To the Department of Communications and the Arts
GPO Box 2154
Canberra ACT 2601

Submission response—Possible amendments to telecommunications powers and immunities

This submission can be published on the World Wide Web

Yes.

Date of submission

21 July 2017.

Logo of organisation—if an organisation making this submission

Name and contact details of person/organisation making submission

NSW Water Directorate Incorporated

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General comments

The NSW Water Directorate has prepared this submission on behalf of its members. The Water Directorate has 87 members out of a total of 89 local water utilities in New South Wales. Membership of the Water Directorate is open to all councils and county councils providing water supply and/or sewerage services to local government areas in NSW.

Its aims include:

- providing an independent source of advice to councils on water and sewerage operations;
- promoting a more efficient operation of Local Government water and sewerage infrastructure;
- providing direction on technical issues;
- providing networking opportunities for water and sewerage engineers to share knowledge and improve communication within the industry.

As NSW Water Directorate's members are vested with important water and sewerage infrastructure and services to NSW communities, and this infrastructure is commonly used by telecommunication carriers, its members need proper consideration in any proposed changes to the telecommunications legislation and codes under it.

A large amount of water infrastructure is used by the telecommunications carriers for the erection of their infrastructure, and organisations such as Water Directorate members are an important stakeholder for the carriers as they go about their functions. Despite this, there is very little in the consultation paper that provides comfort to members that the proposed efficiency gains will be counterbalanced by improved rights for landowners such as our members who provide another essential service to the NSW community.

Summary of Recommendations

1. That the Department of Communication and the Arts urgently convene an appropriate consultation process with relevant representatives of the Australian water industry to address the possible amendments to telecommunications carrier's powers and immunities, which ignore water utilities as a key stakeholder. This consultation will aim to specifically address:

    a. potential enhancements to the *Telecommunications Act* and *Telecommunications Code of Practice* to protect the safety of drinking water in any proposed amendments to carrier's powers and immunities.
    b. appropriate exemptions for drinking water reservoirs.
    c. a proposed requirement for basic drinking water quality awareness training to be undertaken for all staff working on or around a reservoir.

2. That the Australian Communications and Media Authority adopt the Australian Drinking Water Guidelines National Water Quality Management Strategy (National Health and Medical Research Council and Natural Resources Management Ministerial Council - ISBN 1864965118) as an industry standard under the *Telecommunications Act 1997* and the *Telecommunications Code of Practice 1997.*

3. Where a carrier installs equipment on a tower, reservoir, water tank or other structure belonging to a public utility, they must supply an engineering structural analysis to demonstrate that the structure will not be overloaded or be affected by the equipment.

4. That there is a consideration of the use of Memorandums of Understanding between telecommunications carriers and local water utilities that address the central issues raised in this submission, such as:

    a. the positioning of equipment such that the impact on water utility operations is minimised;
    b. the maintenance of telecommunication facilities and fixtures to ensure that water utility sites are safe for workers and for the public in the immediate area ;
    c. a regime for the removal of obsolete telecommunications facilities; and
    d. how a Memorandum of Understanding may be included in the regulatory suite of documents.

5. The amendments should be ensure that there is a protection against any limits imposed by carrier activities that could restrict how a water utility can operate, modify, or expand its own infrastructure in order to meet their own future requirements.

Introduction

The provision of water is an essential service with its own statutory obligations. While the proposed changes to the telecommunications carrier powers and immunities emphasise the benefits of de-regulation, including reduced costs to consumers, in NSW Water Directorate's submission, these changes should not be at the expense of local water utilities.

In this regard, the Government's consultation paper states that carriers have estimated that if the proposed changes proceed, they could result in over $100 million per year in regulatory cost savings to industry and government and over $50 million per year in economic and social productivity benefits to consumers. Although we do not know how the above estimations were formed and the level of accuracy behind the estimate, it is important to our members that the costs created by making such efficiencies are not externalised, and that the full costs on our members should be quantified.

In NSW a local water utility must be able to operate, maintain and repair its water supply facilities and also ensure the quality and reliability of drinking water at all times in accordance with:

- *Local Government Act 1993*[1];
- Australian Drinking Water Guidelines[2];
- *Public Health Act (2010)* NSW[3];
- *Water Management Act*[4]; and
- directions regularly issued by both NSW Health, NSW Department of Primary Industry – Water[5], and NSW Office of Local Government

The proposed amendments highlight the changing demand for telecommunications, and a need for efficiency in carrying out works relating to the telecommunications infrastructure. However, telecommunications carriers have significant existing powers to enter property and install and maintain equipment and infrastructure which impose a number of challenges for our members in this regulatory context.[6] This can present a very real challenge for local water utilities in terms of:

[1] *Local Government Act 1993* (NSW)
[2] National Health and Medical Research Council, 'Australian Drinking Water Guidelines' (2011), Commonwealth of Australia.
[3] *Public Health Act 2010* (NSW).
[4] *Water Management Act 2000* (NSW).
[5] Murray Thompson, "Managing the Impacts of Mobile Phone Telecommunications Installations on Water Reservoirs"(Paper presented at the NSW Water Industry Operations Conference and Exhibition, Newcastle Jockey Club, 6-7 April 2016. Publically available at http://www.wioa.org.au/conference_papers/2016_nsw/MThompson.htm.
[6] Murray Thompson, "Managing the Impacts of Mobile Phone Telecommunications Installations on Water Reservoirs"(Paper presented at the NSW Water Industry Operations Conference and Exhibition, Newcastle Jockey Club, 6-7 April 2016. Publically available at

- meeting their current and future obligations to provide a consistent and reliable clean and safe water supply;
- maintaining their equipment and other assets; and
- meeting their obligations under the *Work Health and Safety Act*[7]; and
- guaranteeing the structural integrity of buildings.

They also have important dispensations to the legal requirements for development that other authorities in NSW do not enjoy, and any increase in those dispensations requires proper consideration.

In the above context, this submission is focused on the extent to which the proposed changes might:

- impact on our member's statutory and community obligations;
- increase our member's costs in the conduct of their responsibilities by increasing their administrative workloads, maintenance costs, asset costs, safety responsibilities, and rectifying problems caused by the actions of carriers; and
- Providing safe and reliable water and wastewater services.

In general, our members are not opposed to efficiency. However, without being alarmist, it could come at the cost of safe drinking water and it needs to be understood that that efficiency might in the circumstances be gained at a cost to our members in terms of time and money and their community's expectations.

It is also instructive to note that the focus on efficiency is not necessarily encouraging of innovation. In this regard, the proposed reforms go to 'bigger and larger' telecommunications infrastructure, and faster timeframes commence and carry out the works. Our member's query whether due consideration has been given to the extent to which the regulatory changes could encourage smarter telecommunications facilities that do the "more with less" or that consolidate the numbers of devices on our member's infrastructure, or consideration of a shared 'standalone' structure by carriers.

Major Concerns

It is our submission that there are a number of major concerns held by local water utilities that need to be addressed in the proposed amendments. These have been numbered and listed below.

Further, the proposed amendments do not properly consider the cost implications for a local water utility or indicate how they will work in practice on a site by site basis.

We set out below the list of major concerns of our members, which are examined in further detail below.

1. **Water Quality and Reliability of Supply- Ensuring the Health of the Community**
   1.1. Drinking Water Quality Management Plan

2. **Coordination between carriers and our members**

3. **Work Health and Safety**
   3.1. Obligations under Work Health and Safety Law - Workers
   3.2. Issues arising from construction debris
   3.3. Management of structures and structural integrity

http://www.wioa.org.au/conference_papers/2016_nsw/MThompson.htm.

[7] *Work Health and Safety Act 2011* (NSW), *Work Health and Safety Act 2011* (Qld).

The above concerns highlight problems that various local water utilities have had with the installation of telecommunications infrastructure on their properties, including deficient coordination between carriers as to where telecommunication equipment might be best placed and an inconsistent standard of work in the installation of these facilities.

The proposed amendments must consider a local water utility's obligations to operate, maintain and repair its facilities. It is uncertain to our members how this can be achieved if by and large unfettered site access is given to a carrier's staff and/or contractors with the resultant loss of control over a site, or if a blanket approval is given for the installation of equipment regardless of location and structural suitability, without the proper capacity for a local water utility to object, and with little coordination between carriers and local water utilities.[8] Whilst the regulatory framework attempts to provide some balancing of control over these matters, in practice that is not always observed and our members bear the costs involved in rectifying these problems. It is our submission that the amendments need to address this issue through cost sharing provisions between carriers and local water utilities with regards to the operational and capital costs arising from the repairs and replacement of these structures.

We set out below more detail as to the general concerns of our members, which informs the basis for our specific response to the questions set out in the consultation paper.

[8]Murray Thompson, "Managing the Impacts of Mobile Phone Telecommunications Installations on Water Reservoirs"(Paper presented at the NSW Water Industry Operations Conference and Exhibition, Newcastle Jockey Club, 6-7 April 2016. Publically available at http://www.wioa.org.au/conference_papers/2016_nsw/MThompson.htm.

1. Water Quality and Reliability of Supply - Ensuring the Health of the Community

The primary function of a local water utility is to provide safe, reliable and clean water pursuant to its statutory obligations. Water quality in NSW is primarily governed by the *Public Health Act 2010*[9] and *Public Health Regulation 2012.*[10] These require all NSW local water utilities to develop and implement a "quality assurance program" for drinking water supplies based upon the Australian Drinking Water Guidelines Framework for Management of Drinking Water Quality[11].

Our members are already highly concerned by the unintended consequences of telecommunication facility installation on water utility infrastructure. Telecommunications antennas attract roosting birds, which defecate onto the roofs of our water reservoirs. This creates a serious risk of water contamination, when our members carry out their maintenance of associated procedures on these water reservoirs, which involve access hatches into the water supply.

Our members point out that the general increase in acceptable heights and concentrations of facilities proposed by the amendments will increase the number of bird roosting areas on the water tanks. The increases the amount of bird habit and defecating areas on the roof areas, which increases the risk of faecal contamination in the drinking water.

It is our submission that the Australian Communications and Media Authority adopt the Australian Drinking Water Guidelines National Water Quality Management Strategy (National Health and Medical Research Council and Natural Resources Management Ministerial Council - ISBN 1864965118) as an industry standard under the *Telecommunications Act.* This would serve as a means of protecting water quality.

1.1. Drinking Water Quality Management Plan

In NSW, the Drinking Water Quality Management Plan is legislated in the *Public Health Act 2010* (NSW) through clause 34 of the *Public Health Regulation 2012* (NSW). This plan directs local water utilities to:

1. **Carry out a careful and detailed site examination of each service reservoir to ensure:**
   a. The reservoir and its roof are secured from the entry by birds, animals, vermin and windborne contaminants;
   b. Rainwater cannot enter into the reservoir (i.e. no leaking roof or holes in the reservoir wall or gaps around the openings on the roof);
   c. The reservoir roof is adequately drained especially near the openings and landings on the roof area. The roof should extend beyond the reservoir wall;
   d. All access hatches or openings are closed and locked at all times; and
   e. The reservoir site and roof are secured from unauthorised access.

2. **Review the reservoir maintenance standard operating procedures to ensure that they are sound and fit for purpose:**
   a. Where access to third parties (e.g. telecommunication companies, SES, NSW Police, etc.) is undertaken and/or approval has been given to install equipment, appropriate written reinstatement and communications protocols need to be established between the local water utility and each third party to ensure the service reservoir integrity is not compromised at any time;

[9] *Public Health Act 2010* (NSW).
[10] *Public Health Regulation 2012* (NSW).
[11] National Health and Medical Research Council, 'Australian Drinking Water Guidelines' (2011), Commonwealth of Australia.

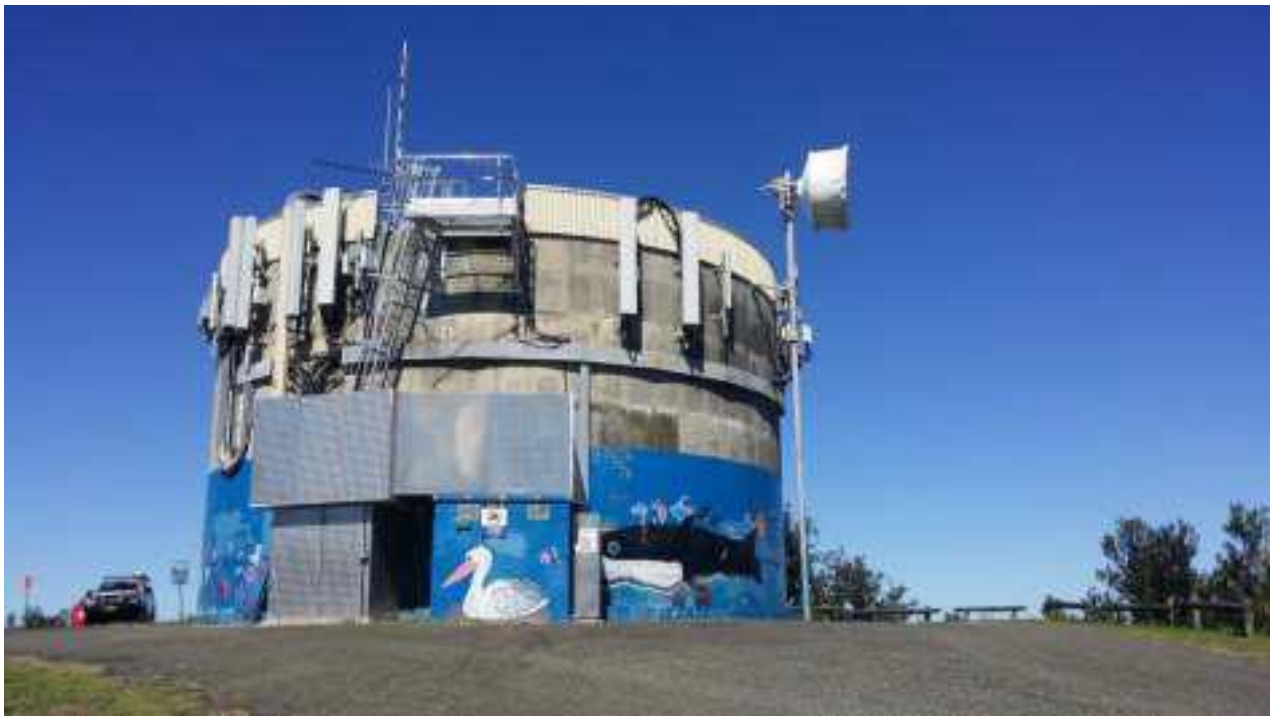
b. The local water utility must conduct regular audits to ensure these protocols are being effectively implemented;
c. Similar protocols should also be effected between the local water utility and any service providers authorised by the Local Water Utility to access its service reservoirs; and
d. A financial penalty be imposed for any failures to comply with the protocol as these may breach the distribution system integrity, resulting in contamination of the drinking water supply and then requiring a “boil water alert” being issued to consumers.

It is clear from an examination of the Drinking Water Management Plan that there is a tension with the current existing telecommunications regime concerning the powers and immunities of telecommunications carriers. This tension will certainly be increased by any relaxations proposed by the amendments, or any strengthening of carrier's powers to install larger telecommunications facilities in higher concentrations on water infrastructure operated by NSW water utilities.

2. Coordination between carriers and our members

NSW Water Directorate understands that the telecommunications industry is highly competitive. The competition can serve as a disincentive for coordination among carriers. Given that all carriers potentially have the same right of access under the legislation, this can be to the detriment of a local water utility's assets and operations which house various telecommunication infrastructure from a plethora of telecommunication carriers.

Please refer to the photographs submitted below of local water utility assets as examples of this proliferation.



A Memorandum of Understanding between carriers and local water utilities in a region might assist in developing an agreement as to how work will proceed with minimal disruption, impact and cost to each other's operations. Additionally, it can facilitate flexibility for a local water utility to use and modify their own asset to meet their own future performance and efficiency requirements. This may involve for example, the installation of solar panels to reduce electricity costs. Our members have been concerned with the way in which some installations have occurred, which have severely restricted the use of their assets.

A Memorandum of Understanding could be developed with the carriers and stakeholders in each region in which they seek to operate, which will include providing information as to the type of work that will be carried out, and obtaining the local water utility's informed consent. To maximise the effectiveness of its resources, a carrier is likely to have developed a capital works program and maintenance plan well in advance. This information could be shared with a local water utility so plans can be facilitated to avoid disruption to their day to day operations. This could feed into any Memorandum of Understanding process.

The Mobile Carriers Forum website refers to its achievements including an RF Safety Compliance Program.[12] While there is a Mobile Carriers Forum which includes Regional Forums[13] in each state, it is uncertain what coordination there is in local operations because of commercial sensitivities and competitive tensions between carriers. This affects how each carrier will interact with local water utilities. A lack of coordination and common approach from carriers can be detrimental to both a local water utility's assets and day to day operations. Neither of these concerns are adequately addressed in the proposed amendments or the consultation paper. It is uncertain what capacity the Mobile Carriers Forum has to enforce the conduct of its members at a local level, or indeed whether this this forms part of its functions.

While the Telecommunications Industry Ombudsman (**TIO**) is empowered to resolve some complaints, it may not have the ability and capacity to resolve problems which emerge in relation to the essential

[12]Mobile Carriers Forum, 'RF Safety Compliance Program' http://www.mcf.amta.org.au/pages/RF.Safety.Compliance.Program
[13]Mobile Carriers Forum 'MCF Regional Forums' http://www.mcf.amta.org.au/pages/MCF.Regional.Forums

services our members provide and to the detriment of the operations of both carriers and local water utilities. If the TIO is going to have its role expanded, then a corresponding increase in resourcing for it is necessary, as a number of our members experience significant delays when dealing with the TIO.

Proposal 19 of the proposed amendments includes allowing carriers to refer "owners and occupiers" to the TIO before it is requested, possibly increasing its remit. This raises the issue of outsourcing, with our members concerned that carriers are outsourcing their responsibility and ownership of problems that arise with members to the TIO, who is not resourced appropriately to deal with these problems in a timely manner. In our submission, the role of the TIO must be expanded to consider the role of other essential services affected by the telecommunications industry and to allow for a swift resolution.

The TIO, Energy and Water Ombudsman NSW all refer to a similar complaints process and investigative powers and it is conceivable that all Ombudsmen could issue contradictory directions, and in this event it is uncertain which direction would take precedence. In our submission, this also needs resolution. Many of the issues that may be referred to one of these Ombudsman could be avoided in advance through an ongoing communications process and a Memorandum of Understanding developed between the carriers and local water utilities.

Finally, Proposal 18 of the proposed amendments would change the objection period to 5 business days from the receipt of notice (instead of the current 5 business days from the commencement of the proposed activity) from the receipt of a notice for some types of land entry activities, all low-impact facility installation activities, and all maintenance activities if adopted. Many of the constraints referred to in explaining this proposal, also apply to other essential services.

While this may be acceptable for most general commercial/residential operations, it is unworkable for local water utilities which operate in a heavily regulated environment. The notice provided will not necessarily specify the full details for the type of work that might be carried out, and with only 5 days (or even less once they have received the notice) to object, this could have a considerable impact on the operations of a local water utility and flow on of costs.

Proposal 23 relates to installation and replacement of mobile towers. In response to issue 23.3 for discussion, the reasonable time period for installation and replacement of mobile towers should be considered on a case by case basis, and should consider that prolonged project timeframes for telecommunications infrastructure can cause significant disruption to the services that local water utilities provide. Again, the proposed work could form part of a Memorandum of Understanding and be subject to ongoing communication and consultation as to how it can be carried out with minimal disruption to all relevant parties.

3. Work Health and Safety

Proposal 1 of the proposed amendments includes a redefinition of co-located facilities, which includes public utilities such as water towers. The health and safety and operational aspects of this redefinition must be considered, including the impact on a local water utility's health and safety obligations.

Another concern of our members relates to the structural integrity for facilities to handle the loads that are being placed on them. A number of our members have serious concerns about the structural integrity of the facilities, particularly for the water utilities which are not as well-resourced to respond to the issues raised by the telecommunications sector. Further, there are concerns about the repair and modification costs on water utility infrastructure as a result of carrier's facilities.

It is our submission that the cumulative impact of the co-location of facilities needs a more robust approach. In our submission, the onus needs to be placed more squarely on carriers when it comes to the co-location of facilities, and that the facility safely handles the load proposed, and that a safety tolerance (factor of safety) applies. The cumulative impact of co-location of facilities also has other associated flow-on issues on local water utility operations due to the impact of carriers, as for example, some members have been unable to install their own telemetry radio antennas on their own structures as a result of carrier's facilities.

3.1. Health and Safety Obligations

In NSW local water utilities are duty holders under Australian Work Health and Safety law[14] as a 'Person Undertaking a Business or Undertaking.[15]' In the context of work being carried out, they have a primary duty of care to ensure as far as reasonably practicable that workers are healthy and safe while working and that non-workers including visitors or volunteers are similarly not at risk.[16]

SafeWork NSW notes that health and safety obligations include:

- safe systems of work;
- safe use of plant, structures and substances;
- adequate facilities for the welfare of workers;
- notification and recording of workplace incidents;
- adequate information, training, instruction and supervision;
- compliance with requirements under the Work Health and Safety Regulation;
- effective systems for monitoring the health of workers and workplace conditions;
- a safe work environment;
- maintain the premises used for accommodation for workers, if required. [17]

Local water utilities will face a significant burden in meeting these obligations unless reasonable notification of when a carrier intends to access a site and who will be accessing the site is given. This highlights the need for more coordinated and meaningful liaison between carriers and local water utilities. In our submission, it also highlights why a 5 day notice period would be inadequate when it comes to local water utilities. Our members are already anxious about the compliance with these laws

14 *Work Health and Safety Act 2011* (Cth); *Work Health and Safety Regulations 2011* (Cth);

15 *Work Health and Safety Act 2011* (Cth) s 5.

16 Julian Mellick, Faith Laube, and Stephanie Livanes, 'Work Health and Safety Changes for the Construction Industry', (21 May 2012), Colin Biggers & Paisley https://www.cbp.com.au/insights/2012/may/work,-health-and-safety-changes-for-the-constructi

17 SafeWork NSW, 'Definitions of PCBUs and Workers' Department of Finance, Services, and Innovation http://www.safework.nsw.gov.au/law-and-policy/employer-and-business-obligations/definitions-of-pcbus-and-workers

under the existing regime, and further relaxations will only generate more uncertainty and unease with the telecommunications regime.

This is particularly important as a carrier's staff may be unfamiliar or unware of water quality management processes, hazards, and specific site conditions which they may impact with their activities, such as operating water dosing equipment and chlorine disinfection systems.

A carrier must agree that while it is on a local water utility site, its staff may at law be supervised by the local water utility. To do this properly, often site induction and appropriate protective clothing are required.

Again a Memorandum of Understanding could be used to address the Work Health and Safety obligations of local water utilities, and how the issues can be addressed in practice on a site by site basis.

3.2. Construction Debris

Construction debris is a potentially serious work place hazard, that must be removed. A local water utility as a Person Undertaking a Business or Undertaking has a primary duty of care to ensure a safe working environment. There is also a potentially considerable cost in a local water utility having to remove construction debris.[18] A number of our members have experienced problems with carriers not removing construction debris in a timely and safe manner. This creates the risk of a number of negative and detrimental effects on the water supply. Examples include metal filing entering the water supply, damage to corrosion protective coatings, and the introduction of dust and aerosols that may contaminate water.

There needs to be a better enforcement mechanism for this so that the cost and responsibility of it does not fall on local water utilities. Again, the proposed regulatory amendments would enable the more efficient construction of new works and bigger or larger infrastructure, but the regulatory changes do not have a proportionate focus on ensuring obsolete infrastructure and debris is removed safely and promptly. These concerns could be resolved in a Memorandum of Understanding between the carrier and local water utility on a site by site basis.

Please refer to the photograph below submitted by a member's site where construction debris has been left.

[18]Murray Thompson, "Managing the Impacts of Mobile Phone Telecommunications Installations on Water Reservoirs"(Paper presented at the NSW Water Industry Operations Conference and Exhibition, Newcastle Jockey Club, 6-7 April 2016. Publically available at http://www.wioa.org.au/conference_papers/2016_nsw/MThompson.htm.

3.3. Management of Structures

SafeWork NSW[19] further notes that a Person Undertaking a Business or Undertaking has further obligations if it is involved in specific kinds of activities including:

- the management and control of workplaces, or fixtures, fittings or plant at workplaces;
- the design, manufacture, import or supply of plant, substances or structures; and
- installation, construction or commissioning of plant or structures.

The positioning of equipment in relation to water assets may impact a local water utility's responsibilities as Person Undertaking a Business or Undertaking. This suggests a need for site management, supervised access and coordination as to how telecommunications assets will be attached to buildings. Our members should be able to recover costs if significant time to assess the installation has been exerted (in a scheme similar to Development Application fees and charges).

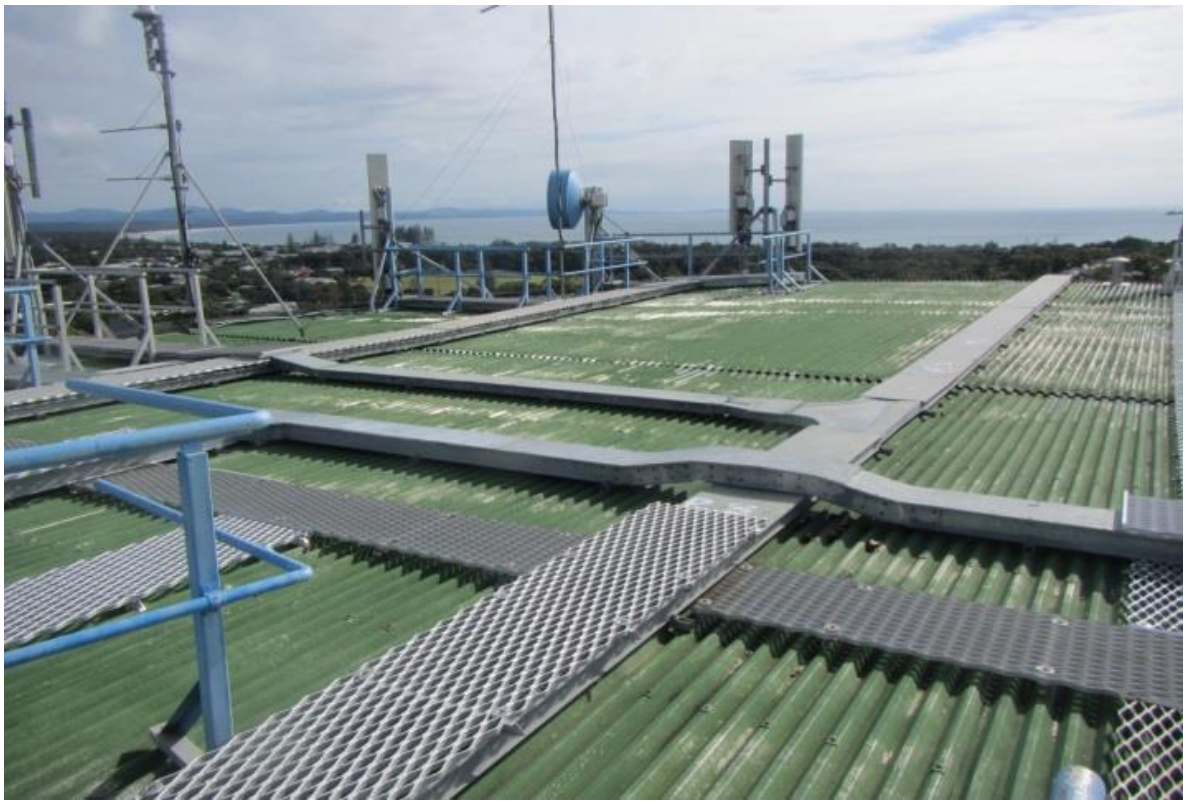
Further, local water utility sites are not designed as telecommunications hubs. The installation of telecommunications equipment can have a significant detrimental impact on the structural integrity of a

[19]SafeWork NSW, 'Definitions of PCBUs and Workers' Department of Finance, Services, and Innovation http://www.safework.nsw.gov.au/law-and-policy/employer-and-business-obligations/definitions-of-pcbus-and-workers

site, which was not designed to support this purpose. For example additional weight may impact on the structural integrity of the roof, or the erection of infrastructure on the site may cause concrete cancer or other holes in the structure leading to entry points for birds, animals, vermin and windborne contaminants.

It is our submission that in circumstances where a carrier installs equipment on a tower, reservoir, water tank or other structure belonging to a public utility, a carrier must supply an engineering structural analysis to demonstrate that the structure will not be overloaded by the equipment.

Please see the photograph submitted below, which shows significant cabling and associated metal cable covers installed along the roof of a water reservoir, which would not have been designed for this type of load.



Other specific issues and concerns that have been identified from existing sites include the following:

- Fixtures such as cable covers need to be regularly inspected and properly maintained to minimise the safety risks to operational staff on site. Please see the photos below submitted by our members of examples of these kinds of issues and where this has not occurred:

- Fixtures attached to the exterior walls of reservoirs have corroded, and have now become hazards to staff and to the public as there is significant risk of falling. Please see the photograph below submitted by our members as an examples of these kinds of issues:

- Fixtures have been installed with little regard to the quality of the work being undertaken or its consistency, and in some cases with little to no regard to how local water utilities will be able to carry out their required maintenance operations. Please see the photograph below as an example of where this has occurred. In this instance, an access hatch could not be opened.

The above highlights the need for carriers to coordinate and consult with local water utilities over how fixtures may be installed and in relation to the finished work. In addition to rectifying the above, carriers will need to coordinate the following with local water utilities:

- The positioning of antennas such as side antennas or fixtures in such a way that external works such as the positioning of elevated work platforms, are restricted;
- The positioning and fixing of antennas on water reservoirs where there are penetrations to the roofs, potentially contaminating the water supply by allowing the ingress of contaminated water and materials into the drinking water supply
- The positioning of antennas, which may attract roosting of birds and hence create a risk of contact with bird excrement, and possible water contamination. Please see the submitted photograph below:

3.4. Potential Health and Safety Concerns Associated with Telecommunications Equipment

3.4.1. Radio Frequency Electromagnetic Energy & Health Effects

Exposure to Radio Frequency Electromagnetic Energy (EME)may lead to adverse health effects, especially where workers are operating in close proximity to telecommunications infrastructure. Water storage facilities were not designed to facilitate telecommunications equipment or concentrations of such equipment.

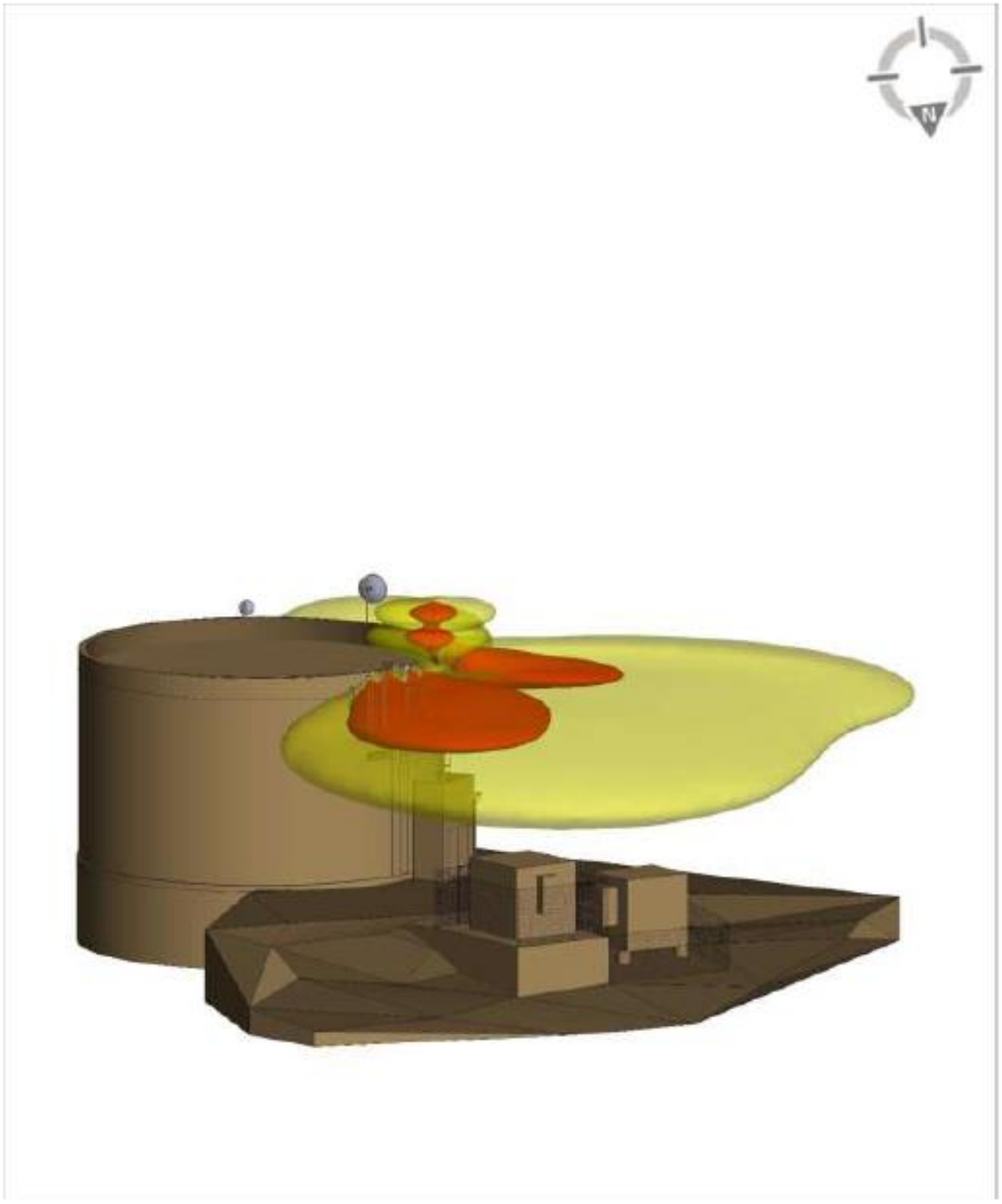
Our members are concerned about permitting higher EME levels on our structures than what is permitted elsewhere (ie. metropolitan areas). We submit that our employees should not be exposed to higher EME than what is considered as the 'norm' in metropolitan areas. We further submit that our operations should not be subject to additional access limitations due to EME.

Our members understand that the size and power of the telecommunications equipment relates to the critical importance of the installation for telecommunications operations and service. The importance of a facility would no doubt, impact on the readiness for carriers to 'turn off' the facility in order to permit our staff to safely entering the EME 'danger zone' in order to carry out our operations. Our members are concerned about the added complexities in coordinating their operations that this involves.

This suggests that ongoing consultation is required between a carrier and local water utility, regarding where equipment should be placed, how it must be placed in relation to other existing telecommunications equipment, and what alternative locations are available. There must also be a consideration of whether a concentration of facilities in a particular location impacts the broader community.

As stated previously, we support the use of a Memorandum of Understanding between carriers and local water utilities to assist the provision of a mutually satisfying regime with respect to the use and management of the whole facility. If this is not accepted by the telecommunication carries, we submit that water utilities should have a general right of refusal to allow telecommunication equipment to be installed on sensitive water supply structures based on issues listed above, where an alternative solution can be demonstrated, such as the erection of a dedicated structure for telecommunication carrier use, with reasonable costing/rent arrangements between a local water utility and a carrier.

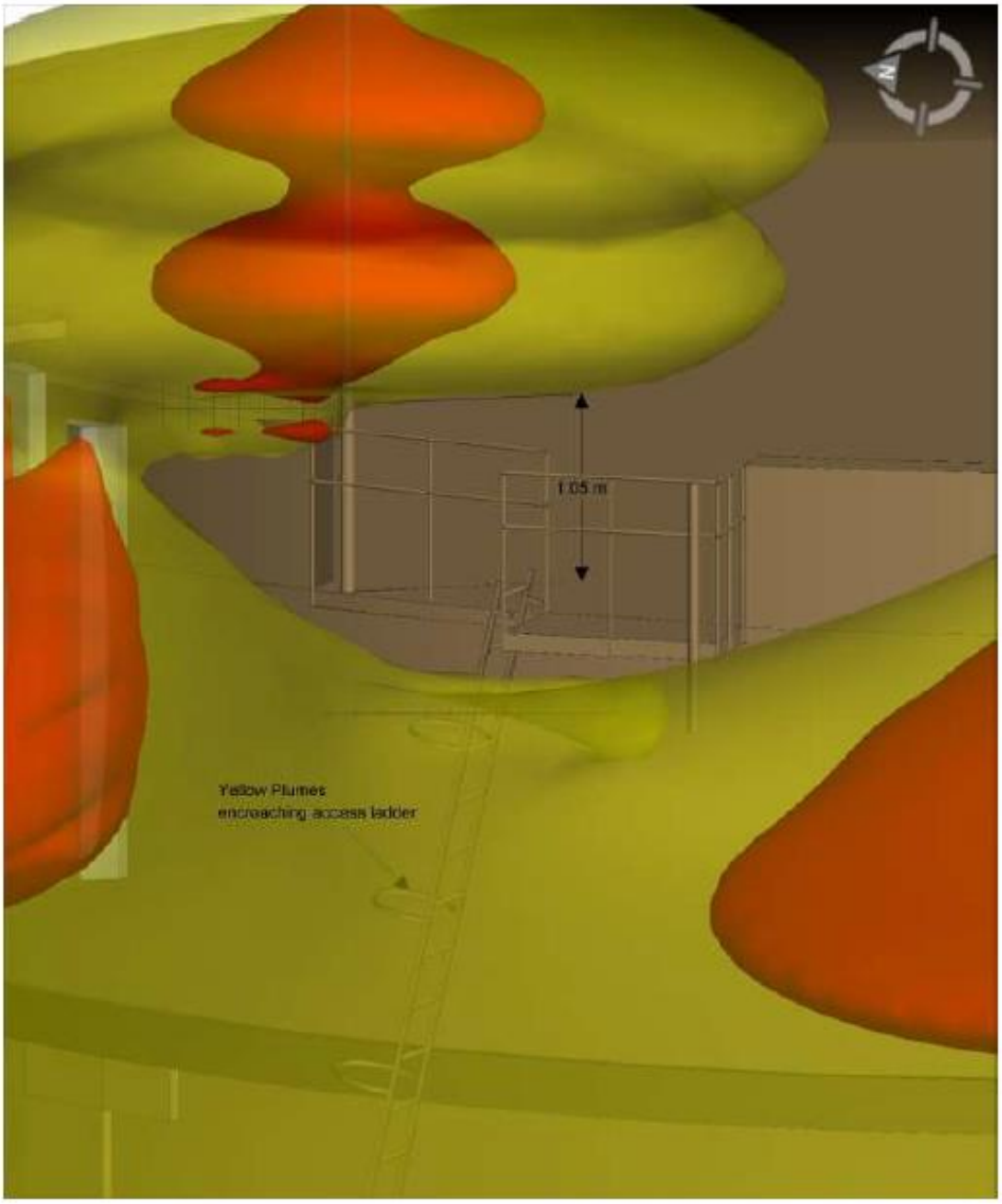
Please see the images below of an EME impact area from the EME Guide to Site Safety for a particular member's site. Large impact areas such as these disrupt the operations of our members, which remains an ongoing concern. At this particular water reservoir site, the telecommunication installations on the reservoir roof area have now placed the stored water at risk as no water utility operational staff can enter within the area to check for structural and contamination risks. The images below show that the clearance is 1.05m, and that the access ladder that completely falls within an EME 'no go' zone.



Exclusion zone Legend

Areas above RPS3 public limits

Areas above RPS3 occupational limits



Exclusion zone Legend

Areas above RPS3 public limits

Areas above RPS3 occupational limits

3.4.2. Training Required To Work With Telecommunications Equipment

It is unlikely that local water utilities personnel would be trained to consider specific health and safety issues almost exclusively related to the telecommunications industry, including the appropriate protective equipment required for work in an area with high EME. Training in health and safety issues related to the telecommunications industry are not part of a local water utility's core role. The cost of training and provision of appropriate protective clothing should be considered. This must be considered as part of a site management plan and could also be included in a Memorandum of Understanding.

In our submission, any changes should reinforce that a local water utility must have the right to refuse the installation of equipment that impacts the health and safety of its staff.

3.5. Site Management Plans

A local water utility as site owner must be provided with an updated/reviewed Radio Frequency National Site Archive (RFNSA)[20] site management plan every 2 years, and must be provided with a clear understanding of any impact areas related to a carrier's equipment. Information about this equipment must be made available on site.

Local water utilities have identified issues of concern that must be addressed in site management plans. These are:

- identification numbers being faded and unreadable,
- the owners of antennas, not always including tank identifying features such as access ladders or the positioning of 'no go' areas.

The positioning of 'no go' areas may have a major impact on the day to day operations of a site and must be included in the site management plan and provided to interested parties such as ambulance and fire services.

Any fixture to a tank must have a record of the ‘owner’, the maintenance schedule, and the emergency contact. This suggests a need for meaningful and regular liaison between carriers and a local water utility to update the site management plan, and to ensure that the installation of carrier equipment does not impact on the operation of either the site or the equipment of other carriers.

Site management plans must be developed in coordination with the local water utility, routinely updated and maintained on site. Please refer to the photograph submitted below showing a identification number that is beyond the point of readability.

[20]Radio Frequency National Site Archive, Australian Mobile Telecommunications Association http://www.rfnsa.com.au/nsa/index.cgi

3.5.1. Health and Safety and Risk Assessment Procedures

Sydney Water has developed health and safety[21] and risk assessment procedures that carriers and local water utilities could consider when carrying out work. While this procedure was developed for use by Sydney Water, it suggests that a carrier must similarly be aware of any health and safety procedures that a local water utility has adopted and considerations that must be practically implemented when developing a site management plan.

Similar procedures could be incorporated in the Memorandum of Understanding between carriers and local water utilities.

[21]Sydney Water, Health and Safety Procedure 14. Publically available at http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq1/~edisp/dd_045675.pdf

4. Operations - Site Security

4.1. Site Security

4.1.1. Access to a Restricted Site

Clause 289 of the *Work Health and Safety Regulation 2011* [22] defines construction work as:

any work carried out in connection with the construction, alteration, conversion, fitting-out, commissioning, renovation, repair, maintenance, refurbishment, demolition, decommissioning or dismantling of a structure.[23]

Work carried out on water storage facilities may fall within this definition.

SafeWork NSW outlines the responsibilities associated with construction work: [24]

- manage risks, including risks associated with the construction work, risks when storing, transporting and disposing of construction materials and waste, storing plant, and managing on-site traffic and essential services;
- restrict site access. Secure the site from unauthorised access;
- prepare safe work method statements. This is likely to be high risk construction work and a Safe Work Method Statement should therefore be prepared; and
- workers must have general construction induction training, including retraining for those who have not carried out construction work for the past two years.

A local water utility site is typically required because of the nature of its function to guarantee the safety of all who enter, in order to maintain its statutory obligations to provide safe, clean and reliable water.

A local water utility has the primary responsibility for the security of its sites, which in our submission should only be accessible by authorised persons who have been properly inducted. Site security can be compromised by unrestricted access to carriers.

Coordination is required between carriers and the local water utility so that the local water utility can ensure adequate supervision and the recording of a site visit. In our submission, local water utilities must be properly notified before a site is accessed by carrier staff.

4.1.2. Training and Authorisation

There are different industry hazards in the telecommunications and water utility industries, and staff of each respective industry are not necessarily aware of the hazards of the other industry. These hazards may also be unique to a particular water utility site. Entry must be restricted only to authorised persons to water utility sites, who are trained to identify and work with hazards associated with providing water. This includes a 'Water Quality Protection' induction, which in our submission, must be conducted for workers on site and near the drinking water supply. [25]

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[22] *Work Health and Safety Regulation 2011* (NSW) Regulation 289.
[23] SafeWork Australia, 'Construction Work Code of Practice July 2014', http://www.safework.nsw.gov.au/__data/assets/pdf_file/0014/52151/construction-work-code-practice-3842.pdf
[24] SafeWork NSW, 'Construction Work' http://www.safework.nsw.gov.au/health-and-safety/industry-safety/construction
[25] Murray Thompson, "Managing the Impacts of Mobile Phone Telecommunications Installations on Water Reservoirs"(Paper presented at the NSW Water Industry Operations Conference and Exhibition, Newcastle Jockey Club, 6-7 April 2016. Publically available at http://www.wioa.org.au/conference_papers/2016_nsw/MThompson.htm.

Carriers must therefore consider their training obligations to their own staff in allowing them to access a restricted site.

4.1.3. Refusal of Entry

In our submission, a local water utility must maintain a right of refusal for a carrier's staff or contractors. This includes those staff/contractors who have not undertaken required training. In our submission the local water utility should have the power to deem a person to be incompetent based on lack of training or banned for breaches of workplace safety, such as being under the influence of drugs/alcohol or negligent/dangerous behaviour.

In NSW, local government is subject to the Independent Commission Against Corruption and codes of conduct. To avoid any appearance of impropriety for either local government or the utility, in our submission, a local water utility may also need to restrict access to a contractor or contractor's staff who have been accused of corruption or who are not "fit and proper persons" due to reputational risks.

These types of issues are not adequately addressed in the current legal framework and the focus on efficiency for carriers needs to be counterbalanced by these other issues which our members continue to raise as concerns.

4.1.4. Examples of Disruption Caused by Unrestricted Access

The local water utility must be able to validate that a site has been secured between inspections. Security problems can occur where cable covers and fixtures used by carriers may allow vandals to bypass security systems.

On the other end of the spectrum, the use of an excessive number of padlocks at local water utility sites by carriers (again reflecting a lack of coordination) also causes disruptions to our members. The lack of a coordinated and proper control regime for access leads to these types of problems.

Please refer to the photograph below of an access gate submitted by one of our members.

4.1.5. Installation of New Telecommunications Assets or Modifications to Existing Telecommunications Assets

The proposed amendments ask for comment about the use of new types of telecommunications equipment.

In our submission, any new installation or work carried out on existing telecommunications assets under the *Telecommunications Act* must consider the matters raised above in this submission. For example:

- can the load be supported?
- does it increase the health and safety risks to the staff of the local water utility?
- will it diminish the asset's security, longevity, integrity, or operational effectiveness?
- what cumulative impacts arise from the inclusion of a new type of equipment on an existing structure?
- will there be an effect on the local water utility's ability to maintain the service they provide?

We submit that the same considerations need to be applied for any proposed modifications and/or alternations or additions to existing telecommunication assets installed on water utility infrastructure.

Further, any costs associated with the installation and/or modifications to existing telecommunications assets, or modifications to the host structure should not be borne by the water utility.

4.1.6. Reasonable Refusal of the Use of a Local Water Utility's Assets

It is our submission that the proposed amendments should consider providing a right for a local water utility to reasonably refuse further use by a carrier, if:

a. such use will endanger assets, or
b. a works program will unduly disrupt the day to day operations or future planning requirements of a local water utility.
c. there is a suitable alternative solution to the use of the local water utility's asset.

In addition to a reasonable right of refusal, carriers and local water utilities should cooperate based a Memorandum of Understanding, to best understand the performance obligations of the local water utility. Examples of cooperation are included in the Roads and Maritime Services publication Campbelltown Road MR177 Strategic Assessment of Utilities[28]. Sections 5 and 7 are particularly relevant:

- Section 5 - Working with Utilities. This details how the RMS intended to work with identified utilities to achieve its stated outcomes;
- Section 7 - Safety in Design. This details how the RMS would identify and work with identified assets to cause minimal damage.

The Memorandum of Understanding could therefore address the following:

- An understanding that the local water utility must conduct regular site inspections and/or maintenance to ensure that water quality is maintained. This must be reflected in the carriers' own work program and should be coordinated to ensure minimal disruption.
- An understanding of how the carrier's proposed installations can be carried out in order to minimise negative effects on a water utility.

[28]NSW Roads and Maritime Services, Campbelltown Road MR177 Strategic Assessment of Utilities, July 2012 <http://www.rms.nsw.gov.au/documents/projects/sydney-west/campbelltown-road-upgrade/campbelltown-road-ref-appendix-e.pdf>

- An understanding of emergency work required because of events such as storm damage.

5. The Current lack of a regime for the removal of obsolete equipment

It is our submission that any proposed amendments to telecommunications legislation must address the removal of obsolete equipment on public utility structures. Essentially, our members have encountered situations where old obsolete telecommunication equipment has remained on local water utility infrastructure, and significant time and cost has been exerted by water utilities in attempting to negotiate with carriers for the removal of these facilities.

It has been assumed that a carrier will remove obsolete equipment, but we are instructed by our members that this has not always the case. In our submission, this should be a precondition of the instalment of any new equipment, that the old equipment that is being replaced, be removed. There must be a requirement on carriers to reasonably restore the structure to is previous condition, including replacement of roof cladding, removal of bolts, sealing of drill holes in concrete, and repainting. We submit that there must also be a provision which enables water utilities to recover any cost exerted in this removal on the carrier's behalf, in circumstances where they do not comply with a request to remove obsolete equipment.

Both the *Telecommunications Act* and the *Code of Practice* are silent on this issue, which is a lacuna in the law. It is our submission that any possible amendments to carrier's powers and immunities addresses this major concern.

Responses

We submit the following comments on the specific areas for discussion raised in the consultation paper, in addition to our 'Major Concerns' and our key Recommendations:

Proposed amendments to the Telecommunications (Low-impact Facilities) Determination 1997

1. Definition of co-located facilities

1.1 Are there any issues with this proposed clarification to the definition of co-location?

We submit that this proposal needs further consideration, and that detailed consultation with water industry stakeholders is required, as set out in Recommendation 1 in this submission.

This proposal may create issues if a cluster of low impact telecommunications facilities are installed on isolated structures but due to them sitting or being housed on separate structures, avoid the considerations required under the co-location provisions. Our members submit that closer consideration as to whether a certain concentration of facilities in a particular area requires assessment, primarily for health and safety reasons is warranted.

The health and safety and operational aspects of this redefinition must be considered, including the impact on a local water utility's health and safety obligations, as set out throughout this submission, and in particular under heading 3 of 'Major Concerns.' Our members are concerned that for example, there may be a number of structures in a site that could potentially be used by carriers, and a high concentration of them in a particular area could create a health and safety risk to its employees. This may take the form of additional EME exposure, exposure to additional workplace hazards as a result of crowded workspaces a general interference with general business operations.

This issue also raises the likelihood that different carriers would be using different structures within the site. In our submission, the lack of coordination between carriers with respect to the erection of their facilities needs to be addressed.

This includes:

- security of the site - would the contractors carrying out the work satisfy a "fit and proper person" check?
- how will the site be properly secured after access to prevent trespassers and vandalism and compromised security of water supply? Will it be over secured with more locks (for example) after access impeding the local water utilities access to its own site?
- can the work be carried out at the same time as local water utility operations, and to what extent will there be interruptions?
- to the extent there are interruptions, are they reasonably necessary?
- multiple carriers maintaining the same rights and entering the same property for the same purpose creating a coordination and business interruption issue;
- the need for a register or control document which our members possess setting out precisely where the infrastructure is located; and
- the regime for the removal of obsolete infrastructure, which needs to be regulated.

Further, an increase in the number of facilities on water utility assets is likely to have a significant impact on the future capability of the water utility asset to respond to changing future needs. For

example, clusters of telecommunications facilities may restrict a water utility's ability to install a new reservoir hatch to meet confined space entry requirements for divers to enter and perform reservoir maintenance and inspections. We submit that the proposed amendments deal with this concern, as set out in Recommendation 1 in this submission.

2. Local government heritage overlays

2.1 Are there any issues with this clarification in relation to local government heritage overlays?

No comment as this does not impact on a local water utility's core functions.

3. Radio shrouds as an ancillary facility

3.1 Should radio shrouds be considered ancillary facilities to low-impact facilities, or should radio shrouds be listed as distinct facilities in the Schedule of the LIFD?

Any additional structure on a water supply tank/reservoir promotes habitats for birds, pests, and vermin. As discussed at many points in this submission, notably section 1 of our 'Major Concerns,' an increased animal habitat causes an increase in defecation onto the roofs of water utility structures. This creates a risk of water contamination of the water supply.

The Water Directorate is supportive of any means to reduce these types of habitats for birds, pests and vermin, which will assist in reducing the incidence of animal defecation onto water reservoir roofs.

Notwithstanding the above, we also submit that this proposal raises the issues of:

- structural adequacy of the installation with respect to the host structure;
- construction impact on the existing water utility infrastructure (will retrofitting an existing piece of water infrastructure with a shroud impact on the operational effectiveness of the water infrastructure due to the manner in which it is constructed?)
- the introduction of additional hazards and risks to local water utility's employees and to its operations;
- the limiting of the opportunity for water utilities to increase the performance and efficiency of their asset;
- eliminating or managing risks to water quality and reliability of supply;
- consolidation of multiple telecommunications equipment and placement of such equipment that doesn’t affect water supply operations, access, and structural integrity of the host structure, and minimising visual impacts of the facility in general; and
- the regime for the removal of obsolete cabinets, which will needs to be regulated.

We submit that the use of a Memorandum of Understanding between carriers and local water utilities could assist in providing a mutually satisfactory regime for the erection of shrouds on water infrastructure, and management of the entire facility, as set out in Recommendation 4 of this submission.

3.2 If listed as distinct facilities in the Schedule of the LIFD, should there be any criteria for radio shrouds, for example in terms of size and dimensions?

As above.

4. Size of radiocommunications and satellite dishes

4.1 Are there any issues with permitting 2.4 metre subscriber radiocommunications dishes (or terminal antennas) in rural and industrial areas (LIFD Schedule, Part 1, Item 1A)?

Our members have concerns of permitting higher EME on our structures than what is permitted elsewhere (ie. metropolitan areas). We submit that our employees should not be exposed to higher EME than what is considered the 'norm' in metropolitan areas. Please see section 3.4 of our 'Major Concerns' for a detailed discussion of our concerns in this regard. We further submit that our operations should not be subject to additional access limitations due to EME. Please see our comments at Proposal 1.1 regarding installations generally.

Our members have no doubt that the size and power of the telecommunications equipment relates to the critical importance of the installation, and would impact on the readiness for carrier to 'turn off' the facility in order to permit our staff to safely entering the EME 'danger zone' in order to carry out our operations.

As submitted above, we support the use of a Memorandum of Understanding between carriers and LWUs to assist providing a mutually satisfying regime with respect to the use and management of the whole facility, as set out in Recommendation 4 of this submission. If this cannot be achieved, we submit that water utilities should have a right of refusal to allow telecommunication equipment to be installed on our sensitive water supply structures where a suitable alternative solution can be demonstrated, based on issues listed above.

4.2 Are there any issues with permitting other 2.4 metre radiocommunications dishes in rural and industrial areas, including those located on telecommunications structures (LIFD Schedule, Part 1, Item 5A)?

As above.

5. Maximum heights of antenna protrusions on buildings

5.1 Is a 5 metre protrusion height acceptable, or is there a more appropriate height?

Our comments for questions 5.1 and 5.2 have been prepared together. Please see the below:

5.2 Are higher protrusions more acceptable in some areas than others? Could protrusions higher than 5 metres be allowed in industrial and rural areas?

We submit that this proposal needs further consideration, and consultation is needed with relevant stakeholders from the water supply industry, as set out in Recommendation 1 of this submission.

Our members point out that the proposed general increase in acceptable heights and concentrations of facilities will increase the number of bird roosting areas on the water tanks. The increases the amount of bird habit and defecating areas on the roof areas, which increases the risk of faecal contamination in the drinking water. Please see our comments at section 1 of our 'Major Concerns' in this submission for more detail in this regard.

Our members are concerned with this issue already under the current regime, especially in light of their obligations under the *Public Health Act 2010* (NSW). The *Public Health Act 2010* (NSW) and the *Public Health Regulation 2012* (NSW) require all local water authorities to develop and implement a "quality assurance program" for drinking water supplies. Clause 34 in the Regulation provides that this quality assurance program is based upon the Australian Drinking Water Guidelines Framework for Management of Drinking Water Quality. Proposed amendments that impact our ability to maintain our obligations under these laws by increasing the contamination risk to our water supply rejected strongly by our members. Further, we submit that the Australian

Drinking Water Guidelines be adopted as an industry standard under the Telecommunications Act, as set out in Recommendation 2 of this submission.

Additionally, increasing the antenna height also increases the load placed on structures, especially when factoring in wind impacts. Drinking water reservoirs are constructed from a range of materials and use different designs, the majority of which did not contemplate the future installation of antennae. A blanket increase maximum height is inappropriate, with each installation requiring careful consideration on a case by case basis. We further submit that an engineering structural analysis certificate should be a pre-requisite to any proposed installations on water utility infrastructure, as set out in Recommendation 3 of this submission.

With regards to whether there is a more appropriate height, please refer to our comments under proposal 1.1, regarding the telecommunications installation of local water utility's infrastructure at the first instance.

Other issues regarding heights of antennas include:

- shadowing affects onto solar panels (existing or future installations);
- increase of bird, pest and vermin habitats that may result in increased defecation onto roof areas, which increases the risk of faecal contamination in the drinking water;
- if the antenna(s) are supported by steel guy ropes, access will be restricted in adjacent roof areas. This issue will be accentuated if multiple antennae masts use the same system of steel guy ropes on the same roof; and
- increased risk of loss of water tightness of roof structure due to increased roof penetrations of mounting guy ropes, resulting in increased water quality risks and loss of structural integrity (ie. rust/corrosion) of the roof structure.

Also, as stated previously, we support the use of a Memorandum of Understanding between carriers and local water utilities to assist in providing a mutually satisfying regime with respect to the use and management of the whole facility, as set out in Recommendation 4 of this submission. If this cannot be achieved, our members request a right of refusal to allow telecommunication equipment to be installed on sensitive water supply structures where a suitable alternative solution can be demonstrated, based on issues detailed above.

6. Use of omnidirectional antennas in residential and commercial areas

6.1 Are there any issues with permitting omnidirectional antennas in residential and commercial areas, in addition to industrial and rural areas?

In addition to the above issues we have set out in comments to the above proposals, we submit the following additional comments.

Omnidirectional antennae are described as “less visually intrusive as panel or yagi antennas, which can already be used in such areas.” This assumes that the established practice is appropriate, when many existing installations are in fact problematic for local water utilities and their operations. These types of antenna also create more health risks and impose greater EME exclusion zones for water supply staff working around the roof area of a reservoir.

Also, as stated previously, we support the use of a Memorandum of Understanding between carriers and LWUs to assist in facilitating a mutually agreeable regime with respect to the use and management of the whole facility, as set out in Recommendation 4 of this submission. If this cannot be achieved, we submit that water utilities should have right of refusal to allow

telecommunication equipment to be installed on our sensitive water supply structures, where a suitable alternative solution can be demonstrated, based on issues listed above.

7. Radiocommunications facilities

7.1 Does the proposed approach raise any issues?

This change appears reasonable, but the consultation paper states that the change "would give carriers the ability to attach facilities up to a certain size to existing structures." Cumulative impact issues raised in this submission need to be considered in terms of health and safety and coordination between carriers. This is because numerous carriers might seek to install smaller radio communication facilities within the proposed location. While the individual impact of one such facility is of less concern to our members, it is the cumulative impact which is of concern to our operations.

In this regard, site access security and coordination between number of carriers is an issue as set out under headings 3-4 of the 'Major Concerns' section this submission. Depending on the load induced by these radio communications facilities, there may also be an effect on the load-bearing capacity of the structure that they are installed onto, and the persons directing the infrastructure such as within a roof cavity may not be aware of risks within that space.

To the extent a concentrated number of facilities are located on a piece of infrastructure, it also raises questions about health and safety in and around the concentrated number of radio communications facilities. There may also be legislative town planning issues regarding aesthetics and adverse visual impacts.

Additionally, the regime for the removal of obsolete radio communications facilities needs to be regulated.

Finally, as stated previously, we support the use of a Memorandum of Understanding between carriers and LWUs to assist in facilitating a mutually agreeable regime with respect to the use and management of the whole facility, as set out in Recommendation 4. If this cannot be achieved, our members seek to provision of a right of refusal to allow telecommunication equipment to be installed on our sensitive water supply structures, where a suitable alternative solution can be demonstrated, based on issues listed above.

7.2 Are the proposed dimensions for these facilities appropriate?

As above.

8. Equipment installed inside a non-residential structure in residential areas

8.1 Should carriers be able to enter land (including buildings) to install facilities in existing structures not used for residential purposes in residential areas?

Our members have no principal objection to making it easier for carriers to reduce a visual impact of facilities installed at non-residential buildings in residential areas by concealing them inside existing structures, but are concerned about the possible health, safety, and security issues this raises. These concerns have been set out above in headings 3-4 the 'Major Concerns' section of this submission, but include for example:

- security of the site - would the contractors carrying out the work satisfy a "fit and proper person" check, how will the site be properly secured after access to prevent trespassers and vandalism and compromised security of water supply? For example, will it be over secured with more locks after access, impeding the local water utilities access to its own site?

- whether the work can be carried out at the same time as local water utility operations, and to what extent there will be interruptions?
- multiple carriers maintaining the same rights, and entering the same premises, for the same purpose. As outlined above, this creates a coordination and business interruption issue. Depending on where the infrastructure is located, the health and safety of those entering the premises and of staff of particular concern if a large concentrated number of these pieces of infrastructure are located in a particular area. This issue is compounded by multiple carriers and multiple facilities affecting the same site;
- safety inductions requirements eg. Chlorine and other chemical dosing equipment, automatic (ie. no prior warning) pump operations, electrical isolation points, confined/restricted space areas, and safe EME zoning requirements and impacts to water supply operations;
- electrical and structural work/alterations that are consistent/compatible with the host structure (i.e. common electrical earthing systems, local electrical isolation points not to affect water supply operations);
- the need for a register or control document which our members possess setting out precisely where the infrastructure is located; and
- the need for a register of who has entered into/onto the premises and what work was performed with respect to safety issues, incidents, accidents and impacts to water supply operations.

Therefore, in light of these issues and concerns, we submit that carrier access to water supply infrastructure for telecommunications purposes be governed by an agreed Memorandum of Understanding between carriers and water utilities, as set out above in Recommendation 4 of this submission. If this cannot be achieved, we would submit that water utilities should have a right of refusal to allow telecommunication equipment to be installed on our sensitive water supply structures based on issues listed above, where a suitable alternative solution can be demonstrated.

9. Tower extensions in commercial areas

9.1 Are there any issues permitting tower height extensions of up to five metres in commercial areas?

This raises many of the same issues outlined above, such as:

- load (can the structure accommodate the additional height given wind and other load on the tower?); and
- retrofitting an existing piece of infrastructure - will it diminish the asset's life, or will it increase risks to safety of staff of local water utilities)?
- whether the work be carried out at the same time as local water utility operations, to what extent will there be interruptions?
- the issue of multiple carriers maintaining the same rights and entering the same property for the same purpose, creating a coordination and business interruption issue; and
- the regime for the removal of obsolete equipment, which needs to be regulated.

10. Radiocommunications lens antennas

10.1 Is lens antenna the best term to describe this type of antenna?

No comment.

10.2 Are 4 cubic metres in volume and 5 metres of protrusion from structures appropriate?

This raises many of the same issues outlined above, such as:

- load (can the structure accommodate the antenna given wind and other loads on the tower?);
- retrofitting an existing piece of infrastructure - will it diminish the asset's life, or will it increase risks to safety of staff of local water utilities?)
- cumulative impact and coordination issues, as the consultation paper states that lens antennas also increase the ability to "co-locate on another carriers towers when there is limited available space on the tower at a high need to provide good coverage"; and
- the regime for the removal of obsolete antennas, which needs to be regulated.

Please refer to our comments in previous sections of this submission, particularly:

- proposal 1.1 regarding the installation of telecommunications facilities on water utility infrastructure at first instance; and
- proposals 3, 4, 5, 6, 7, 8, and 9.

As noted above, there is also the issue of the risk of contamination to a drinking water supply whenever there are facilities installed on the roofs of water reservoirs. This risk occurs where antennas are fixed to reservoir roofs, creating the potential for the contamination of the water supply by allowing the ingress of contaminated water and materials into the water supply. Please see our detailed comments under heading 1 of our 'Major Concerns.'

10.3 Should this type of antenna be allowed in all areas, or restricted to only industrial and rural areas?

No comment.

11. Cabinets for tower equipment

11.1 Are there any issues with the proposed new cabinet type?

We are instructed by our members that towers are often located around land used for water utilities such as tanks and reservoirs. In our submission, this could potentially raise cumulative impacts if a number of these cabinets were installed for facilities on towers operated by a number of carriers.

A coordinated approach to the use of any cabinets is required such that a cabinet could be used by multiple carriers, or the location should be coordinated if more than one are required.

Design standards should be included so that the cabinet is sensitively designed (i.e. not just colours), and so that it is designed in a way which does not increase the risk of pestilence (vermin, and birds) given the risk to water supply. Further, any increased electrical demand should not be at the expense of the local water utility, especially with respect to the future growth and operational needs of carriers.

Further, the regime for the removal of obsolete cabinets needs to be regulated.

Finally, as stated previously, we support the use of a Memorandum of Understanding between carriers and LWUs to assist in facilitating a mutually agreeable regime with respect to the use and management of the whole facility, as set out in Recommendation 4 of this submission. If this cannot be achieved, we would submit that water utilities should have right of refusal to allow telecommunication equipment to be installed on our sensitive water supply structures, where a suitable alternative solution can be demonstrated, based on issues listed above.

12. Size of solar panels used to power telecommunications facilities

12.1 Are there any issues with permitting 12.5 square metre solar panels for telecommunications facilities in rural areas?

This will affect the existing or future installation of local water utility solar panels on local water utility assets. Further, the way in which the panels are installed could cause earthing issues. Multiple earthing points and parallel paths create a serious safety risk for personnel who need to work around the area.

Additionally, this proposal raises the further issues of:

- load (can the structure accommodate the solar panels given wind and other load on the tower?);
- retrofitting an existing piece of infrastructure - will it diminish the asset's life, or will it increase risks to safety of staff of local water utilities?);
- cumulative impact and coordination issues. This is because yet another piece of infrastructure would be located on the local water utilities asset potentially generating more people entering into the site. It also means additional infrastructure being erected on our member's property which may impact asset protection if not located suitable;
- further restrictions to the use of the owned infrastructure by local water utilities. This allowance for carriers may prohibit local water utilities from utilising their own structure to install solar panels for their own purposes. This issue gains significance with increasing energy costs and changes in the business case to warrant alternative energy options; and
- the regime for the removal of obsolete solar panels, which will need to be regulated.

13. Amount of trench that can be open to install a conduit or cable

13.1 Are there reasons not to increase the length of trench that can be open at any time from 100m to 200m in residential areas?

In principle, this could be supported by our members, if:

- backfilling occurred at the end of the working day, at a time where no one is in the vicinity; and
- telecommunication carriers provide safe work statements to water utilities.

It must be pointed out however that large open trenches can be problematic in residential areas, areas of high rainfall, poor drainage, and unstable soil conditions. This should not be the best practice by default.

Further, there must be a qualification that the open trenches must not affect the operations of water utilities by for example, restricting access to the site. This should not be the best practice by default, and should be assessed on a case by case basis, by both property owners and the telecommunication carrier(s).

13.2 Is 200m an appropriate length, or should the length be higher if more than 200m of conduit or cabling can be laid per day and the trench closed?

As above.

14. Cable & conduit installation on or under bridges

14.1 Are there any issues with allowing cable and conduit on bridges to be low-impact facilities?

In our submission, this primarily raises the issues of:

- retrofitting an existing piece of infrastructure - will it diminish the asset's life, the operational effectiveness of the infrastructure, or will it increase risks to safety of staff of local water utilities)?
- safety of workers installing the equipment. Are there site risks for them entering a bridge and undertaking the works on a bridge? Are these risks imposed on local water utilities and do they assume responsibility for the safety of the carrier's workers?
- cumulative impact and coordination issues, given that more than one carrier may wish to use a bridge to install cable and conduit under or on bridges; and
- identification. The cables and conduits need to be clearly marked, clearly taped, and construction drawings need to be issued to the road authority. Additionally, the drawings should be registered with Dial Before You Dig.

In our submission, the placement of conduits and cables should be placed sensitively on the bridge structure in a way that does not significantly diminish the visual appearance of the bridge.

Further, there are concerns about the significant costs that will be faced by water utilities if telecommunication carriers can veto bridge access. It is far more costly to reroute a large diameter water pipeline than it is to reroute a telecommunication cable or conduit.

Additionally, there needs to be an improved regime for the removal of conduits and cables once they become unnecessary and obsolete, with this process needing regulation.

15. Volume restrictions on co-located facilities

15.1 Are there any issues with removing volume limits for adding co-located facilities to existing facilities and public utility structures in commercial areas?

This proposal needs to be more carefully considered. We submit that the less control local water utilities have over their assets and infrastructure, the more susceptible it becomes to breaches in security, and compromised water supply quality and reliability. Please refer to our comments under the 'Major Concerns' heading of this submission, and our comments at Proposal 1.1.

We are instructed by our members that the requirements to perform work in accordance with good engineering practice has not satisfactorily addressed load issues on existing structures. A number of local water utilities do not have the resources to properly consider this. Carriers in turn do not properly consider the cumulative impact of their facilities being placed on an existing utility structure, and whether the cumulative load is sustainable and safe. Whilst some local water utilities manage and control structures well, this is not always possible due to resourcing constraints.

Accordingly this proposal needs to be more carefully considered. Removing volume restrictions will in any case potentially increase the number of carriers using the infrastructure of local water utilities, thereby increasing the severity of the issues raised in the 'Major Concerns' section of this submission. Please refer to the detailed description of these issues as set out above. In summary, these issues includes:

- problems arising out of a lack of coordination between carriers;
- a general lack of consistency in the quality of work, which creates a hazardous work environment for water utility staff;
- carriers installing their facilities in a way that interferes with water utility operations;
- structural loading issues; and
- increasing bird habit areas on the roofs of water reservoirs, which causes excessive defecation and risk of contamination to the water supply.

15.2 Are there any issues with permitting new co-located facilities that are up to 50 per cent of the volume of the original facility or public utility structure in residential areas?

In our submission, the consultation paper is very thin on how the carriers would ensure that the load bearing capacity of the infrastructure is achieved if carriers proposed to add facilities (other then saying carriers need to act in accordance with good engineering practice). A more robust and nuanced approach is required. We submit that certified engineering plans with 'Work as Executed' ("as built") drawings be required, to ensure that all work has been completed in accordance with engineering specification.

In addition, we submit that this raises a coordination issue, as numerous carriers would be able to install facilities on existing water infrastructure. The more players, the more difficult this is to coordinate. Again, the less control local water utilities have over the property, the more susceptible the particular site becomes to breaches in security and compromised water quality.

15.3 Is another volume limit more appropriate in commercial or residential areas?

The focus on commercial and residential areas evidences a focus primarily on visual blight caused by the co-location of facilities rather than the structural integrity of the base infrastructure to support the telecommunications infrastructure, and the ability of authorities to coordinate and manage the infrastructure when multiple carriers wish to install infrastructure on the assets.

In circumstances where a carrier installs equipment on a tower, reservoir, water tank or other structure belonging to a public utility, it is our member's submission that the relevant carrier supply an engineering structural analysis to demonstrate that the structure will not be overloaded by the equipment, as set out section 3.3 of our 'Major Concerns', and in Recommendation 3 of this submission.

15.4 Should alternative arrangements for co-located facilities be developed in the LIFD?

This must be considered on a site by site and case by case basis. This should be subject to a Memorandum of Understanding and ongoing consultation, as set out in Recommendation 4.

16. Updates to environmental legislation references in the LIFD

16.1 Are there any issues with the proposed updates?

Consideration should be given to whether or not the references to environmental law needs to encompass the *Public Health Act 2010* (NSW) and the *Public Health Regulation 2012* (NSW). In this regard, we submit that the Australian Drinking Water Guidelines be adopted as an industry standard under the Telecommunications Act to protect the water supply in circumstances where carriers install facilities on water utility infrastructure, as set out in Recommendation 2 of this submission.

16.2 Are there any further suggestions for updates to terms and references in the LIFD?

As above.

Proposed amendments to the Telecommunications Code of Practice 1997

17. Clarify requirements for joint venture arrangements

17.1 Are there any issues with making it clear in the Tel Code that only one carrier's signature is required on documents for facilities being installed as part of a carrier joint venture arrangement?

If only one signature is going to be required for a joint venture arrangement where a two or more carriers are installing or upgrading facilities, there needs to be a proper balancing of the impact on local water utilities and other property owners.

Additionally, this raises a coordination issue. If there are two or more parties involved in upgrading or installing facilities, then there needs to be a proper approach to the lines of communication between the carrier and the joint venture carrying out the work, and potentially for the ongoing existence of the telecommunication infrastructure. In addition, responsibilities for non-compliances with the regulatory framework need to be dealt with if joint ventures are to benefit by the proposed change.

Finally, as stated previously, we support the use of a Memorandum of Understanding between carriers and local water utilities to assist in facilitating a mutually agreeable regime with respect to the use and management of the whole facility, as set out in Recommendation 4 of this submission. If this cannot be achieved, we would submit that water utilities should have a right of refusal to allow telecommunication equipment to be installed on sensitive water supply structures, where a suitable alternative solution can be demonstrated, based on issues listed above.

18. LAAN objection periods

18.1 Is it reasonable to end the objection period for low-impact facility activities and maintenance work according to when the notice was issued, rather than the date work is expected to commence?

We submit that this is not reasonable. The significant importance of this is referred to throughout this submission.

We are instructed a 5 day period is not sufficient for the local water utilities, who are vested with important statutory and community responsibilities for the provision of safe drinking water, and the maintenance of its assets. These organisations are resourced appropriately for the conduct of their own core operations and are not resourced for the purposes of responding to carriers. A reduced period may also create difficulties where people are away on leave. We submit that the existing provisions strike a better balance of enabling both access to occur and the landowner's ability to properly respond.

If faster turnaround times are required, then it imposes a cost on local water utilities, as they prioritise the response to the notice as to whether an objection is required, and if so, to prepare a proper objection detailing the authorities' reasonable concerns. A faster turnaround time may lead to objections being prepared simply to buy more time or to "reserve the authority's rights". The status quo allows authorities to at least consider their position and to properly consider whether one actually needs to be prepared.

The notice provided by the carrier will not necessarily specify the full details for the type of work that might be carried out, and with only 5 days to object, this could have a considerable impact on the operations of a local water utility and flow-on costs.

Finally, our members submit that considerable disruption can be caused to a local water utility's day to day operations and potentially significant costs could be incurred for labour and equipment if a carrier gives late notice that work will be carried out, or is to be prolonged. An issue that should be considered is whether carriers will compensate local water utilities for any disruption to their day to day operations or costs associated with maintaining and operating water storage sites where this is impacted by short notice, rather than passing these costs onto local water utilities. In light of this, we submit that consultation is required with key water supply stakeholders, as set out in Recommendation 1 of this submission.

18.2 Is 5 business days from the receipt of a notice a sufficient time period for land owners and occupiers to object to carrier activities where carriers have given more than 10 days' notice about planned activities?

No. This is referred to above.

19. Allow carriers to refer land owner and occupier objections to the TIO

19.1 Are there any issues with allowing carriers to refer objections to the TIO before land owners and occupiers have requested them to?

This potentially increases the workload of the TIO, and our members are concerned already about its resourcing and responsiveness. It appears that the consultation paper and proposed reform agenda is predominantly focused on efficiency to carriers, but we submit that this focus on efficiency needs to be better balanced when it comes to other aspects of the system controlling the conduct of carriers.

If complaints are more readily forwarded to the TIO then it is in the interests of local water utilities to ensure that responses from the TIO are responded to in a timely manner so that proper complaints are resolved efficiently. Our member's concern is that the TIO might not be resourced by the carriers to do this properly, especially if there is any increase in the number of complaints referred to them, so that the carriers "get them off the books", improving their reporting figures.

In addition, (although somewhat beyond the scope of the comments sought by this invitation to comment) as per our above comments, the potential for inconsistent directions between the relevant industry Ombudsmen needs to be addressed.

20. Updates to references in the Tel Code

20.1 Are there any issues with the proposed changes?

As per our above comments at proposal 5 and 16, there should be consideration of whether references to environmental law needs to encompass the *Public Health Act 2010* (NSW), and *Public Health Regulation 2012* (NSW). In this regard, we submit that the Australian Drinking Water Guidelines be adopted as an industry standard under the *Telecommunications* Act and *Telecommunications Code of Practice* in order to protect the water supply in circumstances where carriers install facilities on water utility infrastructure, as set out in Recommendation 2 of this submission.

20.2 Are there any further suggestions for updates to the Tel Code?

This is referred to above.

Possible amendments to the *Telecommunications Act 1997*

21. Allowing some types of poles to be low-impact facilities

21.1 Is it reasonable for poles in rural areas for telecommunications and electricity cabling for telecommunications networks to be low-impact facilities?

Our members do not have an in principle objection to 12 m high poles 500 mm in diameter being designated as low-impact facilities, but in accordance with the points and issues raised in this submission, if such a pole were to be erected on any water infrastructure, the loads need to be considered, as well as the ability for the water infrastructure to house the pole such that the asset is not degraded and the safety and security of the water supply is not compromised. In this regard, we highlight Recommendations 3 and 4 of this submission.

21.2 Should low-impact facility poles be allowed in other areas, or be restricted to rural areas?

As above.

21.3 Is the proposed size restriction of up to 12 metres high with a diameter of up to 500mm suitable?

As above.

21.4 Would the existing notification and objection processes for land owners and occupiers in the Tel Code be sufficient, or should there be additional consultation requirements?

The existing processes would be sufficient.

22. Portable temporary communications facilities

22.1 - Are there any issues with making portable temporary communications equipment exempt from state and territory planning approvals under certain conditions?

Our members have no in principle objection to this proposal, so long as the safety and security of the water supply is not compromised, including any adverse impacts to water supply operations.

22.2 - Are there any suggestions for appropriate conditions for the installation of COWs and SatCOWs, such as circumstances in which they can be used and timeframes for their removal?

No comment.

22.3 - Should the Act be amended to remove any doubt that MEOWs can be installed using the maintenance powers or another power under Schedule 3 of the Act?

No comment.

22.4 - Are there any suggestions for appropriate conditions for the installation of MEOWs if the maintenance powers are amended?

No comment.

23. Replacement mobile towers

23.1 Is the proposal reasonable?

The consultation paper does not refer to consulting with other carriers where a mobile tower is proposed to be decommissioned and a new one erected. In some instances, local water utilities also have infrastructure located on those towers. There needs to be a consultation process with other interest holders in the tower to enable decommissioning of the tower and the facilities located on the tower in a way that ensures that these other entities have the ability to manage that decommissioning.

23.2 Is 20 metres a suitable distance restriction for replacement towers?

The 20 m distance separation needs to be made subject to a proper site assessment taking into account among other things (e.g. environmental sensitivities, other utilities affected, and the practicality of the new location for the owner of the site).

23.3 Is 12 weeks a reasonable maximum time period for installation of replacement towers?

No comment.

24. Tower height extensions

24.1 Are one-off 10 metre tower height extensions suitable in commercial, industrial and rural areas, or only some of these areas? If they are only suitable in some areas, which are they and why?

As previously discussed, if the tower is hosted on water utility infrastructure then the following issues are raised:

- structural integrity (i.e. the capacity of the structure to handle the additional load);
- retrofitting an existing piece of infrastructure - will it diminish the asset's life, the operational effectiveness of the infrastructure, or will it increase risks to safety of staff of local water utilities?
- cumulative impact and coordination issues, to the extent that this enables more facilities to be erected on the site and therefore more persons entering the site from different organisations. It also raises the cumulative impact of the additional loads if it leads to an increase in the number of facilities erected on the tower;
- site security issues, and the risk to water supply associated with this;
- the adoption of certified workmanship and standards to control workplace hazards for water utility staff; and
- the increase in the maintenance and inspections requirements of the host structure.