

**COMMUNICATIONS
ALLIANCE LTD**



INDUSTRY CODE

C564:2011

MOBILE PHONE BASE STATION DEPLOYMENT

Industry Code - Mobile Phone Base Station Deployment

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INTRODUCTORY STATEMENT

The *Mobile Phone Base Station Deployment Industry Code* (C564:2011) replaces the registered *Deployment of Mobile Phone Network Infrastructure Industry Code* (ACIF C564:2004).

The *Mobile Phone Base Station Deployment Industry Code* is designed to:

- allow the community and councils to have greater participation in decisions made by Carriers when deploying mobile phone base stations; and
- provide greater transparency to local community and councils when a Carrier is planning, selecting sites for, installing and operating Mobile Phone Radiocommunications Infrastructure.

Although the Code cannot change the regulatory and legislative regime at local, State or Federal level, it can supplement the existing requirements already imposed on Carriers by requiring them to consult with the local community and to adopt a precautionary approach in planning, installing and operating Mobile Phone Radiocommunications Infrastructure.

The attached Appendices which accompany the Code are designed to:

- aid in interpreting the Code; and
- supplement the Code.

In particular, Appendix J provides supporting information on the existing regulatory regime under which the Code operates.

2011 Revision

A review of the *Deployment of Mobile Phone Network Infrastructure Industry Code* was undertaken five years after registration by the Australian Communications Authority, i.e. April 2005. The 2011 Code revision has been undertaken following that review to clarify and provide certainty for all parties in the implementation of the Code.

The purpose of the changes are to:

- require Carriers to develop and evolve the consultation plan for new proposals;
- improve transparency and visibility of the consultation process with local council and communities;
- increase the existing time allowed for local council and the community to comment on proposals for new infrastructure;
- incorporate new and revised methods of communicating with local councils and the community (e.g. website, letters, signage);
- provide consistency, guidelines and examples of the type of letters, plans, signs and reports which Carriers will use when notifying and consulting with local council and the community;
- ensure that Carriers consider and have regard to public and school holidays and that appropriate extensions of time are provided for consultation during these periods;

- provide and update the RF EMR Health and Safety information, reports and signage in keeping with the current and relevant standards;
- update the Code as a Communications Alliance publication; and
- update the Code with further information on Land Access and Activity Notices (LAANs), Facilities Installation Permit, compensation and land owners' rights.

George Tzakis

Chair

WC29 : Mobile Phone Network Infrastructure Revision Working Committee

December 2011

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1 SCOPE AND OBJECTIVES

1.1 Scope

1.1.1 This Code applies to Carriers who are:

- (a) installing;
- (b) intending to install;
- (c) operating; or
- (d) contracting or arranging for the installation of

fixed radiocommunications infrastructure, referred to as Mobile Phone Radiocommunications Infrastructure in this Code, which is used, intended to be used, or capable of being used to supply Public Mobile Telecommunications Services.

This Code does not apply to Radiocommunications Infrastructure that is not Mobile Phone Radiocommunications Infrastructure.

NOTE: This Code also covers the work of contractors or agents of Carriers, infrastructure lessors, infrastructure developers, telecommunications service providers and other entities engaged in activities covered by this Code on behalf of a Carrier.

NOTE: A Public Mobile Telecommunications Service is a publicly accessible mobile phone network, as distinct from a non-public network, for example, an Immediate Circle.

1.1.2 However, this Code does not apply to Carriers in relation to the intended installation or operation of Exempt Mobile Phone Radiocommunications Infrastructure.

NOTE: The following expressions are defined in clause 2:

Exempt Mobile Phone Radiocommunications Infrastructure means:

- (a) Mobile Phone Radiocommunications Infrastructure installed at the request of the occupier to supply services exclusively to that property and not for re-transmission by radiocommunications to another property; or
- (b) Mobile Phone Radiocommunications Infrastructure used or intended to be used for the purpose of providing a facility for use by, or on behalf of, a defence organisation for defence purposes; or
- (c) Mobile Phone Radiocommunications Infrastructure used or intended to be used for the sole purpose of facilitating the provision of emergency services by emergency services organisations; or

(d) Temporary Mobile Phone Radiocommunications Infrastructure; or

(e) Appendix I Equipment.

Appendix I Equipment

means fixed, mobile or portable radiocommunications equipment that is intended for operation by Carriers or non-Carriers, and which would otherwise meet the exemption from evaluation requirements set out in Appendix I.

Example: Appendix I is intended to address low power devices such as a cordless phone which comprises a base unit and handset and would generally be exempt from evaluation under the 2002 ARPANSA Standard.

Note: Appendix I Equipment applies to equipment that meets the exemptions in Appendix I. This applies whether the equipment is fixed, mobile or portable.

Note: Appendix I is an extract from the **Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz**, published by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) in 2002.

Emergency Service Organisation

includes, but is not limited to:

- (a) police forces or services;
- (b) fire services (urban and rural); and
- (c) ambulance services.

Immediate Circle

has the same meaning as in the Act.

NOTE: An Immediate Circle is a non-public network used within an organisation. For example, a council radio network used by council employees to communicate with each other, a taxi service network or a regional water authority network.

1.2 Objectives

The objectives of this Code are:

- (a) to apply a Precautionary Approach to the deployment of Mobile Phone Radiocommunications Infrastructure;
- (b) to provide best practice processes for demonstrating compliance with relevant exposure limits and the protection of the public;

- (c) to ensure that the exposure of the community to EMR is minimised;
- (d) to ensure relevant stakeholders are informed, consulted and engaged with before Mobile Phone Radiocommunications Infrastructure is constructed;
- (e) to specify standards for consultation, information availability and presentation;
- (f) to consider the impact on the wellbeing of the community, physical or otherwise, of Mobile Phone Radiocommunications Infrastructure; and
- (g) to ensure Council and community views are incorporated into the Mobile Phone Radiocommunications Infrastructure site selection.

1.3 Commencement and Application of Code

- 1.3.1 The Code is to be registered by the Australian Communications and Media Authority (ACMA) pursuant to section 117 of the Act.
- 1.3.2 The provisions of this Code have no effect until 1 July 2012.
- 1.3.3 Carriers, that have notified a Council prior to 1 July 2012 regarding the installation of Mobile Phone Radiocommunications Infrastructure at a new site without development application, may meet their obligations for that site with respect to this Code under the *Deployment of Mobile Phone Network Infrastructure Industry Code* (ACIF C564:2004).
- 1.3.4 Upon registration of this Code, the ACMA has the power to issue formal warnings or directions to comply with the Code provisions to all telecommunications organisations covered by the scope of this Code. There are penalties for failing to comply with the ACMA's direction.

1.4 Relationship to Other Laws

- 1.4.1 Nothing in this Code affects any rights or obligations under any Commonwealth, State or Territory law.
- 1.4.2 The consultation requirements of this Code do not apply to infrastructure that requires Development Approval. In such cases it is expected that public consultation will occur through the Development Application process.

1.5 Interpretation and Notification

- 1.5.1 In this Code, mandatory provisions are denoted by the use of the word 'must' and provisions that are recommendatory are denoted by the use of the word 'should'.

- 1.5.2 Unless the contrary is proved, a notice, document or record posted or sent to an address in Australia, as part of the process of notification or consultation is taken to have been given on the second business day after being posted or sent.

<i>NOTE: A 'record' is considered to include an electronic document such as e-mail or facsimile.</i>

- 1.5.3 A notice or document left at a premises (whether residential or otherwise) is taken to have been given on the second business day after it was left at the premises.
- 1.5.4 A notice mentioned in this Code may be combined with another notice mentioned in this Code.

1.6 Code Review

- 1.6.1 Review of this Code will be conducted by Communications Alliance five years after registration by the ACMA.

2 DEFINITIONS AND ABBREVIATIONS

For the purposes of this Code, the following definitions and abbreviations apply:

ACIF

means the Australian Communications Industry Forum.

ACMA

means the Australian Communications and Media Authority.

Act

means the *Telecommunications Act 1997*.

Appendix I Equipment

means fixed, mobile or portable radiocommunications equipment that is intended for operation by Carriers or non-Carriers, and which would otherwise meet the exemption from evaluation requirements set out in Appendix I.

EXAMPLE: Appendix I is intended to address low power devices such as a cordless phone which comprises a base unit and handset and would generally be exempt from evaluation under the 2002 ARPANSA Standard.

NOTE: Appendix I Equipment applies to equipment that meets the exemptions in Appendix I. This applies whether the equipment is fixed, mobile or portable.

*NOTE: Appendix I is an extract from the **Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3kHz to 300GHz**, published by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) in 2002.*

ARPANSA

means the Australian Radiation Protection and Nuclear Safety Agency.

Business Day

means a day that is not a Saturday, Sunday or a public holiday in the place where the Carrier intends to deploy Mobile Phone Radiocommunications Infrastructure. A Business Day concludes at 5 p.m.

Carrier

has the same meaning as in the Act.

Communications

has the same meaning as in the Act.

Consultation

means a process whereby Carriers seek to inform other parties about a proposed project at particular premises with the intention of giving those parties an opportunity to respond to the proposal and to have their responses considered.

Consultation Symbol ()

in this Code refers to the symbol used by Carriers for the purpose of consultation (see Appendix E).

Council

for an activity in a State or Territory, means an authority of the State or Territory responsible for the local government of the area where the activity happens or is to happen and/or the authority in a local area responsible for land use planning decisions. This is usually the Local Government Authority although this may vary in places such as Territories.

Development Application / Approval

means approval in accordance with state or local planning laws.

Emergency Service Organisation

includes, but is not limited to:

- (a) police forces or services;
- (b) fire services (urban and rural); and
- (c) ambulance services.

Exempt Mobile Phone Radiocommunications Infrastructure

means:

- (a) Mobile Phone Radiocommunications Infrastructure installed at the request of the occupier to supply services exclusively to that property and not for re-transmission by radiocommunications to another property; or
- (b) Mobile Phone Radiocommunications Infrastructure used or intended to be used for the purpose of providing a facility for use by, or on behalf of, a defence organisation for defence purposes; or
- (c) Mobile Phone Radiocommunications Infrastructure used or intended to be used for the sole purpose of facilitating the provision of emergency services by emergency services organisations; or
- (d) Temporary Mobile Phone Radiocommunications Infrastructure; or
- (e) Appendix I Equipment.

EMR

in this Code refers to the radiofrequency portion of the electromagnetic spectrum. Energy transmission over the entire spectrum is technically known as electromagnetic radiation (EMR) and includes commonly experienced emissions such as visible light, TV transmission, and AM and FM radio signals. A number of other terms are commonly used for the whole spectrum which include **EME** (electromagnetic energy), **EMF** (electromagnetic fields) which are often used interchangeably with EMR.

Fixed Radio Links

comprises Point-to-point and Point-to-multipoint Services, fixed at both ends that are used in the supply of Public Mobile Telecommunications Services.

Frequency Band

means the radiofrequency bands used by the mobile phone networks.

Installation

in relation to Mobile Phone Radiocommunications Infrastructure, includes:

- (a) the construction of the Mobile Phone Radiocommunications Infrastructure, on over or under any land;
- (b) the attachment of the Mobile Phone Radiocommunications Infrastructure to any building or other structure; and
- (c) any activity that is ancillary or incidental to the installation of the Mobile Phone Radiocommunications Infrastructure *(for this purpose, installation includes an activity covered by paragraphs (a) or (b) above)*.

Interested and Affected Parties

means people, organisations, companies and businesses who, in the Carrier's reasonable opinion, may have an interest in, and may be affected by the design and/or location of proposed Mobile Phone Radiocommunications Infrastructure, including:

- (a) the owner(s) and occupier(s) of the proposed site;
- (b) includes persons who reside within the immediate vicinity of the proposed site;
- (c) occupiers of community sensitive locations in the vicinity of the proposed site; and
- (d) other community stakeholders identified by the Carrier.

NOTE: Interested and Affected Parties includes, but is not limited to local Progress Associations, Parents and Citizens groups, pre-schools and schools, local MPs, resident groups, childcare centres, chambers of commerce, sporting groups, tenants, Occupational Health and Safety Committees, Aboriginal Land Councils and residents in adjacent council areas but living in proximity to a proposal. A local council is a good source of information about potentially affected parties in a locality.

Low Impact Facility

means a facility as determined in the *Telecommunications (Low-impact Facilities) Determination 1997*.

Low RF Power Mobile Phone Radiocommunications Infrastructure

means one or more transmitters operating at a total maximum power into the antenna of no greater than 2 Watts.

NOTE: Examples may include micro-cells and pico-cells.

Mobile Phone Base Station

means a mobile phone radiocommunications transmitter and its associated infrastructure including any antennas, housings and other equipment.

Mobile Phone Radiocommunications Infrastructure

means fixed radiocommunications infrastructure used, intended to be used, or capable of being used to supply Public Mobile Telecommunications Services and includes a Mobile Phone Base Station.

NOTE: Mobile Phone Radiocommunications Infrastructure includes both low impact facilities and facilities that are not low impact.

Point-to-point Service

means a carriage service which allows a person to transmit a communication to an end-user(s).

NOTE: Examples contained in guidelines available from the Mobile Carriers Forum (see Appendix B – Additional Design Information).

Point-to-multipoint Service

has the same meaning as in the Act. Specific information about particular services is available from the ACMA website.

NOTE: Examples contained in guidelines available from the Mobile Carriers Forum (see Appendix B – Additional Design Information).

Precautionary Approach

is discussed in Appendix A.

Public Mobile Telecommunications Service

has the same meaning as in the Act.

RF

means radiofrequency.

RF Hazard Area

means an area where the emission level exceeds the ACMA mandatory limits for general public exposure to RF EMR.

Temporary Mobile Phone Radiocommunications Infrastructure

means Mobile Phone Radiocommunications Infrastructure that is in place for no more than one month to cover a public event. It does not include equipment installed for reoccurring annual events at a specific site.

3 GENERAL OBLIGATIONS ON CARRIERS

3.1 Telecommunications Network Forward Planning

- 3.1.1 If requested by a Council, a Carrier must provide reasonable assistance to Council in the Council's forward planning for the deployment of Mobile Phone Radiocommunications Infrastructure.
- 3.1.2 Examples of the kind of assistance that Carriers may give to Councils include:
 - (a) responding to reasonable requests for information that is to assist the Council to develop forward plans;
 - (b) providing the Council with the Carrier's plans concerning the deployment of Mobile Phone Radiocommunications Infrastructure;
 - (c) providing the Council with the Carrier's plans concerning service level targets for planned Mobile Phone Radiocommunications Infrastructure;
 - (d) providing the Council with an assessment of the opportunities for co-location of Mobile Phone Radiocommunications Infrastructure with the facilities of other Carriers; and
 - (e) engaging in discussions with other Carriers to explore opportunities for co-location and to investigate opportunities for the coordinated, strategic and efficient deployment of Mobile Phone Radiocommunications Infrastructure.

4 APPLICATION OF THE PRECAUTIONARY APPROACH TO MOBILE PHONE RADIOCOMMUNICATIONS INFRASTRUCTURE PLACEMENT AND DESIGN

4.1 Site Selection

- 4.1.1 Clause 4.1 applies if a Carrier proposes to select a new site for the deployment of Mobile Phone Radiocommunications Infrastructure.
- 4.1.2 A Carrier must have written procedures for site selection for Mobile Phone Radiocommunications Infrastructure in relation to factors contained in clause 4.1.5 and make them available to the public on request.
- 4.1.3 For new sites, once the preferred option has been selected, the Carrier must make available to the public on request the summary of the sites considered and the reasons for the selection of the preferred option.
- 4.1.4 The Carrier must comply with its procedures.
- 4.1.5 The procedures must require, as a minimum, that for each site the Carrier have regard to:
 - (a) the reasonable service objectives of the Carrier including:
 - (i) the area the planned service must cover;
 - (ii) power levels needed to provide quality of service;
 - (iii) the amount of usage the planned service must handle;
 - (b) minimization of EMR exposure to the public;
 - (c) the likelihood of an area being a community sensitive location. (Examples of sites which sometimes have been considered to be sensitive include residential areas, childcare centres, schools, aged care centres, hospitals and regional icons);
 - (d) the objective of avoiding community sensitive locations;
 - (e) relevant state and local government telecommunications planning policies;
 - (f) the outcomes of consultation processes with Councils and Interested and Affected Parties as set out in clause 6.7;
 - (g) the heritage significance (built, cultural and natural);
 - (h) the physical characteristics of the locality including elevation and terrain;
 - (i) the availability of land and public utilities;

- (j) the availability of transmission to connect the Mobile Phone Radiocommunications Infrastructure with the rest of the network, e.g. line of sight for microwave transmission;
- (k) the radiofrequency interference the planned service may cause to other services;
- (l) the radiofrequency interference the planned service could experience at that location from other services or sources of radio emissions;
- (m) any obligations and opportunities to co-locate facilities; and
- (n) cost factors.

4.2 Mobile Phone Radiocommunications Infrastructure Design

- 4.2.1 Clause 4.2 applies if a Carrier proposes to design Mobile Phone Radiocommunications Infrastructure.
- 4.2.2 A Carrier must have written procedures for designing Mobile Phone Radiocommunications Infrastructure.
- 4.2.3 With the objective of minimising unnecessary or incidental RF emissions and exposure, the procedures must require that, in designing Mobile Phone Radiocommunications Infrastructure, the Carrier have regard to:
 - (a) the reason for the installation of the infrastructure, considering – coverage, capacity and quality;
 - (b) the positioning of antennas to minimise obstruction of radio signals;
 - (c) the objective of restricting access to areas where RF exposure may exceed limits of the EMR standard;
 - (d) the type and features of the infrastructure that are required to meet service needs including:
 - (i) the need for macro, micro or pico cells; and
 - (ii) the need for directional or non-directional antennas.

<i>NOTE: Some examples of Mobile Phone Radiocommunication Infrastructure are contained in guidelines available from the Mobile Carriers Forum (see Appendix B – Additional Design Information).</i>
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- (e) the objective of minimising power whilst meeting service objectives; and
 - (f) whether the costs of achieving this objective are reasonable.
- 4.2.4 A Carrier must comply with those procedures.

- 4.2.5 Site EMR assessments for Mobile Phone Radiocommunication Infrastructure must be made in accordance with the ARPANSA prediction methodology and report format (see Appendix B – *Additional Design Information* and Appendix C – *ARPANSA EME Report Format*).

NOTE: The ARPANSA prediction methodology requires cumulative predictions from all Mobile Phone Base Station equipment installed at the site.

- 4.2.6 The ACMA may request a copy of the site EMR estimate, and the Carrier must provide the estimate to the ACMA within two weeks of the request being made.

5 LOW RF POWER MOBILE PHONE RADIOCOMMUNICATIONS INFRASTRUCTURE AND FIXED RADIO LINKS

5.1 Notification

- 5.1.1 A Carrier must notify Council of all proposed Low RF Power Mobile Phone Radiocommunications Infrastructure under the Carrier's control.

NOTE: The rationale for having fewer consultation and notification requirements for Low RF Power Mobile Phone Radiocommunications Infrastructure is that the power of such devices is similar to that of a handheld mobile telephone.

- 5.1.2 A Carrier must notify the occupier of a residence in close proximity to the proposed site of all proposed Low RF Power Mobile Phone Radiocommunications Infrastructure and Fixed Radio Links.

NOTE: For guidance purposes, close proximity in relation to Low RF Power Mobile Phone Radiocommunications Infrastructure and Fixed Radio Links may be within 10 to 20 metres.

- 5.1.3 A Carrier must notify the manager, owner and or occupier of the property in/on which the proposed Low RF Power Mobile Phone Radiocommunications Infrastructure is to be located.

- 5.1.4 Notification about the proposal under clause 5 must include:

- (a) the proposed location;
- (b) a description of the Low RF Power Mobile Phone Radiocommunications Infrastructure and/or Fixed Radio Links;
- (c) a statement that the Carrier's proposed infrastructure will be in compliance with the ACMA EMR regulatory arrangements; and
- (d) the Carrier's contact details.

6 CONSULTATION REQUIREMENTS FOR THE INSTALLATION AT A NEW SITE WITHOUT DEVELOPMENT APPLICATION

6.1 Application

6.1.1 Clause 6 applies if:

- (a) a Carrier proposes to carry out any work at premises in relation to the installation of Mobile Phone Radiocommunications Infrastructure that is not Low Power Mobile Phone Radiocommunications Infrastructure;
- (b) there is no radiocommunications infrastructure at the premises, other than Low Power RF Infrastructure; and
- (c) the work does not require Development Approval.

NOTE: The consultation requirements of this Code do not apply to Mobile Phone Radiocommunications Infrastructure that requires Development Approval. In such cases it is expected that public consultation will occur though the Development Application process.

6.2 Overview of Consultation Process

6.2.1 The consultation process must involve the development of the consultation plan and its delivery, implementation, analysis and responses. These processes will operate in parallel and may change as a result of engagement with stakeholders.

NOTE: The Carrier's consultation plan is not static but an ongoing process that evolves in response to feedback from stakeholders.

6.2.2 The Carrier must develop a draft consultation plan for the site. The consultation plan must be in writing and set out the consultation that the Carrier proposes to carry out in relation to a site.

NOTE: The Consultation Guidelines in Appendix D should be used for guidance.

6.2.3 The Carrier must invite Council to comment on:

- (a) the suitability of the draft consultation plan for this community;
- (b) whether there are there any additional key stakeholders who should be included as Interested and Affected Parties; and
- (c) whether there are any significant events within the community that the Carrier should be aware of in developing the draft consultation plan.

6.2.4 Where it can reasonably be expected that an adjacent local government area will be impacted by a proposal, the Carrier

must also seek comment from the Council administering that adjacent local government area on matters set out in clause 6.2.3.

- 6.2.5 The Carrier must review the draft consultation plan having regard for any comments received from the Council(s) under clauses 6.2.3 and 6.2.4.
- 6.2.6 The Carrier must comply with its consultation plan and any amendments made to the plan.

6.3 Development and Evolution of Consultation Plan

Notification Objectives

- 6.3.1 In developing a consultation plan for a site the Carrier must endeavour to meet the objectives of:
 - (a) identifying and informing Interested and Affected Parties of the proposed project;
 - (b) maximising the level of accurate and accessible information about the project to Interested and Affected Parties;
 - (c) using its reasonable endeavours to identify community sensitive locations; and

<i>NOTE: Examples of sites which sometimes have been considered to be sensitive include residential areas, childcare centres, schools, aged care centres and hospitals.</i>
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- (d) meeting the reasonable needs and expectations of the community.

Size and Scope of the Consultation Plan

- 6.3.2 A Carrier's consultation plan for each proposal must be open, transparent and fit for purpose. The size and scope of the consultation plan should be weighed against the likely impact the proposal will have on directly affected parties, relevant stakeholders and community sensitive locations.

Identifying Interested and Affected Parties

- 6.3.3 The Carrier must undertake a stakeholder analysis to identify any Interested and Affected Parties.
- 6.3.4 The Carrier must use its reasonable endeavours to identify relevant Interested and Affected Parties.
- 6.3.5 The Carrier's consultation plan must require it to consult with and seek submissions from:
 - (a) Council(s); and

- (b) Interested and Affected Parties within a distance specified and justified by the Carrier.

NOTE: By way of clarification, the Carrier should consult with the occupants of all residences where the subject site contains multiple residences.

6.4 Information about a proposal to be communicated

- 6.4.1 The information provided to Council and Interested and Affected Parties must include:
 - (a) the proposed location;
 - (b) a written description of the proposal;
 - (c) a statement setting out whether the Carrier regards the infrastructure as a Low Impact Facility under the *Telecommunications (Low-impact Facilities) Determination 1997* and the reasons for that conclusion;
 - (d) a statement that the proposed infrastructure will be in compliance with the ACMA EMR regulatory arrangements;
 - (e) an ARPANSA EME report for the proposal (see Appendix C);
 - (f) the contact details of the Carrier's representative;
 - (g) an invitation to make submissions; and
 - (h) the timeframe to make the submission.
- 6.4.2 In addition to information to be provided under clause 6.4.1, the Carrier must provide plans/site drawings to Council.
- 6.4.3 When notifying Interested and Affected Parties, the Carrier must comply with the formats in Appendix E – *Communication Information Format*.

Letter and envelope

- 6.4.4 The Carrier must send an enveloped letter containing the information contained in clause 6.4.1 to Interested and Affected Parties.

Website information

- 6.4.5 The Carrier must have a website that includes:
 - (a) the address of the proposed site;
 - (b) a description of the proposal;
 - (c) the rationale for the proposal;
 - (d) whether or not the Carrier considers the proposal is low impact;

- (e) alternate options and opportunities for co-location considered;
 - (f) any key dates (e.g. submission dates, construction dates);
 - (g) Consultation Symbol;
 - (h) an ARPANSA EME report for the proposal;
 - (i) a link to the Communications Alliance information portal;
and
 - (j) phone and email address for more information or making a submission.
- 6.4.6 The Carrier must update the information on this website to reflect and date any amendments to the consultation plan as soon as practical.
- 6.4.7 The Carrier must ensure that the website remains publicly accessible until the construction is complete.
- 6.4.8 A Carrier must make information on this website available on request by email or post.

On-site signage

- 6.4.9 The Carrier must place a sign about the proposed Mobile Phone Radiocommunications Infrastructure at the site proposed in a manner that ensures that it is clearly visible and legible from a public road or footpath, unless local government approval is required for the sign, the Council instructs otherwise, or it is not practical to do so.
- 6.4.10 The sign must comply with the format in Appendix E3.
- 6.4.11 The sign must be weatherproof if installed externally.
- 6.4.12 The sign must not be removed by the Carrier until construction is complete.

Additional consultation tools

- 6.4.13 The Carrier must also consider the consultation tools in Appendix D in order to ensure its consultation plan is fit for purpose.

6.5 Timeframes

- 6.5.1 Unless the contrary is proved, a notice, document or record posted or sent to an address in Australia, as part of the process of notification or consultation is taken to have been given on the second Business Day after being posted or sent.

<i>NOTE: A 'record' is considered to include an electronic document such as e-mail or facsimile.</i>

Business
Days

	Mon	Carrier sends consultation plans to council
	Tue	
	Wed	Plan is taken to have arrived at council
1	Thur	Time for council to comment on consultation plan starts
2	Fri	
	Sat	
	Sun	
3	Mon	
4	Tue	
5	Wed	
6	Thur	
7	Fri	
	Sat	
	Sun	
8	Mon	
9	Tue	
10	Wed	Close of period for council (5pm) to comment on consultation plan

FIGURE 1(a)
Timeline for Council to comment on the draft consultation plan

NOTES:

1. Figure 1(a) shows the number of days allowed for the Carrier to receive Council's comments on its draft consultation plan.
2. Figure 1(b) is included to provide an indication of number of days allowed for consultation.
3. Public holidays and weekends are not counted as Business Days.

Business
Days

	Mon	Close of period for council to comment on consultation plan
	Tue	Carrier sends notification letter to council and Interested and Affected Parties
	Wed	
	Thur	Carrier's notification letter to council and Interested and Affected Parties is taken to have arrived
1	Fri	Consultation period commences
	Sat	
	Sun	
2	Mon	
3	Tue	
4	Wed	
5	Thur	
6	Fri	
	Sat	
	Sun	
7	Mon	
8	Tue	
9	Wed	
10	Thur	
11	Fri	
	Sat	
	Sun	
12	Mon	
13	Tue	
14	Wed	
15	Thur	Close of period for Interested and Affected Parties to comment on consultation plan
16	Fri	
	Sat	
	Sun	
17	Mon	
18	Tue	
19	Wed	
20	Thur	Close of period for council to comment on consultation plan

FIGURE 1(b)
Timeline for Council and Interested and Affected Parties to make submissions on proposed Mobile Phone Radiocommunications Infrastructure

- 6.5.2 A notice or document left at a premises (whether residential or otherwise) is taken to have been given on the second Business Day after it was left at the premises.
- 6.5.3 Where a Carrier has identified a school as an Interested or Affected party in its consultation plan, it must have regard to that school's formal holiday periods.

Timeframe for Council to comment on draft consultation plan

- 6.5.4 The Carrier must allow Council ten Business Days from the date of request, to provide written comment on the draft community consultation plan (provided under clause 6.3).

Timeframe for Consultation with Councils and Interested and Affected Parties

- 6.5.5 The minimum submission period for Councils must be 20 Business Days.
- 6.5.6 The minimum submission period for Interested and Affected Parties must be 15 Business Days.
- 6.5.7 The Carrier must allow Interested and Affected Parties an extension period of an additional five Business Days to provide comment if requested in writing.
- 6.5.8 The Carrier's consultation plan must contain the time within which Councils and communities may comment on the proposed work.

6.6 Engagement and Responsiveness

- 6.6.1 The Code requires the Carriers to engage with and respond to Interested and Affected Parties during the consultation process and to modify the consultation plan accordingly where appropriate.
- 6.6.2 The Carrier must have written procedures for responding to the enquiries of Interested and Affected Parties, including likely timeframes for response.
- 6.6.3 If the factors initially identified in the stakeholder analysis change, then the Carrier must review its consultation plan to ensure it remains fit for purpose and amend it as required.
- 6.6.4 The Carrier must develop and update its consultation plan to show that it has engaged with and responded to Council and Interested and Affected Parties, with the objectives of:
 - (a) providing adequate time for Interested and Affected Parties to consider, engage and to complete submissions on the proposal;
 - (b) responding to and addressing Council's views on consultation;

- (c) identifying and attempting to resolve potential issues early in the site planning process;
- (d) adding additional consultation tools to the plan, where the Carrier considers it appropriate, to ensure that it remains fit for purpose; and
- (e) obtaining mutually acceptable outcomes on individual projects.

NOTE: The consultation may not always:

i) satisfy all participants; or

ii) resolve all differences of opinion or values.

6.7 Assessing and Reporting on Outcomes

- 6.7.1 At the end of the consultation process the Carrier must assess all submissions and decide how to proceed.
- 6.7.2 The Carrier must respond to Interested and Affected Parties who provided it with individual submissions in the consultation process.
- 6.7.3 The Carrier must prepare a report which includes:

- (a) summary of submissions received during the consultation process;
- (b) the Carrier's consideration and assessment of these submissions;
- (c) a statement about the Carrier's intended actions regarding the proposed work; and
- (d) where construction is intended, the Carrier must include a range of likely dates for commencement of construction.

NOTE: Carrier's likely date range will be to the nearest month.

- 6.7.4 This Report must be:
 - (a) sent to Council and concurrently published on the website;
 - (b) available to a member of the public on request.

- 6.7.5 The Carrier must:
 - (a) not commence the work until after the Report has been given to Council; and
 - (b) update its website where construction is intended to reflect any changes in the likely date range for the commencement of construction.

- 6.7.6 The Carrier must make additional information about a site (as per clause 6.4.1) available on a website and by other means when requested. See Appendix E1.
- 6.7.7 The Carrier must keep website information up-to-date with significant developments, such as delays or deferrals, and provide that information to members of the public who have previously requested it by other means.

7 NOTIFICATION TO COUNCILS AND THE PUBLIC – INSTALLATION AT AN EXISTING SITE WITHOUT DEVELOPMENT APPLICATION

7.1 Applicability

7.1.1 Clause 7 applies if:

- (a) a Carrier proposes to carry out any work at premises in relation to the installation of Mobile Phone Radiocommunications Infrastructure that is not Low RF Power Mobile Phone Radiocommunications Infrastructure; and
- (b) there is already Mobile Phone Radiocommunications Infrastructure at the premises, other than
 - (i) Low Power RF Mobile Phone Radiocommunications Infrastructure; or
 - (ii) Exempt Mobile Phone Radiocommunications Infrastructure and;
- (c) the work does not require Development Approval.

NOTE: For guidance, where there is a large physical separation between facilities on a premises, they should be dealt with as separate sites for the purposes of consultation.

7.2 Council notification

7.2.1 The Carrier must give the Council notice of the proposed work which must include:

- (a) the proposed location;
- (b) a written description of the proposed work;
- (c) a statement setting out whether the Carrier regards the infrastructure as a Low Impact Facility under the *Telecommunications (Low-impact Facilities) Determination 1997* and the reasons for that conclusion;
- (d) a statement that the proposed infrastructure will be in compliance with the ACMA EMR regulatory arrangements;
- (e) a statement of estimated EMR exposure levels in the ARPANSA Report format (see Appendix C – ARPANSA EME Report format); and
- (f) a statement that Council may obtain further information on the proposed work, and contact details for the Carrier's representative from whom the information may be obtained.

7.3 Newspaper notification

- 7.3.1 The Carrier must also publish in a newspaper circulating in the area surrounding the location of the proposed work a notice which must:
- (a) describe the proposed work and its location, including street address and suburb if applicable;
 - (b) state that members of the public may obtain further information on the proposed work, and set out contact details for the Carrier's representative from whom the information may be obtained;
 - (c) invite written submissions on the proposed work;
 - (d) specify the closing date for submissions, which must be at least 10 days after the date on which the notice is published; and
 - (e) state the address to which submissions should be sent.
- 7.3.2 The notice must be legible and be in the public notice section of the newspaper.

7.4 Council and public submissions

- 7.4.1 Before commencing the work, the Carrier must have regard to any submissions received from the public and Council.

8 APPLICATION OF PRECAUTIONARY APPROACH TO SITE OPERATION

8.1 Operation of infrastructure

- 8.1.1 Carriers must operate their Mobile Phone Radiocommunications Infrastructure in a manner consistent with the objectives in clause 4.2.3.

8.2 Radiofrequency fields

- 8.2.1 Carriers must be able to demonstrate compliance with the ACMA regulations regarding maximum human exposure limits for radiofrequency fields.

8.3 Access and warning signs

- 8.3.1 Carriers must take appropriate measures to restrict general public access to RF hazard areas.

NOTE: General public may include window cleaners, building maintenance staff, etc.

- 8.3.2 For each RF hazard area, a Carrier must ensure warning signs are in place in a location and in a manner that is appropriate so that they are clearly visible.

NOTE: Refer to examples of standard signage in Appendix G – RF Warning Signs.

- 8.3.3 In assessing whether measures are appropriate, the Carrier must have regard to:

- (a) the kinds of people who may have access to the area;
- (b) the need for physical barriers;
- (c) relevant occupational health and safety requirements;
- (d) the views of the property owner;
- (e) any site changes that have been made; and
- (f) any other matter which may be relevant to ensure site safety with regards to EMR.

8.4 Training

- 8.4.1 Carriers must ensure that technical staff of the Carrier who may be involved in activities on or adjacent to Mobile Phone Radiocommunications Infrastructure are trained in radio frequency exposure safety.

8.5 Out of service equipment

- 8.5.1 Carriers must ensure that RF transmission equipment no longer in service does not transmit.

9 REQUIREMENT TO KEEP DOCUMENTARY EVIDENCE OF COMPLIANCE WITH PROCEDURES

Carriers must keep documentary evidence of their compliance with the Code for a period of three years.

10 RADIO EMISSIONS AND HEALTH AND SAFETY INFORMATION

10.1 Requirement for Carriers to keep informed about EMR Research

- 10.1.1 Carriers should keep informed via relevant scientific bodies of the significance of the results of scientific investigations or studies on EMR. Guidance on quality research is included in Appendix H - *Guidelines for Quality EMF Research*.

10.2 RF EMR Health and Safety Information

- 10.2.1 If requested, a Carrier must make available to the public, at no charge:
- (a) information regarding how they address RF EMR health and safety issues in relation to their networks; and
 - (b) information about where research reports on the health and safety impacts of radiofrequency infrastructure may be obtained. A Carrier may meet this requirement by referring members of the public to an industry body or Government agency where the Carrier has entered into a specific agreement for this purpose.
- 10.2.2 For a specific site, a Carrier must provide, as soon as practicable and at no charge, the following information to Councils and members of the public on request:
- (a) a description of their radiofrequency infrastructure on the site;
 - (b) the radio frequency bands as per the ARPANSA EME Report format;
 - (c) a declaration that their infrastructure is in compliance with the ACMA mandatory limits for general public exposure to RF EMR;
 - (d) details of any RF hazard areas associated with their infrastructure and management practices to restrict access to RF hazard areas;
 - (e) the levels of exposure to EMR emissions in accordance with the ARPANSA report (see Appendix C – ARPANSA EME Report format); and
 - (f) coverage information of the area.
- 10.2.3 This clause does not apply where in the reasonable opinion of the Carrier the information is being sought for commercial purposes.

10.3 Additional Information Supplied by Carrier

- 10.3.1 A Carrier may provide information about the health and safety aspects of RF transmitters in addition to that set out in clause 10.2.

- 10.3.2 The Carrier must not assert anything to the effect that the absence of scientific proof means that there is no possibility of risk arising from the operation of Mobile Phone Radiocommunications Infrastructure.
- 10.3.3 Where a Carrier provides or quotes summaries of scientific information, the Carrier must reference the source of information.

11 COMPLAINT HANDLING

11.1 Meaning of Complaint

- 11.1.1 In this clause a complaint means any expression of dissatisfaction or grievance made in writing to a Carrier in relation to its performance of any mandatory obligation in this Code.
- 11.1.2 However, a complaint does not include:
 - (a) a request for information; or
 - (b) any comments on Mobile Phone Radiocommunications Infrastructure received by a Carrier during the consultation process under clause 6.
- 11.1.3 If it appears to a Carrier that a person making a complaint requires assistance to express the complaint in writing, it is the duty of the Carrier to take reasonable steps to provide appropriate assistance to the person.

11.2 Carrier to Develop Complaints Handling Procedure

- 11.2.1 A Carrier must have a written procedure for dealing with complaints.
- 11.2.2 The Carrier must make information about the procedure available to the public including information about how the Carrier can be contacted by a person in order to make a complaint.
- 11.2.3 The Carrier must ensure that staff have received training in the procedure.

11.3 Complaint Handling Procedure

- 11.3.1 A Carrier must acknowledge complaints, in writing, within ten working days of the receipt of the complaint.
- 11.3.2 The Carrier must investigate the matters raised by a complaint unless the Carrier believes that the complaint is frivolous or vexatious, or is not made in good faith.
- 11.3.3 If a Carrier decides not to investigate a matter, the Carrier must give the complainant written notice of the decision, and of the reasons for the decision.
- 11.3.4 The Carrier must advise the complainant of the outcome of the investigation of their Complaint in writing and any action to be taken.
- 11.3.5 If a complainant is dissatisfied with the Carrier's response, the Carrier must inform the complainant of the availability of external options for complaint handling, e.g. the ACMA.

- 11.3.6 Carriers must keep a written record of complaints and the way in which the Carrier responded to the complaint.
- 11.3.7 Where the Carrier assesses a complaint to be frivolous or vexatious the Carrier must:
- (a) record its decision not to proceed with further correspondence and may cease correspondence; and
 - (b) inform the complainant of the availability of external options for complaint handling, e.g. the ACMA.

ACMA Telecommunications Deployment Operations Branch Australian Communications and Media Authority PO Box 78 Belconnen ACT 2617	Tel: 1300 850 115 Fax: 02 6219 5347 Email: lais@acma.gov.au Internet: www.acma.gov.au
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12 REFERENCES

Publication
Industry Standards
Australian Standard – AS 3516.2 Siting of Radiocommunications Facilities
Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3kHz to 300GHz (ARPANSA)
Industry Guidelines
Low-impact Mobile Facilities – Guidelines for Better Visual Outcomes (Mobile Carriers Forum) (MCF)
ACMA Guide
Accessing and Installing Telecommunications Facilities - A Guide (October 1999)
Legislation
<i>Telecommunications Act 1997</i>
<i>Radiocommunications Act 1992</i>
<i>Telecommunications (Low-impact Facilities) Determination 1997</i>
<i>Telecommunications Code of Practice 1997</i>

APPENDIX

A THE PRECAUTIONARY PRINCIPLE

Terms used in the context of risk assessment are the Precautionary Principle, the Precautionary Approach, Prudent Avoidance and ALARA (As Low As Reasonably Achievable).

For the purpose of this document the Precautionary Principle could be seen as the fundamental precepts upon which a practical precautionary approach could be based.

The issue of risk assessment can be summarised as the weighing up of likely harm based on all available scientific evidence, with the cost of commercial adjustment by the Carrier.

The fundamental concept of the Precautionary Principle was summed up in 1992 at the UN Conference on Environment and Development (UNCED) in Rio de Janeiro.

Here, the Precautionary Principle was explicitly recognised and included in the Rio Declaration. It is listed as Principle 15 among the principle of general rights and obligations of national authorities.

'In order to protect the environment, the precautionary approach should be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.'

The application of the Precautionary Principle requires commitment to the idea that scientific proof of a causal link between human activities and its effect is not required.

1. Australia's Inter-governmental Agreement on the Environment (IGAE) notes:

'Essentially, the precautionary principle offers administrators advice about how to act responsibly in the face of uncertainty and lack of full scientific knowledge. Under this Principle, policy makers are advised to use great care when authorising resource use where the outcomes of that use cannot be predicted with confidence, where one or more of the possible outcomes could have extremely adverse implications for future generations, or where no known substitutes exist for the resource being used.'

And that:

- *Careful evaluation to avoid, wherever practicable serious or irreversible damage to the environment; and*
- *An assessment of the risk-weighted consequences of various actions.*

2. However the European Commission Communication on the Precautionary Principle attempts to establish more detailed guidelines for its application, and to this end notes that:

'The Precautionary Principle should be considered within a structured approach to the analysis of risk which comprises three elements: risk assessment, risk management, risk communication. The Precautionary Principle is particularly relevant to the management of risk.'

The Summary notes that:

'The issue of when and how to use the precautionary principle, both within the European Union and internationally, is giving rise to much debate, and to mixed, and sometimes contradictory views. Thus, decision-makers are constantly faced with the dilemma of balancing the freedom and rights of individuals, industry and organisations with the need to reduce the risk of adverse effects to the environment, human, animal or plant health. Therefore finding the correct balance so that the proportionate, non-discriminatory, transparent and coherent actions can be taken, requires a structured decision-making process with detailed scientific and other objective information.'

But also that:

'The Precautionary Principle applies where scientific evidence is insufficient, inconclusive or uncertain – and preliminary scientific evaluation indicates that there are reasonable grounds for concern that the potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the high level of protection chosen by the EU.'

And that:

'In some cases, the right answer may be not to act or at least not to introduce a binding legal measure. A wide range of initiatives is available in the case of action, going from a legally binding measure to a research project or a recommendation.'

Where action is deemed necessary, measures based on the precautionary principle should be, inter alia:

- *proportional to the chosen level of protection;*
- *non-discriminatory in their application;*
- *consistent with similar measures already taken;*
- *based on an examination of the potential benefits and costs of action or lack of action;*
- *subject to review, in the light of new scientific data; and*
- *capable of assigning responsibility for producing the scientific evidence necessary for a more comprehensive risk assessment.*

The application of the Precautionary Principle to the siting of radiocommunications infrastructure should include a consideration of the uncertainty of the science on a-thermal effects.

There is a need to balance the requirement for the telecommunications industry to provide adequate service with the need of the community to be ensured of living in an environment that will not be a potential threat to health.

3. The World Health Organisation's advice on electromagnetic fields and public health with respect to mobile telephones and their base stations (fact sheet 193 June 2000) includes the following precautionary measures:

Precautionary measures

- **Government:** *If regulatory authorities have adopted health-based guidelines but, because of public concerns, would like to introduce additional precautionary measures to reduce exposure to RF fields, they should not undermine the science base of the guidelines by incorporating arbitrary additional safety factors into the exposure limits. Precautionary measures should be introduced as a separate policy that encourages, through voluntary means, the reduction of RF fields by equipment manufacturers and the public. Details of such measures are given in a separate WHO Background document.*
- **Individuals:** *Present scientific information does not indicate the need for any special precautions for use of mobile phones. If individuals are concerned, they might choose to limit their own or their children's RF exposure by limiting the length of calls, or using 'hands-free' devices to keep mobile phones away from the head and body.*

B ADDITIONAL DESIGN INFORMATION

B1 Standards Australia AS 3516.2

Infrastructure should be designed and installed having regard to the requirements of AS 3516.2 Australian Standard '*Siting of Radiocommunications Facilities*'.

B2 ACMA Guide – 'Accessing & Installing Telecommunications Facilities - A Guide' October 1999

Infrastructure should be designed and installed in compliance with the requirements of the ACMA guide '*Accessing and Installing Telecommunications Facilities - A Guide (October 1999)*' available from the ACMA website at http://www.acma.gov.au/WEB/STANDARD/1001/pc=PC_2135.

B3 Mobile Carriers Forum (MCF) Publication – 'Low-impact Mobile Facilities – Guidelines for Better Visual Outcomes'

The MCF has prepared guidelines to assist in the siting and design of new low-impact mobile telecommunication facilities, with the aim of minimizing visual impact and achieving appropriate and acceptable outcomes. The guidelines include photographs of a range of radiocommunications infrastructure and are available from the AMTA website at <http://www.mcf.amta.org.au/pages/Low.Impact.Facilities>.

B4 EMR Software

Specialised software is available to conduct EMR assessments. The purpose of this computer modelling is to determine the effect of RF transmission from a particular site, as well as to predict the possible RF field strengths at particular locations.

C ARPANSA EME REPORT FORMAT

The report format included on the following pages is the format at the date of publication of this code. As this format may be subject to change, it is suggested that the ARPANSA website at <http://www.arpansa.gov.au/emereports/index.cfm> be checked for updates.

In 2006, the format of the ARPANSA Environmental EME Report was revised to provide more useful information to the members of the community. The older report format was used for consultation and approval submissions lodged up to 30th June 2007 and may still be in use at some sites that have not altered since 2007.

A Carrier must respond to all reasonable requests for EMR levels at specific locations.

Summary of Estimated RF EME Levels around the Mobile Phone Base Station at 123 Hight Street, Anytown QLD 4321

Introduction:

Date 28/7/2011

NSA Site No (4321001)

This report summarises the estimated maximum cumulative radiofrequency (RF) electromagnetic energy (EME) levels at ground level emitted from the existing Mobile Phone Base Station antennas at 123 High Street Anytown QLD 4321. Maximum EME levels are estimated in 360° circular bands out to 500m from the base station. The procedures for making the estimates have been developed by the Australian Radiation Protection And Nuclear Safety Agency (ARPANSA)¹. These are documented in the ARPANSA Technical Report; "Radio Frequency EME Exposure Levels - Prediction Methodologies" which is available at <http://www.arpansa.gov.au>

EME Health Standard

ARPANSA, an Australian Government agency in the Health and Ageing portfolio has established a Radiation Protection Standard² specifying limits for continuous exposure of the general public to RF transmissions at frequencies used by mobile phone base stations. Further information can be gained from the ARPANSA web site.

The Australian Communications and Media Authority (ACMA)³ mandates exposure limits for continuous exposure of the general public to RF EME from mobile phone base stations. Further information can be found at the ACMA website <http://emr.acma.gov.au>

Existing Site Radio Systems

Carrier1 / GSM900	Carrier1 / WCDMA850	Carrier2 / WCDMA2100	
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Table of Predicted EME Levles - Existing

Distance from the antennas at 123 High Street in 360° circular bands	Maximum Cumulative EME Level – All carriers at this site (% of ARPANSA exposure limits ²) Public exposure limit = 100%
0m to 50m	0.075%
50m to 100m	0.88%
100m to 200m	0.86%
200m to 300m	0.19%
300m to 400m	0.049%
400m to 500m	0.019%
Maximum EME level 96.072 m, from the antennas at 123 High Street	0.88%

Note: Estimation for the maximum level of RF EME at 1.5m above the ground from the existing antennas assuming level ground. The estimated levels have been calculated on the maximum mobile phone call capacity anticipated for this site. This estimation does not include possible radio signal attenuation due to buildings and the general environment. The actual EME levels will generally be significantly less than predicted due to path losses and the base station automatically minimising transmitter power to only serve established phone calls³. Where applicable, particular locations of interest in the area surrounding the base station, including topographical variations, are assessed in Appendix A "Other areas of Interest" table on the last page.

Summary - Existing Radio Systems

RF EME levels have been estimated from the existing antennas at 123 High Street Anytown QLD 4321. The maximum cumulative EME level at 1.5 m above ground level is estimated to be 0.88 % of the ARPANSA public exposure limits.

Existing and Proposed Site Radio Systems

Carrier1 / GSM900	Carrier1 / WCDMA850	Carrier2 / WCDMA2100	Carrier3 / WCDMA2100 (proposed)
Carrier1 / LTE1800 (proposed)			

Table of Predicted EME Levels - Existing and Proposed

Distance from the antennas at 123 High Street in 360° circular bands	Maximum Cumulative EME Level – All carriers at this site (% of ARPANSA exposure limits ²) Public exposure limit = 100%
0m to 50m	0.1%
50m to 100m	1.086%
100m to 200m	1.11%
200m to 300m	0.34%
300m to 400m	0.1%
400m to 500m	0.048%
Maximum EME level 101.8 m, from the antennas at 123 High Street	1.11%

Note: Estimation for the maximum level of RF EME at 1.5m above the ground from the existing and proposed antennas assuming level ground. The estimated levels have been calculated on the maximum mobile phone call capacity anticipated for this site. This estimation does not include possible radio signal attenuation due to buildings and the general environment. The actual EME levels will generally be significantly less than predicted due to path losses and the base station automatically minimising transmitter power to only serve established phone calls⁵. Where applicable, particular locations of interest in the area surrounding the base station, including topographical variations, are assessed in Appendix A "Other areas of Interest" table on the last page.

Summary - Existing and Proposed Radio Systems

RF EME levels have been estimated from the existing and proposed antennas at **123 High Street** Anytown QLD 4321. The maximum cumulative EME level at 1.5 m above ground level is estimated to be **1.11%** of the ARPANSA public exposure limits.

Reference Notes:

1. The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) is a Federal Government agency incorporated under the Health and Ageing portfolio. ARPANSA is charged with responsibility for protecting the health and safety of people, and the environment, from the harmful effects of radiation (ionising and non-ionising).
2. Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), 2002, 'Radiation Protection Standard: Maximum Exposure Levels to Radiofrequency Fields — 3 kHz to 300 GHz', Radiation Protection Series Publication No. 3, ARPANSA, Yallambie Australia. [Printed version: ISBN 0-642-79400-6 ISSN 1445-9760] [Web version: ISBN 0-642-79402-2 ISSN 1445-9760]
3. The Australian Communications and Media Authority (ACMA) is responsible for the regulation of broadcasting, radiocommunications, telecommunications and online content. Information on EME is available at <http://emr.acma.gov.au/>
4. The EME predictions in this report assume a near worst-case scenario including:
 - base station transmitters operating at maximum power (no automatic power reduction)
 - simultaneous telephone calls on all channels
 - an unobstructed line of sight view to the antennas.
 In practice a worst-case scenario is rarely the case. There are often trees and buildings in the immediate vicinity, and cellular networks automatically adjust transmit power to suit the actual telephone traffic. The level of EME may also be affected where significant landscape features are present and predicted EME levels might not be the absolute maximum at all locations.
5. Further explanation of this report may be found in "Understanding the ARPANSA Environmental EME Report" and other documents on the ARPANSA web site, <http://www.arpansa.gov.au>

Issued by: Company Name, Data reference file – Anytown QLD 4321 - 20110728092904

Environmental EME report

(2007 ARPANSA Format)

Produced with RF-Map2 2.0 (Build 0.288)

Appendix A

Table of Other Areas of Interest

Additional Locations	Height / Scan relative to location ground level	Maximum Cumulative EME Level All Carriers at this site
		(% of ARPANSA exposure limits ²) Public exposure limit = 100%
Main Street	0m to 6m	0.34%
Corner of High Street and Park Street	0m to 17m	2.09%
Station St	0m to 6m	0.7%

Note: Estimation for the maximum EME levels at selected areas of interest over a height range relative to the specific ground level at the area of interest. This table includes any existing and proposed radio systems.

Estimation Notes / Assumptions – Other Areas of Interest

Variable ground topography has been included in the assessment of the "Other Areas of Interest" as per ARPANSA methodology
Insert other data / notes as required

D CONSULTATION GUIDELINES

This guideline is provided to assist Carriers in developing and implementing appropriate consultation plans for individual infrastructure.

D1 Desired Outcomes

The objectives of the Carrier's consultation with the Council and Interested and Affected Parties are to:

- (a) inform Interested and Affected Parties of the proposal and receive input from them;
- (b) provide adequate time for Interested and Affected Parties to consider and engage in meaningful dialogue on the proposal;
- (c) maximize the level of accurate and accessible information about the proposal available to Interested and Affected Parties;
- (d) identify and attempt to resolve potential issues early in the planning process; and
- (e) obtain mutually acceptable outcomes on individual proposals.

When considering the desired outcomes it is to be recognised that a consultation program will not always:

- satisfy all participants; or
- resolve all differences of opinion or values.

D2 Determining Size and Scope of Consultation Plan

A Carrier's consultation plan for each site should be open and transparent and fit for purpose. The size and scope of the consultation plan should be weighed against the likely impact the proposal will have on Interested and Affected Parties, relevant stakeholders and community sensitive locations.

Examples of previous consultation plans are provided at <http://www.commsalliance.com.au/mobile-phone-tower-information>.

D.2.1 Stakeholder Analysis

At an early stage in the planning process, the Carrier is required to undertake a stakeholder analysis to identify who the Interested and Affected Parties may be and the potential for concerns to be raised about a particular proposed facility. The greater the likelihood for concern, the greater the extent and nature of the consultation with stakeholders that is required.

Factors that should be considered in the stakeholder analysis include the following:

- (a) Clear identification of the context of the proposal including consideration of the nature and siting of the facility within the community.

Some examples of facilities which previously have been shown to be sensitive are large visually prominent facilities located very close to where people live.

- (b) Adjacent land uses and any sensitive land uses nearby.

Some examples of sites which previously have been shown to be sensitive are residential areas, child care centres, schools, aged care centres and hospitals.

- (c) Identification of potentially Interested and Affected Parties at or near the proposed facility.

It is critical that the Carrier conducts a thorough search to identify both individuals, organisations or stakeholder groups in a locality who are potentially affected. Progress Associations, parent groups, sporting groups, tenants, Occupational Health & Safety committees, Aboriginal Land Councils and residents in adjacent council areas but living in proximity to a proposal have previously identified themselves as Interested and Affected Parties. Local councils are a good source of information about potentially Interested and Affected Parties in a locality.

- (d) Possible concerns of those individuals or groups.

Some examples of concerns that have been previously raised include health, visual amenity, potential noise and property values.

- (e) The community history of the locality.

Examples of communities that may require special considerations include those who have higher expectations of consultation, as a result of previous proposals and developments, those who may have dealt with previous trauma and loss such as bushfires or have been involved in a controversial development such as a road proposal.

- (f) Any regulatory controls at the locality.

Examples of sites with relevant regulatory controls include heritage areas, scenic protection areas and national parks. The Carrier should make every effort to integrate the consultation strategy with the requirements of local planning controls and State Planning and Environmental legislation. Seeking views of Local Council and engaging in meaningful dialogue will facilitate the development of an appropriately scoped consultation strategy.

D.2.2 Consultation Plan

Following the stakeholder analysis, the Carrier is required to develop the consultation plan. The content of the consultation plan will vary depending on the likely impact the proposal will have on the Interested and Affected Parties. Factors that should be considered when preparing consultation plans in community-sensitive locations include the following:

- (a) Site selection criteria

The plan should document the evaluation criteria the Carrier used in selecting the preferred location (e.g. technical merits, construction feasibility, town planning and visual amenity issues, community sensitive locations, design criteria and minimisation of EMR). Industry best practice would also include evidence of the weighting given to each of the site selection criteria used.

(b) Community-sensitive locations

The plan should provide evidence of what the Carrier has done in relation to considering community sensitive locations for this specific proposal.

(c) Desired outcomes and stakeholder analysis

This should be a summary of Sections D1 and D2 of this Appendix for this proposal.

(d) Issues/risk register

This would include a site specific issues register and risk register.

(e) Timeline for consultation activities

The Carrier must be proactive in keeping Interested and Affected Parties informed of the progress associated with the proposal. The Consultation plan should contain a schedule detailing the key activities and milestones such as:

- 1. site selection.*
- 2. design changes.*
- 3. stakeholder analysis (to identify stakeholders & potential concerns).*
- 4. consultation with Council.*
- 5. consultation with Interested and Affected Parties.*
- 6. community feedback analysis.*
- 7. submission of final consultation report to Council.*
- 8. commencement of construction works.*

(f) Consultation Tools

This would include details of specific consultation tools proposed under the consultation plan, such as those outlined in Appendix D2.3.

(g) Evaluation of alternative sites

This would include description of the current preferred proposal and the history and evaluation of alternative sites. This will include consideration of other Carriers' existing and planned mobile phone radiocommunications infrastructure within the service area.

(h) Previous consultation

Details of any previous consultation undertaken with regards to previous facilities in the location or the proposed facility, including engagement with the community in the development of the consultation plan, or agree what signage would be appropriate with the local council.

(i) Carriers response to feedback from Interested and Affected Parties

The consultation plan should document the service level agreement, for example how community feedback will be addressed, including target response times to community queries, for example requests for general information, specific information, response times to telephone or written requests for information etc.

(j) Quality assurance and version control

The consultation plan may be amended from time to time during the consultation process. Therefore, it should have appropriate version control (issue 1, 2 etc) and should document who in the Carrier's or consultant's organisation approved the consultation plan, and date of approval.

D.2.3 Consultation Tools

The following table summarises a number of consultation tools that can be selected to appropriately communicate with identified individuals and stakeholder(s). The number and type of tools to be used for any one proposal is dependent on the nature of the proposal and the potential level of concern and the stakeholders identified.

In all instances it is important that both verbal and written communications are clear, easy to understand and that opportunities for input and feedback are clearly stated. Further, these communications should include ways the community can obtain additional information from a variety of sources.

A Carrier should make information about the proposal available in other languages for any reasonable request.

Consultation Tools	
notify immediate residential neighbours	conduct open house/community information sessions
advertise in local paper	consult with Members of Parliament
advertise in community newsletters	form community representative committees
conduct door knock	facilitate public meeting
post letters to individual residents/landowners	conduct one-on-one meetings
consult ward councillors	set up public displays
consult with other relevant councillors	establish site specific web site
consult tenant stakeholders	locate signage
notify community representatives	send email notification
consult with community representatives	provide newsletters and fact sheets
notify representatives of sensitive activities	appoint a community relations manager
present to council	provide translation services
consult precinct committees	

E COMMUNICATION INFORMATION FORMATS

The Code requires the Carrier to notify the public about its proposals to construct new infrastructure through a website, by letter and by the placement of onsite signs (clause 6.4). In using these communications tools, the Carrier is required to adhere to formats below.

E1 Website information

Carriers are required to provide information about the proposal (see clause 6.4.5) on the RFNSA website in the following format.



Radio Frequency National Site Archive

Site No 1234567 101 Sunshine Street Nth Sydney 2060

Location & Management	Reports	Community Information Kiosk
-----------------------	---------	-----------------------------

Proposal Summary

What is proposed: CarrierX proposes the installation of a new mobile network facility (base station) on the rooftop at 101 Sunshine Street Nth Sydney to provide improved mobile network coverage in the Sunshine street area.

Why is this required: A new facility is required due to the increased number of customers using mobile phone and broadband services in the Sunshine street precinct. The existing base stations in Nth Sydney do not have sufficient capacity to handle the number of call customers are making especially during peak times.

Community Update & Announcements

17th February 2011
The consultation period has been extended by 2 weeks to 14th March due to the floods in Nth Sydney.

11th February 2011
Community consultation commences for the proposed new base station at 101 Sunshine Street Nth Sydney. Submissions are due by 5pm 28th February 2011

All announcements...

Proposal Details

Site Proposal Details (single or multiple sites)
Installation of 3 antennas on the rooftop at 101 Sunshine Street Nth Sydney. Each antenna is 2.5m in length mounted on a 2m support. The total height above the roof is 4.5m

[Download the community notification letter](#)
[Town planning requirements for this proposal](#)
[Download the site selection analysis](#)
[Download the EMF report](#)
[Download design drawing](#)
[Download photomontage](#)

Location – 101 Sunshine St, Nth Sydney



Click to enlarge

Community Consultation & Having Your Say

Our community consultation program runs from 3rd to 28th February. Carrier X has appointed Y Planning consultations to undertake the consultation program on our behalf. We welcome your feedback and questions on our proposal through the following channels.

Email us inquiries@talkanywhere.com
Call us 02 1234 5678

Information Kiosk
Location: Level 1, 101 Sunshine St Nth Sydney
Times: Thursday 17 March 1 - 3pm
Friday 18 March 9 - 11am

The closing date for submissions is 5pm 28th February.
This web site will be updated when the consultation report is sent to council.

Additional Information

[FAQ's](#)
[Mobile Technology and Health Information](#)
[Mobile Phone Base Station Code Information webpage](#)
[Consultation Report](#) – watch for announcement

More as needed

E2 Letter and envelope

E.2.1 Letter

The Carrier's notification letter to Interested and Affected Parties must contain the information (see clause 6.4.4) and adhere to the format of the example below.

Carrier logo	Carrier's consultant's logo
Date	
<Name> (letters to both owners and occupiers) <Address>	
Dear <Name>	
Proposal to install a mobile phone base station at <address>	
I am writing on behalf of <Carrier> to inform you of a proposal to construct a mobile phone base station nearby at the above address. The purpose of this base station is to provide coverage for <define>. Details about the proposed facility and its emissions can be found on the <Carrier> website at <web address> or by contacting <Carrier> directly. All contact details are provided on the attached sheet. As part of <Carrier's> consultation process, we invite you to provide us with your feedback about this proposal. You can do this by contacting us by letter, email or through our website. We will accept comments on the proposal until <date>. We will then prepare a report on the outcomes of the consultation process which will be available on our website by <date>. Should you wish to receive a copy of this report, please contact us directly. Depending on the outcome of the consultation process, it is our intention to begin construction of the telecommunications facility from <period>. Any changes to this or other dates in this letter will be advised on the above website. We trust that you will find the information about this proposal on our website informative and are happy to provide you with more details by phone or email. We remind you that submissions about this proposal are due by <date> and look forward to receiving your feedback. Yours sincerely <Name> <Position>	

Useful resources

Further information about this proposal is available from <carrier's representative> from	www.rfnsa.com.au
	RFNSA site No.
	Email
	Phone number
You can submit a comment on the proposed facility at	Address
	Website
	email
Information about this proposal is available in other languages from	
Support information about: • mobile phone base stations • the Base Station Code (C564) • your rights • health • low impact facilities • State planning laws is available from	CA web address

Planning regulations

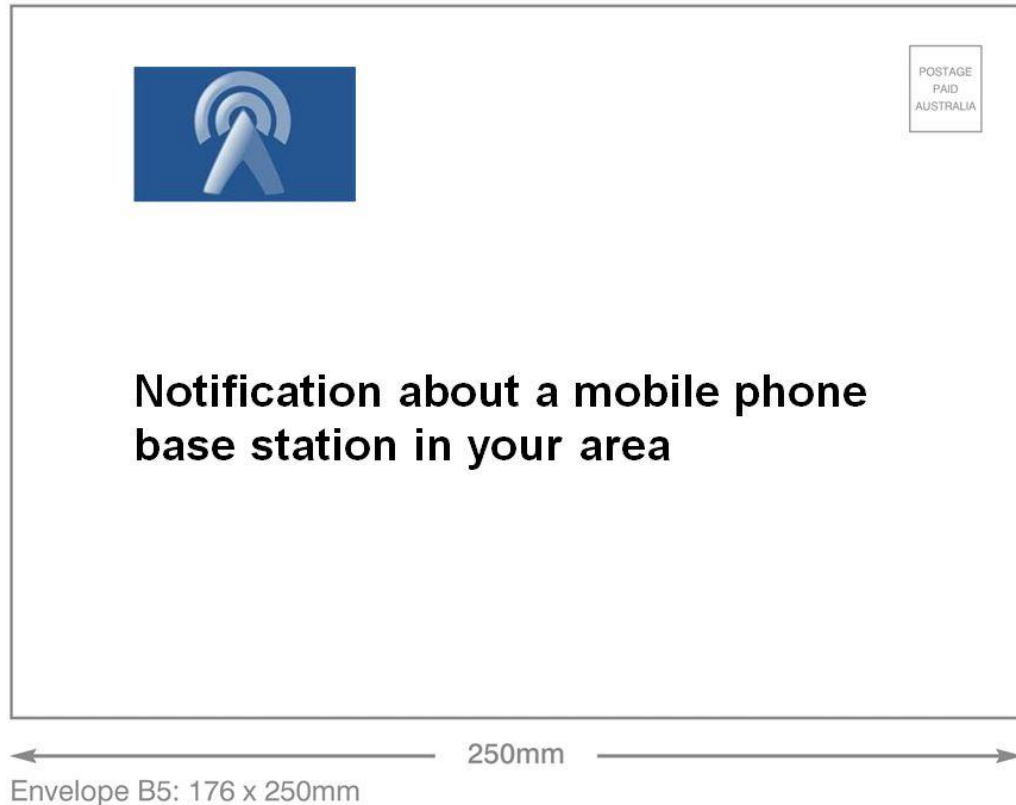
The Carrier considers that this proposed facility does not require council approval because it is a low impact facility or complies with relevant State planning legislation.

E.2.2 Envelope

The envelope for this correspondence should contain the following information and adhere to one of the formats below. However, this does not preclude Carriers from sending personalised letters of notification.

For A5 or B5 envelopes, text should be in bold with the font size of 20 points (Arial) or more. For DL envelopes, text should be in bold with the font size of 18 points (Arial) or more.

When distributing this correspondence, the Carrier should ensure that envelopes are delivered to letterboxes marked with 'no junk mail' or similar.



E3 On-site signage

The Code requires the Carrier to install a notification sign at the proposed site where possible (see clause 6.4.9). For onsite signage, the Carrier must adhere to the content and format of the sign below. The sign is to be printed on a white background in A3 size in urban areas; at least A2 in rural areas. For best-practice placement of these signs, see also Appendix F.

	
NOTICE OF MOBILE PHONE BASE STATION PROPOSAL	
Location	Building Rooftop 101 Sunshine Street North Sydney
Proposal	Installation of 6 panel antennas on rooftop plant room wall. Each antenna is 0.5 w x 2.6 h (metres)
Carrier	TalkAnywhere
Information For details and how to make a submission	Email: inquiries@talkanywhere.com Web: www.rfnsa.com.au Phone: 02 1234 5678 RFNSA site No 1234567
Submissions Close	5pm 28th February 2011
Notice lodged under requirements of Communications Alliance Code C564:2011	

F BEST PRACTICE GUIDELINES FOR PLACEMENT OF SIGNS

F1 Introduction

The placement of a sign or signs on the site of a proposed mobile phone base station is intended to provide an opportunity for members of the community to be informed of the proposal.

The purpose is to supplement the other methods used to inform Interested and Affected parties.

In particular, it is intended to ensure that people who regularly pass by the site, or who regularly visit the locality, are informed and given the opportunity to participate in the consultation process.

In addition, it is intended to provide an opportunity for people who move into the area subsequent to the completion of the consultation process, or observe the construction activities, to have an opportunity to learn about the proposal, or obtain information about what is being built.

F2 Objective

The objectives of these guidelines are to:

- (a) ensure passers-by have the opportunity to learn about the proposal; and
- (b) create consistency of format so that notification signs can be easily recognised as such by the public.

F3 Placement considerations

The following should be taken into account when considering the placement of on-site signage:

- (a) The sign should be placed in a position that is readily visible from the nearest public footpath or other public pedestrian space.
- (b) Whilst the sign does not need to be positioned so it can be read by motorists, a location should be chosen that is visible to motorists, so that they can come back on foot and investigate.
- (c) Where a proposed site has frontage to more than one publicly accessible space, a sign should (where possible and practical), be placed on at least the two most heavily trafficked frontages. However, this obligation does not apply where a public space frontage is well removed from the planned location on the site.
- (d) The sign should be placed directly on the public space frontage or, where that is not possible, as near as practical to that frontage.
- (e) The sign must be legible from a publicly accessible space.
- (f) Typically, the sign should be affixed to a boundary wall, fence, or similar.

- (g) Where there is no suitable boundary wall or fence, the sign should be affixed to a tomato stake, star picket, or similar and placed adjacent to the boundary.
- (h) The sign should be positioned at eye height for a typical adult.
- (i) Where the planned site includes a public thoroughfare (e.g. a public arcade from a rear privately owned car park to the street frontage), consideration should be given to placing a sign at the entrance to that arcade from the privately owned car park.
- (j) Consideration should be given to factors such as the likelihood of the sign being disturbed or its removal during the construction phase.
- (k) Consideration should also be given to locations less likely to be disturbed by vandals.
- (l) The Carrier is to have regard for the interests and desires of the property owner or occupier. There will be occasions when the landowner's wishes preclude a particular location.

G RF WARNING SIGNS

The following are typical examples of signs used to inform and warn of RF radiation hazards at transmitter sites.

G1 Telecommunications facility and RFNSA identification sign

The following sign is used to identify a mobile telecommunications facility and to provide information regarding the National Site Archive (NSA) site number.

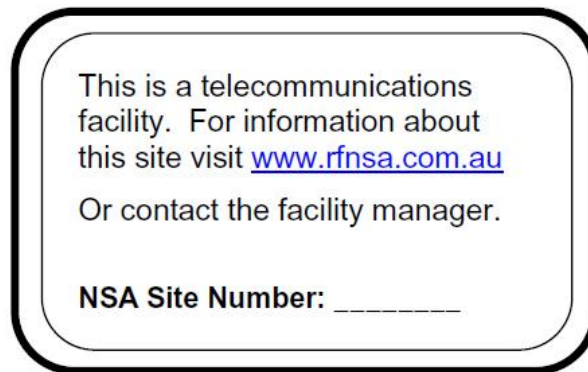


FIGURE G1

Example of an identification sign

G2 RF EMR Warning Signs

RF EMR warning signs are used to identify areas that may exceed the general public and occupational exposure limits. These signs are to be installed at point of access restriction.



FIGURE G2

Example of an EMR warning sign

G3 RF EMR Hazard Identification

RF EMR Hazard Identification sign is used to identify the boundary point of occupational EMR exposure.

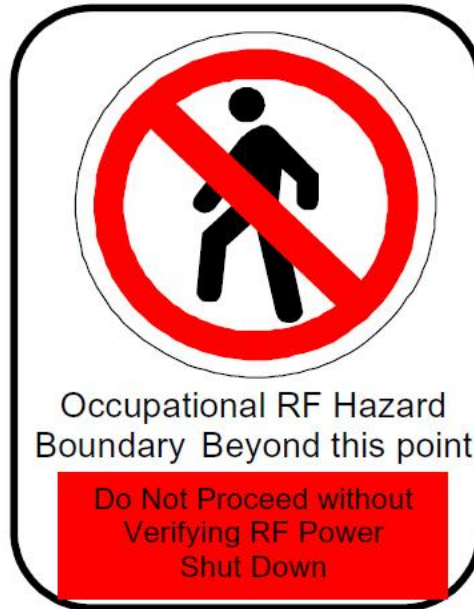


FIGURE G3

Example of an RF Hazard Identification Sign

H GUIDELINES FOR QUALITY EMF RESEARCH

In this Appendix the term EMF, which is an abbreviation for Electric, Magnetic and Electromagnetic Fields, is used whereas in the Code the term EMR, which is an abbreviation for Electromagnetic Radiation, is used. EMF is a more general term, and is appropriate here, because it makes provision for effects below radio frequencies.

H1 Introduction

The following set of guidelines has been summarised from the scientific reviews into the biological effects of EMF exposure held under the International EMF Project (Repacholi, 1998; Repacholi and Greenebaum, 1998). They are intended to assist researchers to complete studies that will be useful to WHO for health risk assessments. Studies with methodology deviating significantly from these guidelines may not provide information useful for health risk assessments. These guidelines have been developed for in vitro, in vivo, human volunteer and epidemiological studies.

H2 General experimental design

1. The project should test a clearly defined hypothesis, using a detailed protocol that would lead to information directly or indirectly relevant to assessment of health risk from EMF exposure.
2. The biological system used should be appropriate to the end-point(s) studied. Threshold and dose-response data (using at least 3 levels of exposure, in addition to sham-exposed controls) are sought where possible.
3. Well-characterised biological systems or assays should be used, preferably ones that are well established from the scientific literature available.
4. The a priori estimated power of the experiment, based on prior knowledge and the number of tests planned, should be sufficient to detect reliably the expected size of the effect (often as small as 10-20%).
5. Good Laboratory Practice (GLP) should be used throughout the design and conduct of the study (see, e.g., FDA, 1993). A specific protocol, consistent with the GLP guidelines, should be established and documented. Any changes instituted during the course of the study should also be documented. The protocol should include randomised, symmetric handling of specimens and their sources, except when precluded by the nature of the experiment or biological system. The protocol should include all appropriate controls (positive, negative, cage controls, sham-exposed etc.). Investigators should be blind to whether they are working with exposed or control materials; human subjects in laboratory experiments should be similarly unaware of their exposure status.
6. Quality assurance (QA) procedures should be included in the protocol, including dosimetry and monitoring of the programme by both a team from within the experimental staff and an independent group, as required by GLP.

Experimental System and Dosimetry

1. Environmental conditions, such as temperature, humidity, light, vibration and sound, and background EMF's, should be measured and recorded periodically. All experimental conditions should be the same for all groups, except for EMF exposure.
2. EMF's should be fully characterised and remeasured periodically. Waveform, pulse shape and timing, frequency spectrum, harmonics and transients from both continuous sources and from switching exposure systems on and off, should all be measured where appropriate. Background fields, such as ambient, equipment-derived, and cross-over fields from other exposure systems, are also important and need to be characterised. Time-varying and static components should be measured, as well as the polarisation and directions of the fields. Field modulation introduced by experimental factors such as motion of sample shakers should be noted and measured whenever possible. Positioning of cultures or animals within exposure systems should be noted and randomised where appropriate.

Data collection and quality assurance

1. The full protocol, including QA, should be followed strictly, as should GLP provisions for monitoring this.
2. Data should be recorded contemporaneously and back-up copies kept.
3. No data should be discarded without valid reason (e.g. equipment failure, procedures not followed). Reasons for this should be recorded.
4. As part of the QA programme, at least one independent reassessment should be made of all or an appropriate sample of specimens, when assays require an independent judgement by the investigator (e.g., histological evaluations).
5. Where possible, samples should be stored for future reference.

Data analysis

1. Analysis techniques should be appropriate to the data and hypothesis.
2. The stored data set should contain all data, and if any data are excluded from an analysis, clear, legitimate reasons for doing so should be recorded.

Conclusions and reports

1. Conclusions should be fully supported by the data and include all important implications of the data set.
2. Reports should include enough data and information concerning materials and methods to allow independent assessment of the conclusions and discussion.
3. Timely peer-reviewed publication is essential.

H3 In vitro studies

1. Temperature, atmosphere in CO₂ incubators, vibration, and stray fields from incubator heaters and fans are sources of asymmetry (differences between exposed and control samples) that are often overlooked in cell and tissue culture experiments. These must be measured with appropriate instrumentation and every effort made to ensure that any differences are minimised, except for EMF exposure of the 'exposed' samples.
2. Contemporaneous positive and negative controls, both maintained under identical circumstances to exposed cultures, sham-sham comparisons of multiple exposure systems, randomised handling of cultures, and blinding, should form part of the study, as appropriate.
3. To characterise electric fields or induced currents in cultures, electrode geometry and materials (including agar bridges, etc.), dish shape and dimensions, depth of medium and specimen dimensions, conductivity (RF and ELF) and dielectric constant (RF only) of medium are important. In some ELF studies, field values should be measured directly. Electrophoretic products should be considered and measured, where possible, when electrodes are used.
4. ELF magnetic field experiments should consider the factors above as they apply to induced current. The angle between applied field and medium, as well as the angle between applied ELF fields and the local DC field, should be measured.
5. When using media, serum or other reagents that may have variation from batch to batch, serious consideration should be given to purchasing and storing sufficient stocks in a single batch for the duration of the experiment. Similarly, the characteristics of cell lines derived from a standard source should not be allowed to diverge over time. There should be backup stocks from the original source.
6. For experiments lasting more than a few days and in all cases where samples or stock cultures are maintained for extended periods or data are gathered or stored electronically, backup systems must be installed to protect the work against equipment or power supply failure.

H4 In vivo studies

1. The protocol must meet the letter and spirit of all relevant regulations concerning experiments using animals or other whole organisms and must have the prior approval of all relevant review boards.
2. Applied EMF field inhomogeneity, temperature, atmosphere (e.g. humidity, room air changes), lighting, vibration and noise asymmetries in cage racks or animal care rooms are often overlooked. These conditions should be measured in each cage location. Randomly rotating cages can overcome any asymmetries within or between exposed and control groups.
3. Controls should be maintained under identical circumstances to exposed cultures. Unless the animal is its own control, contemporaneous controls are important. Positive controls as well as negative controls and sentinel ('cage-control') animals should all be used, where appropriate. All personnel

handling animals or experimental materials or performing assays should be blind to exposure status except in special circumstances.

4. Where possible, sham-sham comparisons of multiple exposure systems and randomised handling of animals, both during experiments and routine cage maintenance, should be considered.
5. Cage size, materials, bedding, spacing between animals, and animals' position in the fields, should be specified. Shielding effects of cages, any metal components and rack materials, presence of other animals, and changes in field strength as cages become soiled, should be measured. Micro shocks from cages or drinking apparatus should be eliminated.
6. Source, strain and sub-strain of animals should be specified. Specific pathogen free (SPF) animals and animals with special genetic characteristics should be tested prior to use. SPF animals and facilities require special care and trained personnel. The SPF status must be monitored throughout the experiment.

H5 Human volunteer studies

1. The protocol should meet the letter and spirit of all relevant regulations concerning experiments using human subjects, and have prior approval of all relevant review boards. Personnel working with volunteers require special training and oversight.
2. Where appropriate, positive as well as negative controls should be used.

H6 Epidemiological studies

1. The protocol should meet the letter and spirit of all relevant regulations and have prior approval of all relevant review boards.
2. Study designs should recognise that the exposure metric for possible effects of weak ELF and weak RF fields is uncertain. Determinations of subjects' exposures, particularly historical exposures that are often determined via surrogates, should be validated from specific measurements where possible. Data should include as much information relevant to alternate metrics as possible to aid future research. Further information can be obtained from Ahlbom (1996), Beaglehole et al (1993) and Bracken et al (1993).

H7 Independent research review and administration

1. Independent panels of independent scientists should assess proposed research projects, advise on the best researchers to conduct the studies, monitor progress of studies, and provide advisory first-stage review of the research results.
2. Research sponsors perceived to have a vested interest in the outcome of the studies should be isolated from all aspects of the research and the researchers. Sponsors might outline the general nature of the research to be supported. Independent bodies should determine the detailed nature of the studies, select and oversee investigators, and administer the programme, including funding.

H8 Coordination of research

Many countries have announced EMF research programmes, and other institutions and organisations are presently conducting or sponsoring well-managed research. Global coordination of this research can help ensure that scarce research funding is not wasted on unnecessary duplication of effort and that all important questions are being studied. The International EMF Project, in collaboration with the major national and multinational research funding institutions, can provide a useful facility or umbrella for worldwide coordination and exchange of information about plans and on-going projects. An ad hoc Research Coordination Committee has been established under the International EMF Project for this purpose. The Project maintains a database of research projects that seem to fulfil the requirements for WHO's Research Agenda on this world wide website.

I EXTRACT FROM - RADIATION PROTECTION STANDARD

MAXIMUM EXPOSURE LEVELS TO RADIOFREQUENCY FIELDS – 3KHZ TO 300GHZ, PUBLISHED BY THE AUSTRALIAN RADIATION PROTECTION AND NUCLEAR SAFETY AGENCY (ARPANSA) IN 2002

This Appendix is intended to address low power devices such as a cordless phone which comprises a base unit and handset and would generally be exempt from evaluation under the provisions below of the 2002 ARPANSA Standard.

S5.3 EQUIPMENT INTENDED FOR USE BY THE GENERAL PUBLIC

S5.3.1 Application

Sub-section S5.3 provides a means, based on equipment and usage parameters, to readily determine compliance with the spatial peak SAR restrictions of Table 2 for general public exposure of certain portable or mobile equipment. This sub-section has application to equipment intended for operation by general public users.

S5.3.2 Equipment with mean output power not exceeding 20 mW

The evaluation of mobile or portable transmitting equipment for compliance with this Standard is not required where the nominal mean power output delivered to the antenna does not exceed 20 mW.

S5.3.3 Equipment with mean output power exceeding 20 mW

The evaluation of mobile or portable transmitting equipment for compliance with this Standard is not required where:

- (a) it operates on a push-to-talk basis;
- (b) it is operated with a transmit duty factor of 50% or less averaged over a six minute period;
- (c) it does not exceed one fifth (20%) of the power levels of Table S2; and
- (d) normal operation entails the antenna or other radiating structure being separated from the user's body by not less than 2.5 cm.

The evaluation of mobile or portable transmitting equipment for compliance with this Standard is not required where the output power delivered to the antenna does not exceed the levels of Table S2 and normal operation entails the antenna or other radiating structure being separated from the user's body by not less than 20 cm.

Where the above provisions are not satisfied, testing or mathematical modelling to demonstrate compliance with the spatial peak SAR restrictions specified for the general public users category in Table 2 of this Standard must be undertaken. Such measurements or calculations should be based on normal use spatial relationships between the equipment and user.

The compliance of transmitting equipment may be assessed, via the reference levels specified for the general public users category in Tables 7 and 8 of this Standard, by direct measurement or evaluation in accordance with the recommendations of AS/NZS 2772.2 or other appropriate guidelines where the power output exceeds the levels of Table S2; and normal operation entails the antenna or other radiating structure being separated from the user's body by not less than 20 cm.

Where operation of the equipment under unusual or inappropriate conditions is liable to exceed the spatial peak SAR restrictions of Table 2 for general public exposure, instructional material must be provided to caution the user against such usage. This should include any requirements regarding minimum separations.

TABLE 1
Summary of compliance provisions for
Mobile or portable transmitting equipment

Equipment parameters	Test exemption	Spatial peak SAR [Table 2 Occupational]	Spatial peak SAR [Table 2 General Public]	Field measurement [Tables 7 & 8 Occupational or evaluation using S5.2.3]	Field measurement [Tables 7 & 8 General Public or evaluation using S5.3.3]
Aware user exposure					
Mean power < 100 mW	✓				
Push-to-talk & mean power < Table S2 & duty factor < 50 % & separation > 2.5 cm	✓				
Mean power > Table S2 & separation > 20 cm				✓	
Otherwise		✓			
General public exposure					
Mean power < 20 mW	✓				
Push-to-talk & mean power < 1/5 of Table S2 & duty factor < 50 % & separation > 2.5 cm	✓				
Mean power < Table S2 & separation > 20 cm	✓				
Mean power > Table S2 & separation > 20 cm					✓
Otherwise			✓		

NOTE: Fixed or vehicle mounted transmitting equipment should be installed in accordance with AS/NZS 4346.

TABLE S2

THRESHOLD LEVELS FOR TESTING

Operating frequency range	Nominal mean output power (W)
100 kHz to 450 MHz	7
450 MHz to 2500 MHz	$3150 / f$

NOTES:

- 1 For the purpose of this Schedule, mean power is as defined in ITU Radio Regulations as the average power over an interval of time which is long compared with the lowest modulating frequency (except for pulse-modulated or intermittent transmissions where mean power is to be taken as peak-envelope-power (PEP) multiplied by duty factor. For duty factors of less than 5 %, mean power is to be taken as 5 % of PEP).
- 2 ***f* is the frequency in MHz.**

J BACKGROUND REGULATORY INFORMATION

J1 Introduction

This Code fits within an existing regulatory scheme that comprises:

- (a) the *Radiocommunications Act 1992*;
- (b) the *Telecommunications Act 1997*, particularly Schedule 3 of that Act;
- (c) the *Telecommunications Code of Practice 1997* issued by the Minister which is made under Schedule 3;
- (d) the *Telecommunications (Low Impact Facilities) Determination 1997*; and
- (e) laws and regulations at State, Territory and Local Government level.

J2 Radiocommunications Act

The *Radiocommunications Act 1992* provides for two main mechanisms for the Australian Communications and Media Authority (ACMA) to regulate EMR from radiocommunications devices:

- (i) under section 162, the ACMA may make mandatory standards to protect the health and safety of people who operate, work on, use or are reasonably likely to be affected by the operation of radiocommunications transmitters; and
- (ii) under section 107, the ACMA is able to determine specific licence conditions with which operators of particular radiocommunications devices must comply.

Using its power to set standards, in March 2003, the ACMA introduced the *Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2003* to apply to certain mobile transmitters including cellular mobile phone facilities and two way radios. Amongst other things, this sets mandatory limits on EMR exposure from such equipment.

Using its power to set licence conditions, in March 2003, the ACMA introduced the *Radiocommunications Licence Conditions (Apparatus Licence) Determination 2003*. Amongst other things, this determination sets certain mandatory limits on public exposure to EMR from mobile base stations operated under an ACMA licence. Carriers operating mobile base stations require a licence from the ACMA and must comply with these licence conditions.

The limits for public exposure to EMR adopted by the ACMA from March 2003 are based on the *Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz*, published by the Australian Radiation and Nuclear Safety Agency (ARPANSA) in 2000, referred to as the ARPANSA Standard.

J3 Telecommunications Act

The *Telecommunications Act 1997* establishes a regime for Carriers' rights and responsibilities when inspecting, maintaining or installing telecommunications facilities.

Schedule 3 provides authority for Carriers to inspect land, maintain facilities or install any declared 'low impact facilities' or temporary defence facilities. Carriers are not obliged to enter into a commercial agreement with the relevant landowners, however, if a person suffers financial loss or damage in relation to their property because of anything a Carrier does in undertaking these activities, the person is entitled to reasonable compensation. When they undertake these activities, Carriers must comply with certain requirements that are set out in Schedule 3 (see below) of the *Telecommunications Act 1997* and additional requirements that have been imposed by the Minister in the *Telecommunications Code of Practice 1997*. These have effect as Carrier licence conditions.

In very general terms, Schedule 3 deals with the conditions on which Carriers must exercise their powers of inspection, maintenance and installation. The conditions deal with, for instance:

- restoration of land;
- doing as little damage as possible;
- the giving of notice to certain interested parties like such as owners and occupiers;
- modification of Carrier obligations by agreement;
- best practice;
- noise;
- compliance with relevant industry standards and codes.

However, Schedule 3 also allows the Minister to set additional conditions in a Code of Practice.

Schedule 3 also provides Carriers with statutory immunity from certain State and Territory laws for inspecting land, maintaining facilities and installing 'low impact facilities'. In effect, Carriers can proceed without development approval or similar from the local authority. However, when they undertake these activities, Carriers must comply with certain requirements set out in Schedule 3 of the *Telecommunications Act 1997* and the *Telecommunications Code of Practice 1997*. This is a condition of a Carrier's licence.

Schedule 3 allows a Carrier to apply to the ACMA for a 'facilities installation permit' (FIP) to carry out installation of facilities where the Carrier does not obtain the approval of the relevant State, Territory or local government body or the owner of the land. However, this process involves onerous obligations and is little used. Further information on FIPs including the permit issue process, compensation for land owners, information for land owners, Carrier's obligations and objection process is available from the Australian Communications and Media Authority's (ACMA) web site at www.acma.gov.au.

J4 Telecommunications Code of Practice 1997

The *Telecommunications Code of Practice 1997* repeats and builds on the obligations that are in Schedule 3. The *Code of Practice* is set out in chapters each of which deals with the obligations on Carriers when undertaking five kinds of

activities. Three of those activities are relevant here. These include inspecting land, installing low impact facilities and maintenance of facilities.

The *Code of Practice* details the procedures a Carrier must follow in relation to issuing a notice to enter, occupy and/or use land, dealing with objections and if necessary, referring the matter to the Telecommunications Industry Ombudsman. (See Section J7 for more details).

The *Code of Practice* imposes various obligations on Carriers, including:

- notice requirements to the Commonwealth Environment Secretary in specified circumstances;
- noise limits;
- a requirement to consider whether infrastructure of a utility or another Carrier is available for the activity (co-location);
- a requirement to take all reasonable steps to use existing facilities for the activity;
- a requirement to cooperate and coordinate their activities with those of other Carriers and utilities; and
- compliance with recognised industry codes and standards.

The additional requirements included in the *Code of Practice* are imposed on the Carriers to minimise damage to the environment when they installing low impact facilities.

J5 The Low Impact Determination

The *Telecommunications (Low-impact Facilities) Determination* (the *Low Impact Determination*) defines what is meant by 'low impact facilities'. The policy rationale for treating 'low impact facilities' differently is to achieve a balance between authorising facilities that are essential to maintaining telecommunications networks, and minimising significant planning or environmental issues of concern to the local community.

The *Low Impact Determination* does not, and cannot, list any aerial cabling or certain (greater than five metres) mobile telecommunications towers. This means that the installation of these facilities, which have been among the most controversial forms of infrastructure, are regulated under State and Territory laws unless the Carrier obtains a facilities installation permit.

As mentioned above, although the installation of 'low impact facilities' is exempt from State and Territory planning laws, Carriers must comply with the relevant requirements in Schedule 3 and the *Telecommunications Code of Practice* including notification of land owners, occupiers and others.

The *Low Impact Determination* and the *Telecommunications Code of Practice* are available at www.dcita.gov.au under Legislation or from Commonwealth Government Bookshops.

J6 State and Territory laws

The planning laws and practices in each State, Territory and local government area differ widely and it is beyond the scope of this Code to summarise them. However, State and Territory governments are progressively introducing codes of practice and statutory controls dealing with new telecommunications facilities under their jurisdiction. These State and Territory wide controls provide design and siting guidelines, measures to protect local heritage and other controls, against which local Councils can assess Development Applications. Readers are advised to make their own enquiries of the relevant planning authority.

J7 Access to land to inspect, install or maintain telecommunications facilities

Schedule 3 of the *Telecommunications Act 1997* gives Carriers very broad powers. In most circumstances, the *Telecommunications Act* requires a Carrier to issue a notice to inspect land, to maintain facilities and install low impact facilities unless the landowner or occupier has waived this entitlement.

A notice issued under the *Telecommunications Act* is sometimes known as a Land Activity and Access Notice (LAAN), a Statutory Notice or a Land Access Notice.

The notice must be in writing and be given to the owner and occupier of the relevant land. However, the statutory notice process is not frequently used by Carriers when installing low impact base stations. The vast majority of low impact sites are secured by commercial negotiation with the land/building owner.

The notice under the *Telecommunications Act* is required to include the following:

- details of the activity that the Carrier intends to carry out including plans;
- reasons why the Carrier intends to carry out the activity;
- the date it intends to start;
- a statement that compensation may be payable if a person suffers any loss or damage under Schedule 3 of the *Telecommunications Act*;
- a statement outlining how to object to any activity.

The Carrier must issue the Notice at least 10 business days before the Carrier intends to start the activity.

Landowners or occupiers who wish to object to the proposed land access must comply with the strict objection procedures and timeframe set out in the *Telecommunications Code of Practice*. They must lodge their objection with the Carrier in writing at least five business days before the Carrier intends to start the activity. The grounds for objection are restricted to the following:

- using the objector's land to engage in the activity;
- the location of a facility on the objector's land;
- the date when the Carrier proposes to start the activity, engage in it or stop it;
- the likely effect of the activity on the objector's land;

- the Carrier's proposals to minimise detriment and inconvenience, and to do as little damage as practicable, to the objector's land.

The Carrier must make reasonable efforts to consult the objector about the objection within five business days after receiving the objection, and resolve it within 20 business days after receiving the objection. Within 25 business days after receiving the objection, the Carrier must tell the objector, in writing:

- whether the Carrier proposes to change the activity, and, if so, how; and
- if the Carrier does not propose to change the activity, why the Carrier will engage in the activity as originally proposed.

If agreement is not reached, the objector can require the Carrier to refer the objection to the Telecommunications Industry Ombudsman (TIO) within five business days of receiving the Carrier's response to its objection. In such circumstances a Carrier cannot proceed until the TIO issues a ruling in the matter.

If the objectors and Carriers reach an agreement or the objector does not request the involvement of the TIO, the Carrier may install the facility.

The TIO is not able to consider the objections where:

- complaints are about non low-impact facilities;
- the objector is not the owner/occupier of the land on which the facility is placed; or
- the objector has not followed the correct objection procedure, unless both parties have agreed to refer the matter to the TIO.

Further information on the Notice is available from www.acma.gov.au and www.tio.com.au.

PARTICIPANTS

The Working Committee responsible for the revisions made to this Code consisted of the following organisations and their representatives:

Organisation	Membership	Representative
Australian Communications and Media Authority (ACMA)	Non-Voting	Michelle Richardson
Mobile Carriers Forum (MCF)	Voting	Matt Evans
NBN Co	Non-voting	George Tzakis
Optus	Non-voting	Howard Game
Rainworth P&C	Voting	Ian Gray
Sutherland Shire Environment Centre	Voting	Lyn McLean
Telstra	Voting	Mike Wood
Vodafone Hutchison Australia	Voting	Roslyn Young / Trudy Schmidt

This Working Committee was chaired by George Tzakis. Lyn McLean was the Deputy Chair. Mike Johns of Communications Alliance provided project management support.

Communications Alliance was formed in 2006 to provide a unified voice for the Australian communications industry and to lead it into the next generation of converging networks, technologies and services.

In pursuing its goals, Communications Alliance offers a forum for the industry to make coherent and constructive contributions to policy development and debate.

Communications Alliance seeks to facilitate open, effective and ethical competition between service providers while ensuring efficient, safe operation of networks, the provision of innovative services and the enhancement of consumer outcomes.

It is committed to the achievement of the policy objective of the Telecommunications Act 1997 - the greatest practicable use of industry self-regulation without imposing undue financial and administrative burdens on industry.



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