

The Senate

Environment and Communications
Legislation Committee

Telecommunications Amendment (Mobile
Phone Towers) Bill 2011

May 2012

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Acronyms and abbreviations

ACIF	Australian Communications Industry Forum
ACIF Code	Code C564:2004 Deployment of Mobile Phone Network Infrastructure
ACMA	Australian Communications and Media Authority
ALGA	Australian Local Government Association
AMTA	Australian Mobile Telecommunications Association
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
CEO	Chief Executive Officer
DBCDE	Department of Broadband, Communications and the Digital Economy
EME	electromagnetic energy
EMR	electromagnetic radiation
ICNIRP	International Commission on Non-Ionising Radiation Protection
industry code	Code C564:2011 Mobile Phone Base Station Deployment
LAANs	Land Access and Activity Notices
RF	radiofrequency
the Act	<i>Telecommunications Act 1997</i>
the bill	Telecommunications Amendment (Mobile Phone Towers) Bill 2011
the committee	Senate Environment and Communications Legislation Committee
the determination	Telecommunications (Low-impact Facilities) Determination 1997
the Wilkie bill	Telecommunications Amendment (Enhancing Community Consultation) Bill 2011
SAR	specific absorption rate
TAG	Tower Action Group

TIO	Telecommunications Industry Ombudsman
USO	Universal Service Obligation
WHAAT!	Worried Householders Action Against Tower

Chapter 1

Introduction

Conduct of the inquiry

1.1 On 9 February 2012, the Senate referred the Telecommunications Amendment (Mobile Phone Towers) Bill 2011 (the bill) to the Senate Environment and Communications Legislation Committee (the committee) for inquiry and report by 9 May 2012.¹

1.2 The reason given for referral of the bill through was:

To allow opportunity for detailed consideration of the Bill and to allow the Committee to hear from stakeholders and consider the practical implications of the Bill.²

1.3 In accordance with usual practice, the committee advertised the inquiry on its website. In addition, the committee wrote to relevant organisations inviting submissions. The committee received 56 submissions (see Appendix 1) and held one public hearing in Canberra on 12 April 2012 (see Appendix 2).

1.4 The committee would like to thank the organisations and individuals that made submissions to the inquiry and the representatives who gave evidence at the public hearing.

Purpose of the bill

1.5 The bill is a private senators' bill introduced by Senator Bob Brown on 14 September 2011.³ In his second reading speech, Senator Brown stated that the bill aims to:

...introduce the precautionary principle for the installation of mobile phone facilities, to improve consultation with communities, scrutiny of site choices and expand the opportunities for appeal.⁴

1.6 To achieve these aims the bill seeks to amend the powers and immunities regime contained in the *Telecommunications Act 1997* (the Act) to:

1 Commonwealth of Australia, *Journals of the Senate*, 9 February 2012, pp 2089–2090.

2 Senate Selection of Bills Committee, *Report No. 1 of 2012*, www.aph.gov.au/Parliamentary_Business/Committees/Senate_Committees?url=selectionbills_ctte/reports/2012/rep0112.htm (accessed 28 March 2012), Appendix 4, p. 7.

3 Commonwealth of Australia, *Journals of the Senate*, 14 September 2011, p. 1463.

4 Senator Bob Brown, *Senate Hansard*, 14 September 2012, p. 6092.

- expand the definition of "tower" in relation to the installation of a facility to include an antenna, aerial, dish or other attachment;
- ensure that a tower cannot be the subject of a low impact determination made by the minister;
- ensure that maintenance of a facility does not include any activity that increases the electromagnetic radiation emitted by the facility;
- create notification and consultation requirements on carriers in relation to owners and occupiers of land within 500 metres of a facility that will emit electromagnetic radiation;
- provide that no facility can be located within 200 metres of a community sensitive site;
- require carriers to provide electromagnetic radiation exposure maps and five-year plans for facility development; and
- insert a definition of the precautionary principle.⁵

1.7 The bill seeks to provide greater opportunities for people to appeal decisions made by the Australian Communications and Media Authority (ACMA) in relation to the granting of installation permits.⁶ The ACMA would also be required to inform members of the public of the location of telecommunications towers and provide electromagnetic emissions exposure maps.

1.8 The bill also seeks to amend the *Australian Radiation Protection and Nuclear Safety Act 1998* to require the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), through the Radiation Health and Safety Advisory Council, to review radiofrequency exposure standards every five years, with the first review to be completed within 6 months of the commencement of the bill.

House of Representatives inquiry

1.9 On 19 September 2011, Mr Andrew Wilkie MP, introduced the Telecommunications Amendment (Enhancing Community Consultation) Bill 2011 (the Wilkie bill) into the House of Representatives. The Wilkie bill has similar aims to Senator Brown's bill and seeks to:

...expand the requirements of telecommunications carriers to notify and consult affected residents when installing mobile phone towers and other related infrastructure. The bill also aims to restrict the allowable distance

5 Explanatory Memorandum, pp 3–4.

6 Explanatory Memorandum, p. 4.

between a tower and a site that is regarded as 'community-sensitive' and to limit the size of tower extensions.⁷

1.10 The Wilkie bill was referred to the House Standing Committee on Infrastructure and Communications on 22 September 2011 for inquiry and report. The advisory report on the bill was tabled on 21 March 2012 and recommended that the House of Representatives not pass the bill.⁸

1.11 The House Standing Committee concluded that:

...the bill, as currently proposed, would not meet its objectives of strengthening the role of the community in the decision-making processes by carriers. Furthermore, essential routine activities by carriers, which would generally be of little concern to the community, will likely be severely disrupted by the consultation requirements of the bill.⁹

1.12 As at 9 May 2012 the Wilkie bill is before the House of Representatives for debate.¹⁰

Report structure

1.13 This report is divided into two substantive chapters. Chapter 2 briefly outlines the policy context in which the legislation is proposed. Chapter 3 then discusses key issues raised during the course of the committee's inquiry and outlines the committee's recommendation.

7 House of Representatives Standing Committee on Infrastructure and Communications, *Advisory report on the Telecommunications Amendment (Enhancing Community Consultation) Bill 2011*, www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=ic/telecommunications/report.htm (accessed 28 March 2012), p. 1.

8 House of Representatives Standing Committee on Infrastructure and Communications, *Advisory report on the Telecommunications Amendment (Enhancing Community Consultation) Bill 2011*, p. 29.

9 House of Representatives Standing Committee on Infrastructure and Communications, *Advisory report on the Telecommunications Amendment (Enhancing Community Consultation) Bill 2011*, p. 29.

10 Commonwealth of Australia, *Votes and Proceedings*, No. 100, 21 March 2012, p. 1360.

Chapter 2

Background

Current regulatory framework

2.1 The primary Commonwealth legislation regulating the telecommunications industry is the *Telecommunications Act 1997* (the Act). The broad objects of the Act are to provide a regulatory framework that promotes the long-term interests of end-users of carriage services and to promote the efficiency and international competitiveness of the Australian telecommunications industry.¹

2.2 The Act is also intended to ensure that standard telephone services, payphones and other carriage services of social importance are:

- reasonably accessible to all Australians wherever they reside or carry on business;
- supplied as efficiently and economically as possible; and
- supplied at performance standards that reasonably meet the social needs of the Australian community.²

2.3 In addition to ensuring the provision of services, the Act is intended to provide appropriate community safeguards in relation to telecommunications activities and to regulate adequately participants in sections of the Australian telecommunications industry.³

2.4 The Act further specifies that telecommunications be regulated in a manner that:

Promotes the greatest practicable use of industry self-regulation and does not impose undue financial and administrative burdens on participants in the Australian telecommunications industry.⁴

Carriers' powers and immunities

2.5 In order for carriers to comply with and carry out the objectives of the Act, they are required to install and maintain telecommunications infrastructure.⁵

1 *Telecommunications Act 1997*, Part 1, ss. 3(1).

2 *Telecommunications Act 1997*, Part 1, ss. 3(2).

3 *Telecommunications Act 1997*, Part 1, para. 3(2)(h).

4 *Telecommunications Act 1997*, Part 1, ss. 4(a)–(b).

2.6 To this end, Schedule 3 of the Act provides telecommunication carriers with powers and immunities to inspect land to determine whether it is suitable for the carriers' purposes, install a facility on that land, and to maintain a facility that is situated on that land.⁶

2.7 The power for a carrier to install a facility may only be exercised if the carrier holds an installation permit and the facility is a low impact facility, temporary facility, or is used by a defence organisation for defence purposes.⁷ The installation of any other type of facility is regulated by state and territory planning laws.

2.8 In exercising these powers a carrier must comply with certain conditions, including:

- doing as little damage as practicable;
- acting in accordance with good engineering practice;
- complying with recognised industry standards;
- complying with conditions specified in a facility installation permit;
- complying with conditions specified in regulations and the Ministerial Code of Practice; and
- giving notice to the owner of the land.⁸

2.9 Schedule 3 also provides immunity to carriers from some state and territory laws, including planning laws, when carrying out activities to install or maintain facilities.⁹

Inspection of land and installation of facilities

2.10 The Act provides the telecommunications carrier with the power to inspect any land to determine whether it is suitable for its purposes.¹⁰ Carriers may enter and inspect land and do anything on the land that is necessary for its purposes, including:

- making surveys, taking levels, sinking bores, taking samples, digging pits and examining soil;

5 A carrier is defined in the *Telecommunications Act 1997* as a holder of a carrier licence. A carrier licence is provided by the ACMA to applicants that are a constitutional corporation, an eligible partnership, or a public body. The applicant must also meet additional criteria set out in Division 3 of the Act.

6 The powers to enter, inspect, occupy and do anything else on, over or under the land also extend to employees of the carrier and persons acting for the carrier under contract. See Schedule 3, clause 43 of the Act.

7 *Telecommunications Act 1997*, Schedule 3, s. 6.

8 *Telecommunications Act 1997*, Schedule 3, s. 8–20.

9 *Telecommunications Act 1997*, Schedule 3, s. 36–39.

10 *Telecommunications Act 1997*, Schedule 3, ss. 5(1).

- felling and lopping trees and clearing other vegetation;
- closing, diverting or narrowing a bridge or road;
- altering the position of an electricity cable or water, sewerage or gas main or pipe.¹¹

2.11 Following a carrier's inspection of the land they may, for purposes connected with the supply of a carriage service, carry out the installation of a facility if:

- the carrier is authorised to do so by a facility installation permit; or
- the facility is a low impact facility; or
- the facility is a temporary facility for use by a defence organisation for defence purposes; or
- the installation is carried out for the sole purpose of connecting a building or structure to a line that forms part of a telecommunications network.¹²

2.12 If, after meeting these criteria, a carrier is authorised to carry out an installation, the carrier may enter on, and occupy, any land for the purposes of erecting a facility. The carrier may also do anything necessary or desirable to install the facility including:

- constructing, erecting and placing any plant, machinery or equipment;
- felling and lopping trees and clearing and removing vegetation;
- making cuttings and evacuations;
- restoring the surface of the land;
- erecting temporary workshops, sheds and other buildings; and
- levelling the surface of the land and making roads.¹³

Notification

2.13 Before engaging in any activity authorised under the Act on any land, a carrier must give written notice of its intention to do so to:

- the owner of the land; and
- if the land is occupied by a person other than the owner—the occupier.¹⁴

2.14 The notice must specify the purpose for which the carrier intends to engage in the activity. It must also contain a statement to the effect that, if a person suffers

11 *Telecommunications Act 1997*, Schedule 3, s. 5.

12 *Telecommunications Act 1997*, Schedule 3, ss. 6(1).

13 *Telecommunications Act 1997*, Schedule 3, para. 6(2)(a)–(b).

14 *Telecommunications Act 1997*, Schedule 3, s. 17.

financial loss or damage in relation to property because of anything done by a carrier in engaging in the activity, compensation may be payable.¹⁵

2.15 The notice must be given at least 10 business days before the carrier begins to engage in the activity.¹⁶ The notice need only be given 2 business days before a carrier begins work if the activity:

- is not inconsistent with Australia's obligations under a listed international agreement;
- could not have an effect on a threatened species or plant community;
- will not have an adverse effect on a streetscape or other landscape; and
- will not have an impact on a World Heritage property, Ramsar wetland, or a listed heritage property.¹⁷

2.16 The requirement for carriers to notify owners or occupiers of land does not apply if the activities associated with inspecting the land, installing facilities or maintaining facilities need to be carried out without delay in order to:

- protect the integrity of a telecommunications network or facility; or
- the health or safety of persons; or
- the environment; or
- property; or
- the maintenance of an adequate service level.

2.17 Carriers are also not required to give notice in relation to the installation, proposed installation or maintenance of a temporary defence facility if the carrier considers that compliance is impracticable in the circumstances.¹⁸

2.18 Further, carriers do not have to give notice to engage in the inspection of land that is a public place provided there is no impact to threatened species, adverse impact on a streetscape or other landscape, or will not have an impact on a listed heritage property.¹⁹

2.19 If a carrier is unable, after diligent inquiry, to find out who owns particular land, the carrier may serve a notice by publishing a copy in a newspaper circulating in the district or attaching a copy of the notice to a conspicuous part of the land.²⁰

15 *Telecommunications Act 1997*, Schedule 3, ss. 17(3).

16 *Telecommunications Act 1997*, Schedule 3, ss. 17(4A).

17 *Telecommunications Act 1997*, Schedule 3, ss. 17(4A).

18 *Telecommunications Act 1997*, Schedule 3, ss. 17(6A).

19 *Telecommunications Act 1997*, Schedule 3, ss. 17(7).

20 *Telecommunications Act 1997*, Schedule 3, ss. 54(1).

2.20 If a carrier is unable, after diligent inquiry, to find out who occupies particular land, the carrier may treat the land as unoccupied.²¹

Low-impact facilities

2.21 Licensed carriers are authorised under the Act to install a limited range of facilities without seeking state, territory or local government approval. The most common of these are known as low-impact facilities.

2.22 The minister has the power under the Act to determine that a specified facility is a low-impact facility.²² Infrastructure classified as low-impact facilities are contained in the Telecommunications (Low-impact Facilities) Determination 1997 (the determination).

2.23 Low-impact facilities include small radiocommunications antennae and dishes that are erected on existing towers or buildings that are designed to be unobtrusive.²³ Other types of low-impact facilities include underground and above ground housing, underground cables, public payphones and temporary emergency facilities. The full list of low-impact facilities are contained in Appendix 3.

2.24 The determination defines where low-impact facilities may be installed based on the zoning of the site as commercial, industrial, residential or rural under state or territory laws.²⁴ For example, a facility that is deemed to be low-impact in a rural or industrial area may not be low-impact in a residential area.

2.25 Low-impact facilities are also prohibited from being installed in areas of environmental significance.²⁵

2.26 Under the Act, certain facilities cannot be designated as low-impact facilities, including:

- designated overhead lines;
- a tower that is not attached to a building;
- a tower attached to a building more than 5 metres high;
- an extension to a tower that has previously been extended; and
- an extension to a tower, if the extension is more than 5 metres high.²⁶

21 *Telecommunications Act 1997*, Schedule 3, ss.54(2).

22 *Telecommunications Act 1997*, Schedule 3, ss. 6(3).

23 Telecommunications (Low-impact Facilities) Determination 1997, Part 3.

24 Telecommunications (Low-impact Facilities) Determination 1997, s. 1.2.

25 Telecommunications (Low-impact Facilities) Determination 1997, s. 2.5.

26 *Telecommunications Act 1997*, schedule 3, ss. 6(4), (5), and (7).

2.27 Neither the Department of Broadband, Communications and the Digital Economy (DBCDE) nor the Australian Communications and Media Authority (ACMA) have a role in adjudicating whether or not a particular installation is a low-impact facility. Binding determinations as to whether a facility is a low-impact facility are made by courts, typically in response to proceedings commenced by state, territory or local governments.²⁷

Electromagnetic energy (EME) regulation

2.28 Carriers must also comply with legislation that limits the exposure from telecommunications facilities of electromagnetic energy (EME; also referred to as EMR, electromagnetic radiation). These requirements are specified in the *Radiocommunications Act 1992* and the following legislative instruments:

- The Radiocommunications Licence Conditions (Apparatus Licence) Determination 2003 and the Radiocommunications Licence Conditions (Temporary Community Broadcasting Licence) Determination 2003 which set out the circumstances under which a transmitter may be operated to communicate with another station and the conditions regulating human exposure to EMR emitted by a transmitter; and
- The Radiocommunications (Electromagnetic Radiation – Human Exposure) Standard 2003 which regulates the performance of particular radiocommunications transmitters, to protect the health and safety of persons exposed to electromagnetic radiation from the transmitters.²⁸

Codes of practice²⁹

2.29 In addition to the legislation described above, carriers must also comply with conditions specified in enforceable ministerial and industry codes which supplement the Act.

Telecommunications Code of Practice 1997

2.30 The Act requires the minister to create a Code of Practice setting out conditions carriers must comply with when conducting activities allowed under the

27 Australian Communications and Media Authority (ACMA), 'Telecommunications: Legislation & regulation', www.acma.gov.au/WEB/STANDARD/pc=PC_2889 (accessed 17 April 2012).

28 House of Representatives Standing Committee on Infrastructure and Communications, *Advisory report on the Telecommunications Amendment (Enhancing Community Consultation) Bill 2011*, www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=ic/telecommunications/report.htm (accessed 28 March 2012), pp 6–7.

29 Please note that some of the material contained in this chapter is drawn from the House of Representatives Standing Committee on Infrastructure and Communications' *Advisory report on the Telecommunications Amendment (Enhancing Community Consultation) Bill 2011*.

Act, including the installation of low-impact facilities.³⁰ This is known as the Ministerial Code of Practice or ministerial code.

2.31 The current version of the ministerial code is the Telecommunications Code of Practice 1997 which requires carriers to:

- ensure as little detriment, damage and inconvenience as practicable is caused;
- act in accordance with good engineering practice;
- protect the safety of persons and property;
- protect the environment;
- notify the owner and occupier of the land at least 10 business days before commencing the installation; and
- make any reasonable efforts to consult with, and resolve the objection from, any owner or occupier who makes a written objection.³¹

2.32 The code also specifies the rule under which land owners and occupiers can object to the activities of carriers, including referral of complaints to the Telecommunications Industry Ombudsman (TIO).³²

Industry codes

2.33 In addition to the ministerial code, the Act requires a carrier to comply with the recognised industry code when carrying out activities authorised under the Act.³³ The ACMA is responsible for registering codes of practice that have been developed and submitted by the industry.

2.34 The registered industry code of most relevance to the bill is the Australian Communications Industry Forum (ACIF) Code C564:2004, Deployment of Mobile Phone Network Infrastructure (the ACIF Code).³⁴ This code applies to all carriers who install infrastructure used to provide public mobile telecommunications services, and includes directions to telecommunications carriers when deciding where to place a telecommunications facility (for example a mobile phone base station). The ACIF Code also outlines requirements for community consultation, for the notification to local councils where the installation of a facility does not require development approval, and specifies the approaches that carriers must take to minimise EME exposure.

30 *Telecommunications Act 1997*, Schedule 3, s.15.

31 *Telecommunications Code of Practice 1997*, s. 2.3–2.13

32 *Telecommunications Code of Practice 1997*, s. 4.36–4.38.

33 *Telecommunications Code of Practice 1997*, Schedule 3, clause 12.

34 ACIF, *Industry Code ACIF C564:2004 Deployment of Mobile Phone Network Infrastructure*, 30 March 2006, [www.acma.gov.au/webwr/telcomm/industry_codes/codes/c564_2004\(1\).pdf](http://www.acma.gov.au/webwr/telcomm/industry_codes/codes/c564_2004(1).pdf) (accessed 20 April 2012).

2.35 The objectives of the ACIF Code are to:

- apply a precautionary approach to the deployment of radiocommunications infrastructure;
- provide best practice processes for demonstrating compliance with relevant exposure limits and the protection of the public;
- ensure relevant stakeholders are informed and consulted before radiocommunications infrastructure is constructed;
- specify standards for consultation, information availability and presentation;
- consider the impact on the wellbeing of the community, physical or otherwise, of radiocommunications infrastructure; and
- ensure council and community views are incorporated into the radiocommunications infrastructure site selection.

2.36 Regulations designed to minimise exposure to EME emissions from telecommunications facilities are also specified under the precautionary principle requirements of the ACIF Code. Under these requirements carriers must have regards to a number of issues including:

- the reason for the installation of the infrastructure, considering coverage, capacity and quality;
- the positioning of antennae to minimise obstruction of radio signals;
- the objective of restricting access to areas where radiofrequency (RF) exposure may exceed limits of the EME standards; and
- the objective of minimising power whilst meeting service objectives.

2.37 According to the ACIF Code, if the radiocommunications infrastructure is associated with a base station used for the supply of public mobile telecommunications services, site EME assessment must be made in accordance with the prediction methodology and report format of the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

2.38 The ACMA may request a copy of such a site EME estimate, and the carrier must provide this estimate within two weeks. A carrier must also notify council of all proposed low RF power infrastructure under its control and also notify any occupiers of residences in close proximity of all proposed low RF power infrastructure and fixed radio links.

2.39 In addition, carriers must:

- demonstrate compliance with the ACMA EME regulations regarding maximum human exposure limits for RF fields;
- take appropriate measures to restrict general public access to RF hazard areas; and

- ensure warning signs are in place for each RF hazard area so that they are clearly visible.

Revised industry code

2.40 The current ACIF Code is due to be replaced by the Communications Alliance Industry Code C564:2011 Mobile Phone Base Station Deployment (the industry code) on 1 July 2012.³⁵ The revised code is currently awaiting registration by the ACMA.³⁶

2.41 Briefly, the purpose of the changes to the industry code are to:

- require carriers to continue to develop the consultation plan for new proposals;
- improve transparency and visibility of the consultation process with local council and communities;
- increase the 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 (for example via a 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 Radiofrequency 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.³⁷

35 Communications Alliance, *Codes*, <http://commsalliance.com.au/Publications/all/codes/c564> (accessed 20 April 2012).

36 Mr John Stanton, Chief Executive Officer, Communications Alliance, *Proof Committee Hansard*, 12 April 2012, p. 14.

37 Communications Alliance, *Industry Code C564: 2011 Mobile Phone Base Station Deployment*, available: http://www.commsalliance.com.au/_data/assets/pdf_file/0018/32634/C564_2011.pdf (accessed 1 May 2012), pp i–ii.

The role of the ACMA and ARPANSA

2.42 The ACMA is the Commonwealth Government agency responsible for the regulation of broadcasting, the internet, radiocommunications and telecommunications.³⁸ As such, it is responsible for ensuring regulators comply with Schedule 3 of the Act.

2.43 The ACMA described its role with respect to Schedule 3 of the Act:

ACMA is the communications regulator for the Commonwealth. It manages public resources such as the radio-frequency spectrum and telecommunications numbers. In those areas, in a lot of the activities that the ACMA conducts and where it is most visible, the ACMA issues licences or allocates numbers. We normally grant regulatory permissions to industry but sometimes to the community or individual Australians to access and use those resources. With regard to Schedule 3, the situation is different. The parliament has set up a regulatory arrangement that confers powers and immunities on carriers or their agents, and carriers and their agents have responsibility to comply with Schedule 3 and, subsequently, the low-impact facilities determination. But the ACMA is not in a position where it grants a regulatory permission to a carrier or is able to withdraw it. Those powers have been established by the parliament and augmented by the minister.

The role of the ACMA is to ensure that carriers and their agents comply with the conditions that apply to the exercise of those powers under Schedule 3. So we are not actually in a position where we give permission to or are able to withdraw permission from carriers, which is not to say that we do not have a compliance enforcement role, but we are not allocating a resource to people in the way that we do as a spectrum manager or as the numbering manager.³⁹

2.44 ARPANSA is the Commonwealth Government agency responsible 'for protecting the health and safety of people, and the environment, from the harmful effects of ionising and non-ionising radiation'.⁴⁰

2.45 With respect to mobile phone towers, ARPANSA provided the following explanation about its role:

Mobile phone base stations include radio transmitters that radiate electromagnetic energy (EME), also known as Radiofrequency EME (RF EME), into the surrounding area. The levels of these electromagnetic fields must comply with safety limits imposed by the Australian Communications

38 ACMA, *About us*, available: http://www.acma.gov.au/WEB/STANDARD/pc=ACMA_ROLE_OVIEW (accessed 1 May 2012).

39 Mr Mark Loney, Executive Manager, Operations Branch, ACMA, *Committee Hansard*, 12 April 2012, p. 41.

40 ARPANSA, *About us*, <http://www.arpansa.gov.au/AboutUs/index.cfm> (accessed 7 May 2012).

and Media Authority (ACMA) in the Radiocommunications Licence Conditions (Apparatus Licence) Determination 2003. (ACMA is a statutory authority within the Department of Broadband, Communications and the Digital Economy.) The safety limits in this document are based on the ARPANSA Radiation Protection Standard - Maximum Exposure Levels to Radiofrequency Fields - 3kHz to 300GHz.

ACMA also requires compliance with industry codes of practice including the Australian Communications Industry Forum (ACIF - now called Communications Alliance Ltd) C564:2004 Industry Code – Deployment of Mobile Phone Network Infrastructure. (This code has recently undergone review, including public consultation, but is yet to be adopted by ACMA.)

Under this code, the operators of mobile phone networks (carriers) have certain obligations when planning, installing or upgrading mobile phone base stations. These include providing information about predicted levels of EME in the vicinity of a new or upgraded facility. The Code requires this information to be prepared in accordance with the ARPANSA Prediction Methodology and presented as a report in an approved ARPANSA Environmental EME Report format. Environmental EME Reports for almost every Australian mobile phone base station, in metropolitan and regional areas, can be found in the Radio Frequency National Site Archive.

The ARPANSA and the State and Territory radiation regulatory authorities have no regulation of RF EME emissions from mobile phone base stations. Only a small part of the ARPANSA Standard is captured by the ACMA regulatory framework and the bulk of the Standard remains non mandatory.⁴¹

2.46 The Radiation Health and Safety Advisory Council provides advice to ARPANSA. In detail, the role of the council is:

- to identify emerging issues relating to radiation protection and nuclear safety and to advise the CEO [of ARPANSA] on them;
- to examine matters of major concern to the community in relation to radiation protection and nuclear safety and to advise the CEO on them;
- to advise the CEO on the adoption of recommendations, policies, codes and standards in relation to radiation protection and nuclear safety;
- to advise the CEO, at the CEO's request, on other matters relating to radiation protection and nuclear safety;
- to advise the CEO on such other matters relating to radiation protection and nuclear safety as the Council considers appropriate;

41 Australian Radiation Protection and Safety Agency (ARPANSA), *Supplementary Submission*, pp 2–3.

- to report to the CEO on matters relating to radiation protection and nuclear safety.⁴²

Key issues regarding the bill

2.47 The following chapter, Chapter 3, examines key issues raised during the course of the inquiry. These issues include:

- notification and consultation processes;
- EME emission standards; and
- potential costs and unintended consequences arising as a result of the bill.

42 *Australian Radiation Protection and Nuclear Safety Act 1998*, section 20.

Chapter 3

Discussion of key issues

3.1 Many community groups and individuals supported the bill and believed that the additional requirements for carriers to consult more widely would result in better community consultation and improved rollout of telecommunications infrastructure.¹

3.2 The bill's requirement for regular independent reviews of electromagnetic energy (EME) was also strongly supported by community groups and individuals.² The application of the precautionary principle to EME was seen by these groups as an important safeguard against any potential health issues caused by non-ionising radiation of the type associated with mobile telecommunications.

3.3 The bill was opposed by telecommunication carriers and their industry representatives.³ According to these groups the bill would only serve to duplicate consultation requirements that are already imposed on carriers in existing codes and legislation. They argued the bill would also impose significant costs on carriers and would delay the rollout and repair of telecommunications infrastructure.

3.4 It was suggested by telecommunications carriers and the Department of Broadband, Communications and the Digital Economy (DBCDE) alike that the bill may have unintended consequences relating to the deployment and maintenance of telecommunications infrastructure, such as emergency communications facilities, simple maintenance issues and state and territory planning legislation.

3.5 As part of this inquiry many individuals and community groups raised concerns about individual telecommunications installations occurring in their area. The committee would like to reiterate that it is not the committee's role to investigate or pursue individual cases.

1 For example see: Mr and Mrs Guy Maxwell, *Submission 4*; Mr Steven Green, *Submission 10*; Mrs Judy Thomas, *Submission 11*; Ms Jacqui Godwin, *Submission 14*; Mr Robert Taylor, *Submission 15*; Ms Bronwyn Johnstone, *Submission 16*; The Rivermouth Action Group Inc, *Submission 17*; Mrs Rhonda Hynes, *Submission 18*; Mrs Anthea Hopkins, *Submission 23*; Ms Wendy Taylor, *Submission 29*; and Ms Carol Parkinson, *Submission 38*.

2 For example see: Dr Jason Whitehead and Dr Fiona Taylor, *Submission 2*; Name withheld, *Submission 7*; Mrs Judy Thomas, *Submission 11*; Ms Joy O'Farrell, *Submission 13*; Ms Jacqui Godwin, *Submission 14*; Mr Robert Taylor, *Submission 15*; Ms Rhonda Hynes, *Submission 18*; Ms Rhonda Orso, *Submission 19*; Ms Ruth Valentine, *Submission 20*; Dr Don Maisch, *Submission 22*; Mr Enrico Grani, *Submission 35*; Ms Wendy McClelland, *Submission 43*; and Mrs Lynne McDonald, *Submission 56*.

3 For example see: Crown Castle, *Submission 5*; Telstra, *Submission 8*; Communications Alliance, *Submission 21*; AMTA, *Submission 33*; Optus, *Submission 36*; and Vodafone Hutchinson Australia, *Submission 46*.

3.6 As mentioned in Chapter 2, this chapter discusses key issues raised during the course of the inquiry, namely the requirement of carriers to notify and consult with landowners and community groups and the issue of EME. The chapter also examines potential costs and unintended consequences associated with the bill.

Notification, consultation and the complaints process

Notification

3.7 The bill seeks to impose additional requirements on carriers to notify land owners and communities of proposed installation or maintenance of telecommunications infrastructure. The bill would provide for changes to the current Ministerial Code of Practice so that telecommunication carriers must:

- notify and consult with owners and occupiers of land within 500 metres of any facility that will emit electromagnetic radiation; and
- provide full disclosure plans for the facility being installed (including cumulative electromagnetic emission reports and the likelihood of co-locations and upgrades) and the reasons for the selection of the site.⁴

3.8 The bill would also increase from 10 business days to 30 business days the time at which a carrier must give notice to owners and occupiers of the carrier's intention to conduct work.⁵

3.9 There was widespread support from individuals and community organisations for these provisions in the bill.⁶ It was felt that at present there is an overall lack of community power and too much control residing with the telecommunications carriers. The Worried Householders Action Against Tower group (WHAAT!) asked:

...that the Telecommunications Act be amended to allow citizens to live safely in their homes, without the fear of Telecommunications companies sitting in an office, looking at a map and deciding the highest point in a town and deciding that spot is the best for their business, so they will forge forward, no matter what objection is raised by residents or agencies. If Telecommunications companies want to build, the wellbeing of the citizens must be paramount and residents must be consulted.⁷

3.10 The extension to the timeframe for notification was welcomed by a number of submitters who felt that 10 business days did not provide sufficient time for individuals and communities to organise themselves to discuss carriers' intentions. WHAAT! informed the committee that:

4 Telecommunications Amendment (Mobile Phone Towers) Bill 2011, clause 12.

5 Telecommunications Amendment (Mobile Phone Towers) Bill 2011, clause 14.

6 For example see: Mrs Anthea Hopkins, *Submission 23*; WHAAT! *Submission 39*; Mr Ian Gray, *Submission 41*; No Towers Near Schools, *Submission 48*; and TAG, *Submission 51*.

7 WHAAT! *Submission 39*, p. 8.

Such a short notice time to reply is blatantly unfair. It takes time for residents surrounding the proposed site, who in many cases do not know each other, to even call a meeting to discuss the way forward.⁸

3.11 Mrs Anthea Hopkins similarly argued that:

The existing 10 day response period provided to communities is highly inadequate and is not nearly long enough to allow the community to provide an informed response...Anything shorter [than the 30 days] will unfairly disadvantage community members and not be representative of a genuine effort to consider community consultation. A shorter period would particularly disadvantage those in isolated locations, the elderly, those with disabilities, health issues or those who need to access translation services.⁹

3.12 Community groups also wanted to ensure that their concerns are heard from the very beginning of the planning and development process. Ms Sue Hetherington of WHAAT! described an example where despite a carrier undertaking planning for two years, the community was only notified of the installation of a telecommunications facility 10 days prior to the installation commencing (as per the current requirements).¹⁰

3.13 These provisions in the bill were opposed by carriers and the Australian Mobile Telecommunications Association (AMTA) on the basis they would duplicate existing requirements, increase costs and make maintenance work extremely difficult.¹¹

3.14 AMTA submitted that the telecommunications industry has 'adequately demonstrated its willingness to notify properties in the surrounding area pursuant to the provisions of the Industry Code for Deployment of Mobile Phone Network Infrastructure'.¹²

3.15 The industry code, developed by the industry with input from community groups and local government, requires carriers to provide at least 10 business days notice for community consultation: AMTA emphasised that this is consistent with local government development application notice periods.¹³

8 WHAAT!, *Submission 39*, p. 3.

9 Mrs Anthea Hopkins, *Submission 23*, p. 5.

10 Ms Sue Hetherington, Group Facilitator, WHAAT!, *Proof Committee Hansard*, 12 April 2012, p. 7.

11 See Telstra Corporation, *Submission 8*; AMTA, *Submission 33*; Optus, *Submission 36*; and Vodafone Hutchinson Australia, *Submission 46*.

12 AMTA, *Submission 33*, p. 30.

13 AMTA, *Submission 33*, p. 33.

3.16 According to AMTA, a 30 day notification period for some projects might be feasible.¹⁴ However, AMTA was of the opinion that for most projects the imposition of a lengthy notification period would 'materially obstruct the carrier's ability to respond to customer demand and carry out standard network maintenance'.¹⁵ AMTA noted that:

Scheduling these activities around weather, project readiness, and staff and equipment availability is a considerable logistical challenge, and an increased notification period will substantially impede this ability.¹⁶

3.17 AMTA further informed the committee that the revised industry code will extend the notification period from 10 business days to 15 business days.¹⁷

3.18 Carriers and AMTA were also opposed to the proposed requirement for notification to be given to owners and occupiers within a 500 metre radius of an installation. It was suggested by AMTA that:

The logistics and costs associated with indentifying all owners and occupiers within 500m is a very difficult task requiring (but not limited to) searching council records (where this is not restricted) and undertaking a formal Title Search. These activities would place a significant administrative burden on State Titles officers (where this is not automated) and Councils.¹⁸

3.19 Telstra echoed these concerns and informed the committee that it undertakes approximately 10 000 maintenance activities every year.¹⁹ Under the bill the number of individual notices required could increase to 400 000 notices annually (based on there being 40 owners/occupiers within the 500 metre radius).²⁰ Telstra estimated that at a cost of \$250 to prepare and send each individual notice, the additional notices required could cost the company \$100 million annually.²¹

3.20 Similarly, AMTA quoted a Deloitte Access Economics report estimating that the additional annual costs resulting from the bill for maintenance activities could reach \$1.42 billion dollars per annum.²²

14 AMTA, *Submission 33*, p. 32.

15 AMTA, *Submission 33*, p. 32.

16 AMTA, *Submission 33*, p. 32.

17 AMTA, *Submission 33*, p. 33.

18 AMTA, *Submission 33*, p. 30.

19 Telstra, *Submission 8*, p. 3.

20 Telstra, *Submission 8*, p. 3.

21 Telstra, *Submission 8*, p. 11.

22 AMTA, *Submission 33*, p. 31.

3.21 Telstra also raised concerns that the bill would require notifications to be issued for all maintenance activities and all low-impact facility installations which relate to radiocommunications infrastructure. Telstra stated that 'the range of activities caught by the new notification requirements in the bill is very broad and extends beyond facilities which themselves emit EME'.²³ Telstra believed the new provisions would require notification to be given for upgrading old technology antennae, reinforcing lattice towers damaged by corrosion, lifecycle replacement of batteries and feeder cabling, and like-for-like "swap-outs" of towers.²⁴

3.22 DBCDE advised the committee that the bill's provisions for increased notification could result in delays for infrastructure rollouts and maintenance in emergencies.²⁵ The provisions may also limit a carrier's ability to provide reliable services thus impacting on their ability to carry out other statutory requirements, such as the Customer Service Guarantee.²⁶

Consultation

3.23 The bill seeks to require carriers to consult with owners and occupiers of land within 500 metres of any facility that will emit EME.²⁷

3.24 The Tower Action Group submitted that:

At present, it would seem that community consultation is only undertaken as a last resort, well after leases have been signed, locations chosen and decision essentially made; consultation is presently seen by carriers as just 'one box to be ticked' rather than as a way of actively dealing with and listening to the concerns of local communities....We believe that community consultation is essential in the siting of telecommunications facility [sic], especially at sites close to, or potentially close to, community sensitive sites.²⁸

3.25 Mrs Anthea Hopkins was similarly concerned that at present community concerns are not always listened to:

Objections received by carriers, from the community or from councils, carry no weight and the carrier has no obligation (not even under the revised ACIF Code) to alter their plans in any way in response. Proper consultation should mean, that not only are communities properly notified and informed about proposals, and given the opportunity to respond, but

23 Telstra, *Submission 8*, p. 8.

24 Telstra, *Submission 8*, pp 8–9.

25 DBCDE, *Submission 42*, p. 8.

26 DBCDE, *Submission 42*, pp 7–8.

27 Telecommunications Amendment (Mobile Phone Towers) Bill 2011, para. 12(1A)(a).

28 TAG, *Submission 51*, p. 4.

that their responses have some weight in the consultation process, and must be properly addressed by carriers.²⁹

3.26 In response to claims such as these, AMTA opined that the current ACIF industry code and the revised edition currently awaiting approval from the Australian Communications and Media Authority (ACMA), provides an adequate framework for community consultation.³⁰ AMTA stated that 'the level of carrier activity associated with the Code consultation processes and provision of information is significant.'³¹

3.27 AMTA estimated that on average 89 stakeholders were notified for each new telecommunications infrastructure site as part of the consultation process set out in section 5.5 of the industry code. AMTA asserted that this level of consultation compares favourably with council development application processes which consult on average 18 stakeholders.³²

Complaints process

3.28 The bill proposes to amend the Ministerial Code of Practice to include a complaints process whereby owners and occupiers of land within 500 metres of a facility that will emit EME can make a complaint to the ACMA in relation to any or all of the following:

- the location of the facility; or
- compliance with the ministerial code; or
- compliance with any relevant industry standard.

3.29 Any work relating to the installation of the facility would be suspended until a complaint is resolved.

3.30 Some submitters to the inquiry argued that the existing complaints resolution process is deficient.³³ These submitters were particularly concerned that, in their view, the complaints process favours carriers over individuals and communities. Mr Ian Bullock of the Tower Action Group claimed:

Complainants, as we have heard, are made to jump through many hoops just to get a complaint formally recognised and then carriers simply provide their evidence and correct their mistakes. This is deemed acceptable. There

29 Ms Anthea Hopkins, *Submission 23*, p. 5.

30 AMTA, *Submission 33*, p. 20.

31 AMTA, *Submission 33*, p. 20.

32 AMTA, *Submission 33*, p. 20.

33 See Ms Sue Hetherington, WHAAT!, *Committee Hansard*, 12 April 2012, pp 1–2; Mrs Anthea Hopkins, *Committee Hansard*, *Committee Hansard*, 12 April 2012, p. 2; Mr Ian Bullock, TAG, *Committee Hansard*, 12 April 2012, pp 4–5; Mr Ian Gray, No Towers Near Schools, *Committee Hansard*, 12 April 2012, pp 6–7 and Ms Sharon Adlam, *Submission 45*, p. 3.

is no interrogation of their evidence—it is just accepted as true and accurate—and, worse, complainants are then told that there will be no investigation as carriers have supposedly fulfilled their code obligations. How anyone can deem this as acceptable is, for us, simply beyond comprehension.³⁴

3.31 On this basis, there was strong support from community groups for the complaints process proposed in the bill.³⁵

3.32 By contrast, the Communications Alliance argued that the industry code had reduced the number of complaints made to the ACMA and was therefore an effective mechanism by which to regulate the installation of telecommunications infrastructure.³⁶

3.33 The ACMA provided the following explanation of the existing complaints process:

There is a complaints process that is established by the Telecommunications Act so that people can make complaints to the ACMA. The ACMA can consider the complaint...The ACMA can make preliminary inquiries. As a result of those preliminary inquiries or simply considering it, they decide whether to investigate the complaint. We have received complaints that, in relation to the matters that the ACMA is responsible for, have not been within our jurisdiction or the scope of the Telecommunications Act. In that case, the complaint is resolved by the ACMA saying that it is not planning to take any action because the complaint is not relevant to our jurisdiction. In terms of resolution, it is really a matter for the ACMA, if it decides to investigate a complaint, to determine what action, if any, will be taken once it has formed a view about the matter that was complained about.³⁷

3.34 The ACMA also informed the committee that the number of complaints they have received relating to telecommunications infrastructure has declined from 32 in 2006–2007 to 14 in 2010–2011.³⁸

Electromagnetic energy (EME) emissions

3.35 The bill seeks to amend the *Australian Radiation Protection and Nuclear Safety Act 1998* to broaden the functions of the Radiation Health and Safety Advisory

34 Mr Ian Bullock, TAG, *Committee Hansard*, 12 April 2012,

35 See for example Mr Ian Gray, *Submission 41*, p. 1 and TAG, *Submission 51*, p. 4.

36 Mr John Stanton, Chief Executive, Communications Alliance, *Committee Hansard*, 12 April 2012, pp 13–14 and Mr Chris Althaus, AMTA, *Committee Hansard*, 12 April 2012, pp 14–15.

37 Mr Mark Loney, Executive Manager, Operations Branch, ACMA, *Proof Committee Hansard*, 12 April 2012, p. 39.

38 ACMA, *Answers to questions on notice*, 12 April 2012, p. 3.

Council.³⁹ The additional functions for the council proposed in the bill would include 'reviewing the standard that relates to the limits for human exposure to radiofrequency fields in the frequency range 3 kHz to 300 GHz'.⁴⁰

Regulation of EME in Australia

3.36 Many submitters to the inquiry were supportive of the proposal in the bill to require the Radiation Health and Safety Advisory Council to review the standard for EME from telecommunications infrastructure in Australia. These submitters mostly cited concerns about potential adverse health impacts associated with EME from mobile phone towers as the reason for their support.⁴¹

3.37 In response to these types of concern, Mr Ray McKenzie of AMTA informed the committee:

In relation to people's concerns around EME, the industry understands that people have these concerns around health effects and is committed to addressing those concerns responsibly. We do that by taking advice in regard to those health effects and also in the way we deploy our networks. In regard to the advice we take, we do not pretend to be an authority on health effects. We look for experts and national and international authorities such as the World Health Organisation and also the Australian Radiation Protection and Nuclear Safety Agency...who provide us with advice regarding health effects...In relation to the way we deploy our networks, again, all our networks are deployed in accordance with strict science-based safety standards, and the safety standards are those adopted by the Australian Radiation Protection and Nuclear Safety Agency—which I will abbreviate to ARPANSA. Their limits are based, in effect, on the World Health Organisation's own standard, the International Commission on Non-Ionising Radiation Protection, or ICNIRP. So we deploy all our networks in accordance with those standards.⁴²

3.38 ARPANSA advised the committee that the EME from telecommunications infrastructure:

...must comply with safety limits imposed by the Australian Communications and Media Authority (ACMA) in the *Radiocommunications Licence Conditions (Apparatus Licence) Determination 2003*...The safety limits in this document are based on the

39 Telecommunications Amendment (Mobile Phone Towers) Bill 2011, clause 2.

40 Telecommunications Amendment (Mobile Phone Towers) Bill 2011, clause 2.

41 See for example Dr Jason Whitehead and Dr Fiona Taylor, *Submission 2*; Mr and Mrs Guy Maxwell, *Submission 4*; EMR Australia, *Submission 6*; Mrs Judy Thomas, *Submission 11*; Ms Ruth Valentine, *Submission 20*; and Mr Enrico Grani, *Submission 35*.

42 Mr Ray McKenzie, Program Manager, Mobile Carriers Forum, AMTA, *Committee Hansard*, 12 April 2012, p. 13.

ARPANSA *Radiation Protection Standard - Maximum Exposure Levels to Radiofrequency Fields - 3kHz to 300GHz*.⁴³

3.39 The ARPANSA 'Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz' (the Australian standard) provides the following EME exposure limits for the general public:⁴⁴

Basic restrictions for whole body average specific absorption rate (SAR) and spatial peak SAR

Exposure category	Frequency range	Whole-body average SAR (W / kg)	Spatial peak SAR in the head and torso (W / kg)	Spatial peak SAR in limbs (W / kg)
General public	100 kHz–6 GHz	0.08	2	4

3.40 During the course of the inquiry, ARPANSA informed the committee that it was not responsible for ensuring carriers comply with the Australian standard for EME emissions from telecommunications facilities, but rather that this responsibility lies with the ACMA:

We do not do the surveys to assess compliance. We are not the regulator. The Australian Communications and Media Authority is the regulator. They are the one that issues the licences. It is formally their act and licence conditions that the carriers are required to follow. They adopt our standard as the basis of their regulation. We are not the regulator of this matter. The survey we do is to provide public information about actual exposures and particularly to compare them with the EME reports, that you will have heard of already today, which provide a theoretical prediction. We do the measurements, doing our best to find the maximum exposure, to show comparisons with those EME reports. We do not do it to show technical compliance with the act or the regulations.⁴⁵

3.41 Mr Mark Loney of the ACMA explained the ACMA's role in regulating EME emissions from telecommunications facilities:

The ACMA is responsible for the actual compliance by radiocommunications transmitters of licence conditions. I should point out, and it is relevant to this bill, that EME levels are regulated by the ACMA, as the spectrum manager, under the Radiocommunications Act. ARPANSA

43 ARPANSA, *Supplementary Submission*, p. 2.

44 ARPANSA, *Radiation Protection Standard – Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz*, available: <http://www.arpansa.gov.au/pubs/rps/rps3.pdf> (accessed 2 May 2012), p. 7.

45 Dr Lindsay Martin, Manager, Non-ionising Radiation Section, ARPANSA, *Committee Hansard*, 12 April 2012, p. 33.

has made the health exposure standard and the ACMA has taken the health exposure standard and the limits established in the health exposure standard and incorporated them into conditions of licence for radiocommunications licences issued under the Radiocommunications Act. Those limits, as I said, based on the ARPANSA standard, apply to all radiocommunications transmitters that operate in Australia, including base stations for mobile phone networks.⁴⁶

3.42 DBCDE and the ACMA clarified that carriers are required to provide a predictive report, which is completed 'in advance of the construction of the facility so that the community knows what the EME exposure levels will be'.⁴⁷ DBCDE explained that the predictive reports are 'prepared according to a methodology produced by ARPANSA and in a format approved by ARPANSA'.⁴⁸

3.43 DBCDE further advised the committee that:

ARPANSA has checked its methodology for predictive reports by conducting surveys of base stations in 1999, 2003 and 2007-12. The 2003 survey was published in the journal *Bioelectromagnetics* in 2006 [*Bioelectromagnetics* (2006) 27:73-76]. That survey showed the predicted exposure levels for all sites measured exceeded the actual measured exposure values.⁴⁹

3.44 The ACMA indicated that it had received 'a small number of complaints or inquiries about whether particular installations have complied with the EME limits'.⁵⁰ In relation to these complaints, Mr Loney stated:

I am not aware of any case where the subsequent ACMA inquires and measurements have resulted in us identifying a site that was operating beyond the limits specified in the licence conditions. They are, as I mentioned before, based on the human exposure standard made by ARPANSA. The ACMA also conducts a program of site audits, where we go to radiocommunications sites and look for compliance issues.⁵¹

46 Mr Mark Loney, Executive Manager, Operations Branch, ACMA, *Committee Hansard*, 12 April 2012, p. 42.

47 Mr Mark Heazlett, Acting First Assistant Secretary, NBN Implementation Division, DBCDE; Mr Mark Loney, Executive Manager, Operations Branch, ACMA; and Mr Philip Mason, Assistant Secretary, NBN Regulation, NBN Implementation Division, DBCDE, *Committee Hansard*, 12 April 2012, pp 45–47.

48 DBCDE, *Answers to questions on notice*, 12 April 2012, p. 1.

49 DBCDE, *Answers to questions on notice*, 12 April 2012, p. 2.

50 Mr Mark Loney, Executive Manager, Operations Branch, ACMA, *Committee Hansard*, 12 April 2012, p. 42.

51 Mr Mark Loney, Executive Manager, Operations Branch, ACMA, *Committee Hansard*, 12 April 2012, p. 43.

3.45 In response to queries about the compliance of telecommunications facilities with EME emission standards, the committee was informed that of approximately 18 000 telecommunication installations in Australia, the ACMA had audited 474:

With regard to compliance with EME licence conditions, the ACMA conducted an audit program between 2006 and 2008 that involved the auditing of 474 sets of EME records held by licensees. It is a condition of a licence that licensees hold records that demonstrate compliance with the EME conditions that apply to apparatus and spectrum licences.⁵²

International EME emission standards

3.46 During the course of the inquiry, there was some discussion about the Australian standard for EME emissions in comparison to standards used internationally. In particular, the standard in Switzerland was raised by some submitters. For example, Ms Anna Castellano of No Towers Near Schools stated:

Last year the Council of Europe said that non-ionising radiation, which is in fact EMR, used in telecommunications:

"... appear to have more or less potentially harmful, non-thermal, biological effects on plants, insects and animals, as well as the human body when exposed to levels that are below the official threshold values...One must respect the precautionary principle and revise the current threshold values; waiting for high levels of scientific and clinical proof can lead to very high health and economic costs, as was the case in the past with asbestos, leaded petrol and tobacco".

This resonates with communities. This is what is going to happen to us in the future. There are more and more of these base stations all over the country, constantly.

The council goes on to recommend a threshold of 0.1 microwatt per centimetre squared. Let us remind ourselves once more that the ARPANSA limit is 450. We know of nine countries in Europe who have adopted the precautionary approach and have already lowered their EMR levels; Switzerland comes to mind.⁵³

3.47 In regards to the EME emission standard in Switzerland, Dr Lindsay Martin of ARPANSA commented:

I understand it was generally as a response to community concern. They have also done that in the extremely low frequency area as well. I believe that was partly to facilitate the deployment, by clarifying, by reducing a level, and avoiding the need to do a case-by-case assessment of many examples. That is why they introduced a precautionary level...Clearly, in some cases a particular person who made that decision may have seen a

52 ACMA, *Answers to questions on notice*, 12 April 2012, p. 2.

53 Ms Anna Castellano, Community Representative, No Towers Near Schools, *Committee Hansard*, 12 April 2012, pp 3–4.

scientific paper and acted on it—I cannot possibly know that—but I am not aware of any particular evidence that scientists in these countries have put forward that says, "We need this level because of this particular effect, this particular scientific background".⁵⁴

3.48 ARPANSA also provided the committee with an international comparison of EME exposure limits for the general public.⁵⁵ These limits for selected countries are outlined below.

Exposure limits for the general public for electromagnetic fields in inhabited areas in member states of the European Union and selected industrial nations outside the European Union⁵⁶

	50 Hz		900 MHz			1800 MHz		
	Electric field strength	Magnetic flux density	Electric field strength	Magnetic flux density	Equivalent plain wave power density	Electric field strength	Magnetic flux density	Equivalent plain wave power density
	V / m	μT	V / m	μT	W / m ²	V / m	μT	W / m ²
France	5000	100	41	0.14	4.5	58	0.20	9
Germany	5000	100	41	0.14	4.5	58	0.20	9
Hungary	5000	100	41	0.14	4.5	58	0.20	9
Sweden	-	-	41	0.14	4.5	58	0.20	9
United Kingdom	-	-	41	0.14	4.5	58	0.20	9
Australia	5000	100	41	0.14	4.5	58	0.20	9
Switzerland	-	1	4	-	-	6	-	-
USA	-	-	-	-	6	-	-	10

Potential costs and unintended consequences

3.49 A number of submitters discussed potential costs and unintended consequences associated with the bill if it were enacted. The telecommunications industry identified costs associated with increased administration and 'sub optimal'

54 Dr Lindsay Martin, Manager, Non-ionising Radiation Section, ARPANSA, *Committee Hansard*, 12 April 2012, pp 31–32.

55 ARPANSA, *Answer to question on notice*, 12 April 2012.

56 Rianne Stam, National Institute for Public Health and the Environment (The Netherlands), 'Comparison of international policies on electromagnetic fields (power frequency and radiofrequency fields)', May 2011, pp 9–10.

network performance and maintenance.⁵⁷ Local government was concerned that there may be 'unintended consequences in terms of additional burdens and costs falling on councils'.⁵⁸

3.50 Crown Castle felt the bill would create 'considerable uncertainty for the wireless telecommunications industry at a time when critical investment decisions are being made' as well as '[a]n uncertain regulatory environment' that would increase '...the cost of equity associated with bidding for spectrum and, therefore, reduces the bid price and the ultimate returns to taxpayers on that valuable community asset'.⁵⁹

3.51 As discussed earlier in this chapter, AMTA and Telstra believed the bill would impose significant costs on the telecommunications industry. AMTA, quoting analysis by Deloitte Access Economics, claimed the bill would have an overall annual cost of \$2.2 billion comprising \$2.06 billion per annum of additional administration costs, \$132 million per annum arising from a sub-optimal network outcome and \$14 million per annum reflecting the delay to required facility construction, upgrade or maintenance.⁶⁰

3.52 AMTA continued:

AMTA fails to see what, if any, benefits the Bill would deliver over the existing regulatory requirements. Indeed, it would impose a range of costs on industry, the community and local governments and result in unintended consequences that could lead to less community consultation and not more as the Bill intends.⁶¹

3.53 Mr Adrian Beresford-Wylie, Chief Executive Officer of the Australian Local Government Association (ALGA) cautioned that:

We are flagging that [potential cost impacts are] something that always needs to be considered in terms of regulatory responsibilities being placed on local government or when their responsibilities are expanded—although, as our discussion has turned to, community consultation and issues like this are a responsibility of local government anyway. Therefore it is just ensuring that local government is appropriately resourced, which really relies on a state government.⁶²

57 See for example AMTA, *Submission 33*, p. 7 and Telstra, *Submission 8*, p. 11.

58 Mr Adrian Beresford-Wylie, Chief Executive Officer, Australian Local Government Association (ALGA), *Committee Hansard*, 12 April 2012, p. 21. See also WA Department of Planning, *Submission 28*, p. 4 and Tweed Shire Council, *Submission 52*, p. 2.

59 Crown Castle, *Submission 5*, pp 3–4.

60 AMTA, *Submission 33*, p. 7.

61 AMTA, *Submission 33*, p. 36.

62 Mr Adrian Beresford-Wylie, Chief Executive Officer, Australian Local Government Association (ALGA), *Committee Hansard*, 12 April 2012, p. 26.

3.54 DBCDE concurred that the changes proposed in the bill would likely 'place a significant administrative burden on local government planning department resources' and:

...may delay premises connections to networks, including where a service has been requested in fulfilment of the Universal Service Obligation (USO). Furthermore, they may limit carriers' land entry powers to the extent they are inconsistent with state or territory legislation. This may affect the ability of carriers to effectively maintain their existing networks, including fixed line and backhaul networks. If the bill were enacted, it may therefore be necessary to review certain existing consumer protection regulation, such as the USO and Customer Service Guarantee, to ensure that the timeframes for connection and repair of services allow for the relevant approvals to be received.⁶³

3.55 The department also identified other unintended consequences of the bill, including:

- extension of the application of Schedule 3 resulting in the capture of organisations that install private networks such as other utilities, police, emergency services organisations, defence organisations, broadcasters, taxi services and potentially some local councils, community organisations such as surf clubs and individuals installing devices in their home;
- amending the definition of "tower" which may prevent the installation of most radiocommunications antennae under Schedule 3 of the Act 'thus inhibiting the deployment of radiocommunications equipment generally to both transmit and receive';
- amending the maintenance clause which may result in activities such as changing the visible light emitted, replacing defective indicator lights on an electronic panel or infrared radiation emitted by a warm object being excluded from the Schedule 3 immunities;
- extension of the notification period which could delay infrastructure roll-outs and maintenance, particularly in unforeseen circumstances; and
- requiring a carrier to prepare a Local Telecommunications Network Plan and making this plan publicly available which 'may have significant implications for critical infrastructure protection'.⁶⁴

Committee view

3.56 The committee is sympathetic to the concerns voiced by communities when they are faced with the prospect of a telecommunication infrastructure development in their region. The information provided during the course of this inquiry demonstrates the difficulties some communities encounter when seeking to engage in planning and

63 DBCDE, *Submission 42*, pp 6–7.

64 DBCDE, *Submission 42*, pp 6–9.

development processes, and how these processes can make individuals and communities feel disempowered and frustrated.

3.57 The committee was heartened, however, by advice from the telecommunications industry and the industry regulatory about improvements that have been made to the industry code of conduct in response to the concerns and experiences of individuals and communities. The committee was equally pleased to hear that community representatives had participated in development of the revised industry code. The revised code, Industry Code C564:2011 Mobile Phone Base Station Deployment, is due to come into effect on 1 July 2012. The committee trusts that the telecommunications industry will fully comply with the revised industry code, as well as all other applicable regulations, and will strive to improve its relationships with affected communities through considered, transparent and effective consultation practices. Failure to improve community engagement as a result of the changes to the industry code could require further legislative amendments to ensure the community is and feels part of the process, and has access to real and effective communication and consultation processes.

3.58 That said, the committee recognises consumer demand for improved telecommunication services, particularly wireless services, and that this requires the installation of telecommunications infrastructure. As mentioned above, this places obligations on carriers with respect to consultation and community engagement and, in the committee's opinion, it also requires consumers—including those in regional and rural Australia—to acknowledge that telecommunications infrastructure must be built in their area if they are to access these services.

3.59 With respect to EME emissions from telecommunications installations, the committee notes that an apparently low number of these installations are audited by the ACMA. Whilst recognising resource limitations, the committee urges the ACMA to conduct regular audits of telecommunication installations to ensure, and give confidence to communities, that these installations are compliant with Australian EME emission standards.

3.60 The committee acknowledges the potential costs and unintended consequences associated with the bill as identified by various submitters. It is the committee's view that these costs and unintended consequences suggest the bill is impractical and would not effectively resolve the concerns it is seeking to address. On that basis, the committee recommends that the bill not be passed.

Recommendation 1

3.61 The committee recommends that the bill not be passed.

**Senator Doug Cameron
Chair**

Dissenting Report

Senator Bob Brown, Australian Greens

The intention of the Telecommunications (Mobile Phone Towers) Bill 2011 is to recognise that citizens have a right to be more engaged in the installation and expansion of telecommunication facilities in their communities.

The evidence from concerned citizens who have been taking local action around the location of telecommunication facilities in their communities has demonstrated the current regulations and processes are inadequate. While we recognise the importance of providing appropriate coverage, security and stability of our telecommunications network, so too is the community's ability to voice concerns about infrastructure which may impact on their lives.

The deficiencies the Bill seeks to remedy include:

- strengthening the requirements for community consultation in relation to the installation of telecommunications facilities, in particular by requiring at least 30 days notice and for such notice to be given to people within 500m of the proposed facility;
- ensuring all electromagnetic emitting facilities including low impact facilities are subject to local government processes as well as community consultations;
- require the precautionary principle to be considered in decisions about the location of such facilities;
- ensuring there is better recourse for citizens where telecommunication companies have not met their obligations to the community; and
- providing a mechanism for better monitoring of Australia electromagnetic radiation standards.

Telecommunication carriers are given widespread powers to locate their facilities. The Australian Greens share the concerns of many in the community that the current consultation provisions are inadequate and that communities should have a right to be more involved in the location of mobile phone towers and engaged in the decision-making process, and that the legislation should provide for this.

A key issue the bill is seeking to address is that once a telecommunications tower is established there is little stopping carriers expanding and adding more antennae without any notice or consultation with affected residents.

The fact that ARPANSA has checked only 21 out of 18 000 telecommunications facilities and ACMA has audited the records of only 474 out of 18 000 for compliance with the EMR standards demonstrates the relevant authorities are not listening to the concerns of the community.

The precautionary principle is relevant when there is a suspicion that an action may cause harm to the health of humans or the environment. There is no scientific consensus on the effects of long-term accumulated exposure to electromagnetic radiation, especially for children and adolescents, in the case of mobile phone facilities. Therefore, carriers should take a cautious approach to the siting of facilities because there is an absence of evidence that they do not cause harm.

We acknowledge there are some technical issues with the Bill and we will consider amendments to ensure the Bill meets the stated objectives. In particular, ensuring the provisions of the Bill do not apply to low-impact facilities that do not emit electromagnetic radiation, such as cables. With such amendments the Bill should be considered favourably by the Senate.

Senator Bob Brown

Appendix 1

Submissions, tabled documents, additional information and answers to questions taken on notice

Submissions

- 1** Kingborough Council
- 2** Dr Jason Whitehead and Dr Fiona Taylor
- 3** Ms Angie Lionetto
- 4** Mr and Mrs Guy Maxwell
- 5** Crown Castle
- 6** EMR Australia PL
- 7** Name Withheld
- 8** Telstra Corporation
- 9** Australian Local Government Association
- 10** Mr Steven Green
- 11** Mrs Judy Thomas
- 12** Sutherland Shire Environment Centre
- 13** Ms Joy O'Farrell
- 14** Ms Jacqui Godwin
- 15** Mr Robert Taylor
- 16** Ms Bronwyn Johnstone
- 17** The Rivermouth Action Group Inc

- 18** Mrs Rhonda Hynes
- 19** Ms Rhonda Orso
- 20** Ms Ruth Valentine
- 21** Communications Alliance
- 22** Dr Don Maisch
- 23** Ms Anthea Hopkins
- 24** Ms Jennifer Robertson
- 25** Ms Christine Hobby
- 26** Rainworth State School Parents and Citizens' Association
- 27** Ms Diana Glynn
- 28** Department of Planning (WA)
- 29** Ms Wendy Taylor
- 30** Name Withheld
- 31** Ms Anne Tredenick
- 32** Ms Hayley Williams
- 33** Australian Mobile Telecommunications Association
- 34** EMR Stop Pty Ltd
- 35** Mr Enrico Grani
- 36** Optus
- 37** Mr Robert Coughlin
- 38** Ms Carol Parkinson
- 39** WHAAT! Worried Householders Action Against Tower

- 40** Hobart City Council
- 41** Mr Ian Gray
- 42** Department of Broadband, Communications and the Digital Economy
- 43** Ms Wendy McClelland
- 44** Ms Margaret C Bolster AM
- 45** Ms Sharon Adlam
- 46** Vodafone Hutchison Australia
- 47** Australian Radiation Protection and Nuclear Safety Agency
- 48** NoTowersNearSchools
- 49** Energy Networks Association
- 50** Mr Rob Godwin
- 51** Tower Action Group Inc
- 52** Tweed Shire Council
- 53** Mr Michael Frost and Ms Pauline Horlock
- 54** Mr Greg Marning
- 55** Warringah Council
- 56** Mrs Lynne McDonald

Tabled documents

Copies of correspondence between Mr & Mrs Bullock and Optus CEO and Chairman, ACMA re Inappropriate location of Optus Mobile Phone Telecommunications Facility, between September 2011 and January 2012, tabled by Mr Ian Bullock, President, Tower Action Group at public hearing, 12 April 2012, Canberra

Ten coloured photographs of a mobile tower installed on water tank adjoining residence; and

Paper: *Summary of Estimates RF EME Levels around the Proposed Mobile Phone Base Station at 2A Basalt Ct, Lennox Head, NSW* tabled by Ms Sue Hetherington, Group Facilitator, Worried Householders Action Against Tower at public hearing, 12 April 2012 Canberra

Photographs of towers at Ashgrove Cycles, Ashgrove and Bardon; map indicating sources of contacts with NTNS since November 2009, tabled by Mr Ian Gray, Community Representative, No Towers Near Schools at public hearing, 12 April 2012, Canberra

Photograph of the Canberra Hospital, tabled by Ms Anthea Hopkins at public hearing, 12 April 2012, Canberra

Opening statement by Mr Philip Mason, Mr Philip Mason, Assistant Secretary, NBN Regulation, NBN Implementation Division, Department of Broadband, Communications and the Digital Economy, tabled by Mr Mason at public hearing, 12 April 2012, Canberra

Additional information

Documents received from Mr Ian Bullock, President, Tower Action Group Inc as part of Submission 51 (supplementary submission)

1. Complaint Letter to the ACMA dated 9 November 2011
2. Letter from the ACMA dated 13 December 2011
3. Response letter to ACMA dated 14 December
4. Precautionary Approach Checklist
5. EME Report for NSA Site No 4352010 dated 9 August 2010
6. EME Report for NSA Site No 4352010 dated 5 August 2010
7. EME Report for NSA Site No 4352011 dated 2 September 2011
8. E-mail from Megan Wynn timer dated 20 January 2012
9. Letter from the ACMA dated 13 December 2011
10. Letter from Optus (Ms Lisa Kelly) dated 12 October 2011
11. Precautionary Approach Checklist
12. Letter to the ACMA dated 31 January 2012.

Answers to questions taken on notice

- 1** Australian Communications and Media Authority - Answers to questions taken on notice (from public hearing, 12 April 2012)
- 2** Australian Mobile Telecommunication Association - Answers to questions taken on notice (from public hearing 12 April 2012)
- 3** Department of Broadband, Communications and the Digital Economy - Answers to questions taken on notice (from public hearing, 12 April 2012)
- 4** Communications Alliance Ltd - Answers to questions taken on notice (from public hearing, 12 April 2012)
- 5** The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) - Answers to questions taken on notice (from public hearing, 12 April 2012)
- 6** WHAAT! Worried Householders Action Against Tower - Answers to questions taken on notice (from public hearing, 12 April 2012)
- 7** Tower Action Group Inc - Answers to questions taken on notice (from public hearing, 12 April 2012)
- 8** Mrs Anthea Hopkins - Answers to questions taken on notice (from public hearing, 12 April 2012)
- 9** No Towers Near Schools - Answers to questions taken on notice (from public hearing, 12 April 2012)
- 10** No Towers Near Schools – Answers to questions taken on notice (from public hearing, 12 April 2012)
- 11** No Towers Near Schools – Answers to questions taken on notice (from public hearing, 12 April 2012)
- 12** Tower Action Group Inc – Answer to written question on notice (20 April 2012, received 27 April 2012)
- 13** Australian Local Government Association (ALGA) – Answers to questions on notice (from public hearing, 12 April 2012, and written question dated 20 April 2012)
- 14** Mrs Anthea Hopkins – Further answer to questions taken on notice (from public hearing, 12 April 2012)

- 15** Australian Communications and Media Authority – Further answers to questions taken on notice (from public hearing, 12 April 2012)
- 16** WHAAT! Worried Householders Action Against Tower – Further answers to questions taken on notice (from public hearing, 12 April 2012)

Appendix 2

Public hearings

Thursday, 12 April 2012 – Canberra

Tower Action Group

Mr Ian Bullock, President

No Towers Near Schools

Ms Anna Castellano, Community Representative

Mr Ian Gray, Community Representative

Worried Householders Action Against Tower

Ms Sue Hetherington, Group Facilitator

Mrs Anthea Hopkins, Private capacity

Australian Mobile Telecommunications Association

Mr Chris Althaus, Chief Executive Officer

Mr Ray McKenzie, Program Manager, Mobile Carriers Forum

Communications Alliance

Mr John Stanton, Chief Executive Officer

Mr Michael Johns, Project Manager

Australian Local Government Association

Mr Adrian Beresford-Wylie, Chief Executive Officer

Australian Radiation Protection and Nuclear Safety Agency

Dr Carl-Magnus Larsson, Chief Executive Officer

Dr Lindsay Martin, Manager, Non-Ionization Radiation Section

Department of Broadband, Communications and the Digital Economy

Mr Mark Heazlett, Acting First Assistant Secretary, NBN Implementation Division

Mr Philip Mason, Assistant Secretary, NBN Regulation, NBN Implementation Division

Australian Communications and Media Authority

Mr Mark Loney, Executive Manager, Operations Branch

Appendix 3

Low-impact facilities¹

Radio facilities

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	Subscriber connection deployed by radio or satellite terminal antenna or dish: (a) not more than 1.2 metres in diameter; and (b) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local authority	Residential Commercial Industrial Rural
1A	Subscriber connection deployed by radio or satellite terminal antenna or dish: (a) not more than 1.8 metres in diameter; and (b) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local government authority	Industrial Rural
2	Panel, yagi or other like antenna: (a) flush mounted to an existing structure; and (b) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local authority	Residential Commercial Industrial Rural
3	Panel, yagi or other like antenna: (a) not more than 2.8 metres long; and (b) if the antenna is attached to a structure — protruding from the structure by not more than 3 metres; and	Residential Commercial Industrial Rural

1 Taken from the Telecommunications (Low-impact Facilities) Determination 1997, available: http://www.comlaw.gov.au/Details/F2012C00177/Html/Text#_Toc320612714 (accessed 9 May 2012).

Column 1 Item no.	Column 2 Facility	Column 3 Areas
	(c) either: <ul style="list-style-type: none"> (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local authority 	
4	An omnidirectional antenna or an array of omnidirectional antennas: <ul style="list-style-type: none"> (a) not more than 4.5 metres long; and (b) not more than 5 metres apart; and (c) if the array is attached to a structure — protruding from the structure by not more than 2 metres 	Industrial Rural
5	Radiocommunications dish: <ul style="list-style-type: none"> (a) not more than 1.2 metres in diameter; and (b) either: <ul style="list-style-type: none"> (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local government authority; and (c) if attached to a supporting structure, the total protrusion from the structure is not more than 2 metres 	Residential Commercial Industrial Rural
5A	Radiocommunications dish: <ul style="list-style-type: none"> (a) not more than 1.8 metres in diameter; and (b) either: <ul style="list-style-type: none"> (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local government authority 	Industrial Rural
6	Microcell installation with: <ul style="list-style-type: none"> (a) a cabinet not more than 1 cubic metre in volume; and (b) a separate antenna not more than 1 metre long 	Residential Commercial Industrial Rural
7	In-building coverage installation: <ul style="list-style-type: none"> (a) to improve cellular coverage to mobile phone users operating inside a building; and (b) wholly contained and concealed in a 	Residential Commercial Industrial Rural

Column 1 Item no.	Column 2 Facility	Column 3 Areas
	building	
8	Equipment installed inside a structure, including an antenna concealed in an existing structure	Commercial Industrial Rural
9	An extension to a tower if: (a) the height of the extension does not exceed 5 metres; and (b) there have been no previous extensions to the tower	Industrial Rural

Underground housing

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	Pit with surface area of not more than 2 square metres	Residential Commercial Industrial Rural
2	Manhole with surface area of not more than 2 square metres	Residential Commercial Industrial Rural
3	Underground equipment shelter or housing with surface area of not more than 2 square metres	Residential Commercial Industrial Rural

Above ground housing

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	Pillar: (a) not more than 2 metres high; and (b) with a base area of not more than 2 square metres	Residential Commercial Industrial Rural
2	Roadside cabinet: (a) not more than 2 metres high; and (b) with a base area of not more than 2 square metres	Residential Commercial Industrial Rural

Column 1 Item no.	Column 2 Facility	Column 3 Areas
3	Pedestal: (a) not more than 2 metres high; and (b) with a base area of not more than 2 square metres	Residential Commercial Industrial Rural
4	equipment shelter: (a) not more than 2.5 metres high; and (b) with a base area of not more than 5 square metres; and (c) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local authority	Residential Commercial Industrial Rural
5	equipment shelter: (a) used solely to house equipment used to assist in providing a service by means of a facility mentioned in Part 1; and (b) not more than 3 metres high; and (c) with a base area of not more than 7.5 square metres; and (d) either: (i) colour-matched to its background; or (ii) in a colour agreed in writing between the carrier and the relevant local authority	Residential Commercial Industrial Rural
6	In-building subscriber connection equipment	Residential Commercial Industrial Rural
7	Solar panel with a base area of not more than 7.5 square metres	Rural
8	Building connection equipment: (a) the substantive volume of which is not more than 0.21 cubic metres; and (b) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Residential Commercial Industrial Rural

Column 1 Item no.	Column 2 Facility	Column 3 Areas
9	In-building network equipment: (a) the substantive volume of which is not more than 0.21 cubic metres; and (b) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Residential Commercial Industrial Rural

Underground cable facilities

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	Underground conduit or cable deployed by: (a) narrow trench not more than: (i) 450 millimetres wide; or (ii) 650 millimetres wide if intended to be used by more than one carrier; or (b) direct burial; or (c) bore or directional drill hole at least 600 millimetres below the surface; where: (d) access to business premises is not restricted between the hours of 8 am and 6 pm, Monday to Friday, or such other hours agreed to by the relevant local government authority; and (e) in relation to residential areas, not more than 100 metres of excavation is left open for each trench at any time and vehicle access to each property is not lost for more than 8 hours in total.	Residential Commercial Industrial Rural
2	Conduit or cabling to be laid in: (a) an existing trench; or (b) a trench created by a developer, relevant local government authority, public utility or carrier.	Residential Commercial Industrial Rural
3	Cable location marking post or sign	Residential Commercial Industrial Rural

Column 1 Item no.	Column 2 Facility	Column 3 Areas
4	Underground optical fibre splice enclosure:	Residential
	(a) forming part of (or integrated with) a cable; and	Commercial
	(b) the substantive volume of which is not more than 0.046 cubic metres.	Industrial
		Rural
5	Underground optical fibre access terminal:	Residential
	(a) the substantive volume of which is not more than 0.02 cubic metres.	Commercial
		Industrial
		Rural

Above ground optical fibre facilities

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	A single optical fibre line link or a bundle of optical fibre line links:	Residential
	(a) suspended above the surface of:	Commercial
	(i) land (other than submerged land); or	Industrial
	(ii) a river, lake, tidal inlet, bay, estuary, harbour or other body of water; or	Rural
	(b) protruding from the surface of land (other than submerged land); and	
	(c) the maximum external cross-section of any part is:	
	(i) in the case of a single line link—30 millimetres;	
	(ii) in the case of a bundle (of optical fibre line links)—30 millimeters;	
	(d) deployed on, or attached to, a public utility structure, building or other structure; and	
	(e) has electrical properties consistent with those specified for cables set out in the IEEE 1222-2011 Standard; and	
	(f) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	

Column 1 Item no.	Column 2 Facility	Column 3 Areas
2	<p>Optical fibre splice enclosure:</p> <p>(a) suspended above the surface of:</p> <p>(i) land (other than submerged land); or</p> <p>(ii) a river, lake, tidal inlet, bay, estuary, harbour or other body of water; and</p> <p>(b) either:</p> <p>(i) forming part of (or integrated with) a cable; or</p> <p>(ii) clamped to, strung from, or otherwise mounted on a public utility structure, building or other structure;</p> <p>(c) the substantive volume of which is not more than 0.046 cubic metres; and</p> <p>(d) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.</p>	<p>Residential</p> <p>Commercial</p> <p>Industrial</p> <p>Rural</p>
3	<p>Optical fibre access terminal:</p> <p>(a) suspended above the surface of:</p> <p>(i) land (other than submerged land); or</p> <p>(ii) a river, lake, tidal inlet, bay, estuary, harbour or other body of water; and</p> <p>(b) clamped to, strung from, or otherwise mounted on a public utility structure, building or structure;</p> <p>(c) the substantive volume of which is not more than 0.02 cubic metres; and</p> <p>(d) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.</p>	<p>Residential</p> <p>Commercial</p> <p>Industrial</p> <p>Rural</p>
4	<p>A single optical fibre drop cable or a bundle of optical fibre drop cables:</p> <p>(a) suspended above the surface of:</p> <p>(i) land (other than submerged land); or</p> <p>(ii) a river, lake, tidal inlet, bay, estuary, harbour or other body of water; or</p> <p>(b) protruding from the surface of land (other than submerged land); and</p>	<p>Residential</p> <p>Commercial</p> <p>Industrial</p> <p>Rural</p>

Column 1 Item no.	Column 2 Facility	Column 3 Areas
	<p>(c) either:</p> <p>(i) clamped to an electrical drop cable or other cable; or</p> <p>(ii) strung from a public utility structure, building or other structure; and</p> <p>(d) attached to a building or other structure for the purposes of a subscriber connection;</p> <p>(e) the maximum external cross-section of any part is:</p> <p>(i) in the case where a single drop cable is attached to a single-unit building—13 millimetres; or</p> <p>(ii) in the case where a bundle (of optical fibre drop cables) is attached to a single-unit building—13 millimetres; or</p> <p>(iii) in the case where a single drop cable is attached to a multi-unit building—30 millimetres; or</p> <p>(iv) in the case where a bundle (of optical fibre drop cables) is attached to a multi-unit building—30 millimetres; and</p> <p>(g) has electrical properties consistent with those specified for cables set out in the IEEE 1222-2011 Standard); and</p> <p>(h) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.</p>	
5	<p>Optical fibre termination box (Type A):</p> <p>(a) attached to a building or other structure for the purposes of a subscriber connection;</p> <p>(b) the substantive volume of which is not more than 0.005 cubic metres; and</p> <p>(c) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.</p>	<p>Residential</p> <p>Commercial</p> <p>Industrial</p> <p>Rural</p>

Column 1 Item no.	Column 2 Facility	Column 3 Areas
6	Optical fibre termination box (Type B):	Residential
	(a) attached to a multi-unit building;	Commercial
	(b) the substantive volume of which is not more than 0.04 cubic metres; and	Industrial
	(c) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Rural
7	Network termination unit:	Residential
	(a) attached to a building or other structure for the purposes of a subscriber connection;	Commercial
	(b) the substantive volume of which is not more than 0.02 cubic metres; and	Industrial
	(c) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Rural
8	Power supply:	Residential
	(a) attached to a building or other structure for the purposes of a subscriber connection;	Commercial
	(b) the substantive volume of which is not more than 0.005 cubic metres; or	Industrial
	(c) that is, or is to be, part of a national network used, or for use, for the high speed carriage of communications, on a wholesale-only and non-discriminatory basis.	Rural

Public payphones

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	Public payphone cabinet or booth:	Residential
	(a) used solely for carriage and content services; and	Commercial
	(b) not designed for other uses (for example, as a vending machine); and	Industrial
	(c) not fitted with devices or facilities for other uses; and	Rural

	(d) not used to display commercial advertising other than advertising related to the supply of standard telephone services	
2	Public payphone instrument:	Residential Commercial Industrial Rural
	(a) used solely for carriage and content services; and	
	(b) not designed for other uses (for example, as a vending machine); and	
	(c) not fitted with devices or facilities for other uses; and	
	(d) not used to display commercial advertising other than advertising related to the supply of standard telephone services or displayed as part of the supply of a content service	

Emergency facilities

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	A temporary facility installed:	Residential Commercial Industrial Rural
	(a) in an emergency; and	
	(b) to provide assistance to an emergency services organisation	

Co-located facilities

Column 1 Item no.	Column 2 Facility	Column 3 Areas
1	Facility mentioned in:	Industrial Rural
	(a) Part 1, 5 or 6; or	
	(b) item 3 of Part 4;	
	installed on or within:	
	(c) an original facility; or	
	(d) a public utility structure	
2	Facility mentioned in:	Residential Commercial
	(a) Part 1, 5 or 6; or	
	(b) item 3 of Part 4;	
	installed on or within:	

- (c) an original facility; or
- (d) a public utility structure;

where:

- (e) the total **co-location** volume of the co-located facilities is no more than 25 per cent greater than the volume of the original facility or the original infrastructure; and
 - (f) the levels of noise that are likely to result from the operation of the co-located facilities are less than or equal to the levels of noise that resulted from the operation of the original facility or the public utility structure
-

