longer distance).

### **Important disclaimer:**

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These antennas may be connected to the rest of the system via underground fibre-optic cable or by convex antennas called microwave dishes.

Base station configurations vary. An equipment shelter may be located underground. In a road reserve, they are called roadside cabinets. Antennas may also be mounted in ceilings to provide coverage within buildings.

## Regulation of telecommunications facilities

The Australian Government regulates the installation and modification of telecommunications facilities. The Australian Communications and Media Authority ("ACMA") has principal responsibility for oversight of the deployment of base stations.

Facilities may be installed without permission from State or Federal authorities if they are classified as low-impact facilities. For other facilities, carriers must either obtain planning permission from State or local government authorities, or a Facilities Installation Permit ("FIP") from ACMA.

## What is a low-impact facility?

Low-impact facilities are defined under the *Telecommunications (Low-Impact Facilities) Determination 1997* ("the Low-Impact Determination"). Different types of equipment are defined as low-impact depending on their size and whether they are located in a residential, industrial, commercial or rural area according to the relevant zoning laws.

Each of the following facilities is classified as low-impact if it is constructed in a rural, industrial, commercial or residential area:

- Radiocommunications dish up to a maximum of 1.2m diameter;
- Flush-mounted panel antenna;
- Satellite terminal antenna up to 1.2m in diameter protruding not more than 3m from the structure to which it is affixed;
- Antennas designed to provide coverage only within the building on which they are located;
- Co-located facilities up to a certain size installed within an existing facility or on a public utility structure;
- Underground cabling up to a certain size;

New overhead cabling is not classified as low-impact.

No facility that is located within an area of environmental significance is classified as low-impact. Areas of environmental significance include:

- Properties on the World Heritage List;
- State and Commonwealth conservation reserves;
- An area protected from significant environmental disturbance;
- Places listed under State or Commonwealth heritage laws, or on the register of the National Estate; and

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- An area of significance to Aboriginal persons or Torres Strait Islanders under Commonwealth or State law.

## Code of Practice Standards

When installing or maintaining a low-impact facility, a carrier is responsible for complying with the *Telecommunications Code of Practice 1997*. This requires the carrier to take reasonable steps to ensure that:

- Damage, detriment and inconvenience is minimised;
- The land is restored to its prior condition;
- The safety of people and property is not endangered;
- Interference with public utilities, roads and pathways and the use of land is minimised; and
- The environment is protected.

A breach of the Code of Practice amounts to a breach of a carrier's licence and attracts penalties. These are enforced by ACMA.

## ACIF Code

To minimise the risk from EMR from facilities, carriers must also comply with the Australian Communications Industry Forum Code ("ACIF Code").

Among other things, the ACIF Code requires carriers to:

- Conduct electromagnetic assessments for all new sites;
- Minimise EMR emissions in site design; and
- Turn off transmitters when sites are not in use.

An example of a higher standard in the ACIF code is giving local government advance notice about a carrier's forward planning for base stations in its district. ACMA can direct a carrier to follow the ACIF Code and there are civil penalties for failure to do so.

## What happens if the facility is not low-impact?

If a carrier wants to build a facility which is not low-impact, it must first negotiate in good faith with state and local planning authorities in order to obtain planning permission to build the proposed facility. If it fails to obtain the necessary planning permission, it can apply to ACMA for a Facilities Installation Permit ("FIP"), which overrides State planning laws.

## Development Applications

Development applications are required for telecommunications facilities in Western Australia. If development consent is refused, the applicant has a right of review by the State Administrative Tribunal ("SAT"). Third

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parties have no right to participate however at the discretion of the SAT, third parties can apply to be heard as interveners on a public interest matter.

In the NSW Land and Environment Court, there have been a few unsuccessful attempts by residents and local government authorities to argue for refusal of consent to mobile phone infrastructure on the grounds of EMR risk. The Court has generally taken the view that consent should not be refused so long as Australian standards are complied with, even though there is international controversy regarding a 'safe' level of EMR exposure.

In March 2004, the Western Australian Planning Commission issued *State Planning Policy 5.2 'Telecommunications Infrastructure'* "SPP". The SPP sets out Guiding Principles to be considered by planning authorities in deciding whether or not to grant consent to telecommunications facilities.

## Facility installation permits

If a carrier is unable to obtain development approvals and other permits necessary for construction of a facility, then the carrier in the alternative can apply to ACMA for a facility installation permit ("FIP").

The applicant for a FIP must satisfy certain criteria, including:

- The facility must be an important part of a nationally significant telecommunications network;
- The benefit conveyed by the facility must outweigh any environmental harm that might be caused by the installation or operation of the facility; and
- Most of the infrastructure of the network must have already been installed or all the administrative authorities whose approval otherwise would have been required have given, or are reasonably likely to give, their approval.

Before granting an FIP, ACMA must hold a public inquiry. If an FIP is granted after a public inquiry, the carrier may build the facility without State planning permission, however it is still required to comply with the Code of Practice and the ACIF code.

## Information and resources

Information and resources about the development safety limits for EMR (also known as EMF in Europe) and the effects of radiofrequency radiation on human health is published by:

- The World Health Organization ([www.who.int/peh-emf/about/WhatisEMF/en/index1.html](http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html)).
- The ICNIRP ([www.icnirp.de](http://www.icnirp.de)); see in particular its statement on the Guidelines for Limiting Exposure at ([www.icnirp.de/documents/StatementEMF.pdf](http://www.icnirp.de/documents/StatementEMF.pdf)).
- ARPANSA, which has fact sheets on Radiation and Health ([www.arpansa.gov.au](http://www.arpansa.gov.au)).
- The ACMA in its Consumer Fact sheet series ([www.acma.gov.au](http://www.acma.gov.au)).

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## Other resources and further information

- For a copy of the *Telecommunications (Low Impact Facilities) Determination* go to <http://www.comlaw.gov.au>
- Policy and legislation that govern the communications and technology programs and services from the Department of Broadband, Communication and Digital Economy ([www.dbcde.gov.au/communications and technology/policy and legislation](http://www.dbcde.gov.au/communications_and_technology/policy_and_legislation)).
- The ACMA has comprehensive information on enforcement under the Telecommunications Act 1997 ([www.acma.gov.au](http://www.acma.gov.au)).
- The Telecommunications Industry Ombudsman is available for complaints about non-EMR issues, such as complaints by the landowner about failure to comply with the notice provisions of the Code of Practice ([www.tio.com.au/policies/jurisdiction.htm](http://www.tio.com.au/policies/jurisdiction.htm)).
- The Communications Alliance Ltd Consumer Issues Reference Panel meets regularly to review consumer issues (<http://www.commsalliance.com.au/Activities/committees-and-groups/cirp>).
- There is also an Australian Telecommunications Users Group ([www.atug.org.au](http://www.atug.org.au)).

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## The Environmental Defender's Office WA (Inc)

The Environmental Defender's Office WA (EDO) is a community legal centre specialising in public interest environmental law.

The objects of the EDO include:

- to provide community groups and individuals with legal advice and representation to help protect the environment;
- to promote law reform that improves environmental protection; and
- to provide community education about environmental law.

The EDO is a non-profit, non-government organisation. The EDO receives its principal funding from the Federal and State Attorney-General's Departments.

However, these funds are limited and donations from the public provide a vital source of funds for many of our activities. Donations over \$2 are fully tax deductible. The EDO also welcomes people with a commitment to the environment to join as members.

If you require legal advice on an environmental issue or wish to find out more about the EDO, please contact us at the following address:

Environmental Defender's Office WA (Inc)

Suite 4, 544 Hay Street, Perth WA 6000

Tel: (08) 9221 3030

Fax: (08) 9221 3070

Freecall: 1800 175 542 (for WA callers outside the Perth metropolitan region)

Email: [edowa@edowa.org.au](mailto:edowa@edowa.org.au)

## Thank you to our donors

The EDO is grateful for the funding provided by the following organisations to create and maintain these fact sheets.



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