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

18 July 2017

## Logo of organisation—if an organisation making this submission

Queensland Government

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## General comments

The Queensland Department of Transport and Main Roads (TMR) has significant concerns with the public consultation paper on proposed changes to telecommunications carriers' powers and immunities.

TMR does not accept that these proposals will save the government and community the regulatory savings suggested by industry. If adopted, the proposals contained in this paper would fundamentally change the existing framework under which telecommunications carriers interact with all other infrastructure owners, without a Regulatory Impact Statement, and for the purpose of gaining unverified cost savings sought by telecommunications carriers.

It is TMR's position that any perceived cost savings for the telecommunications industry usually results in higher direct and indirect costs for TMR construction and maintenance of infrastructure.

Generally, the telecommunications industry has been adversarial in nature and reluctant to work cooperatively with TMR. There is a perception within the telecommunications industry that they have an absolute right to access transport infrastructure regardless of TMR's strategic interests.

In achieving its strategic goals TMR works closely with all industry stakeholders, contractors and consultants to find ways to work smarter, improve the way we do business and reduce the costs across the board. Similar approaches have been made to the telecommunications industry to work together to achieve mutual benefits and costs savings. To date only one telecommunications carrier has been prepared to meet for six monthly planning meetings.

Any proposed amendments to the telecommunications legislative framework should also include provisions that:

1. Require telecommunications carriers to engage in forward planning sessions with transport infrastructure authorities.
2. Make clear that conduit and cables are to be placed in a location permitted by the road authority.
   For example:
   - Regardless of TMR future transport planning some telecommunications carriers will trench and place conduit in a location that will require TMR to pay excessive relocation costs when transport infrastructure is to be built.
   - Telecommunications carriers have refused to use pre-existing bridge conduit, insisting that it should be able to use the bridge super structure for cabling. This approach would have severely undermined the safety and security of the bridge.
3. Make clear that the placement of telecommunications facilities and cables on bridges and other infrastructure is not a right in perpetuity.
   For example:
   - Refusal by a carrier to remove its infrastructure on a bridge that has reached end of life and must be demolished.
4. Provide a reasonable framework for road authorities to notify a telecommunications carrier that it requires its telecommunications infrastructure to be relocated due to road infrastructure works. Historically the telecommunications carriers have regularly refused to participate in the relocation of assets in a timely and cost effective manner. The telecommunications carriers charge incontestable amounts for the relocation of telecommunications.

With regard to the proposals of the telecommunications carriers, TMR is particularly concerned that if the proposals are adopted:

1. There will be increased inappropriate shifting of costs from the commercial sector to the tax payer via state governments.
2. TMR's ability to fulfil its obligations, as a state government department, to manage transport infrastructure for the safe and efficient movement of goods, people and services will be compromised including the ability to manage workplace health and safety legislation.
3. The effect of telecommunication assets being installed on TMR's structures will, at best, be to shorten the life of TMR's assets and increase maintenance requirements and, at worst, the require TMR to redesign and replace infrastructure to accommodate carriers or have assets rendered unfit-for-purpose.
4. The changes propose telecommunications assets to be located primarily inside the road carriageway and clear zone, whereas they are currently located outside that area. The introduction of telecommunication infrastructure into the clear zone significantly increases the risk to the travelling public, particularly when carrier assets are non-frangible and powered.
5. The proposed changes will severely limit the ability of TMR to protect and preserve bridges. Bridges provide vital arterial connection to state and national transport networks for the haulage of goods and services across the country. Bridges form an important link uniting the local community and facilitating travel across rivers, lakes and harbours and are essential to the connectivity of the nation.
6. TMR has a bridge which has been identified as Critical Infrastructure by the Queensland Counter-Terrorism Committee and the proposals severely limit TMR's capability to verify which individuals will carry out works/maintenance or operations on these assets as recommended by the Committee.

The proposed changes would significantly increase TMR costs of relocating third party infrastructure during road widening and realignment projects.
Further, any disruption to franchised roads due to the work of telecommunications carriers will result in penalty fees payable to the road operator by TMR. Neither the Queensland Government nor TMR is funded for, nor can it absorb, the additional work and costs the proposed changes would require.

The key telecommunications carriers with infrastructure in Queensland are:

- SingTel Optus Pty which is a wholly owned subsidiary of SingTel which is listed on the Singapore Exchange
- TPG and Telstra, both publicly listed companies on the Australian Securities Exchange, and
- nbn™, which is currently a Federal Government Owned Corporation

no longer conform to a public service model of operation. Rather than savings for industry and government if adopted, these changes would represent a transfer of costs and risk from telecommunications carriers to the taxpayer via state governments.

It is not in the public interest for telecommunications carriers to add risks to the transport network or to place additional costs on either the public or the Queensland Government. Rather, TMR submits, that it is more appropriate for publicly listed companies and corporations to absorb the costs associated with the changes they have proposed, rather than to transfer those costs to the taxpayer.

There is no absolute need for telecommunications infrastructure to occupy space within the road corridor, it is a commercial decision. TMR does however work closely with all industry stakeholders, contractors and consultants to find ways to work smarter, improve the way we do business and reduce the costs across the board, allowing telecommunications carriers access to its structures on reasonable terms.

TMR currently works closely with telecommunications carriers providing conduit for telecommunications cables on new bridges and accommodating requests for additional access to existing infrastructure in as timely a manner as possible. TMR has approached the telecommunications industry to work together to achieve mutual benefits and costs savings.

To date only one telecommunications carrier, nbn™, has been prepared to meet for six monthly planning meetings. TMR's best practice as we have with other utility providers including mining, gas pipelines and water includes pre-planning meetings; combined works and ongoing communications. Refer to Case Study 5 for more detail. To further support industry TMR has developed the *Third party utility installation on state-controlled roads technical guideline*.

Should these proposed changes to telecommunications carrier powers and immunities become law, TMR has some requirements to reasonably reduce their impact on road authorities:

- TMR expects telecommunications asset owners, not the delivery partner, to take responsibility for all liabilities and responsibilities of the work. As Telecommunications carriers, and not their delivery partner, exercise their powers as telecommunications carriers, indemnifying the state of Queensland against all costs associated with these proposed changes will be required to more properly protect TMR. This could be partially achieved through a broadening of Part 5 Division 2 2.23(3) of the Telecommunications Code of Practice 1997 to reflect potential risk and damage to persons and to the states of Australia.
- TMR expects telecommunications carriers, and their delivery partners, to develop and apply a quantifiable and contemporary standard to work they commission on TMR assets, including but not limited to the 'National Construction Code 2016' or 'AS/NZS3845.2: 2017 Road safety barrier systems and devices-Road safety devices'.
- Alternatively, structural certification of work, undertaken on behalf of telecommunications carriers, will be required for each installation. This will delay telecommunications works, be difficult to resource (as there are a limited number of structural engineers in Queensland), and be costly to both the telecommunications carriers paying for the structural certification and to TMR.
- TMR is to be able to verify which individuals will carry out works, maintenance or operations on any structure identified as Critical Infrastructure by the Queensland Counter-Terrorism Committee.
- TMR will apply a standard and targeted Licence Agreement for all third parties which will provide a transparent and equitable access regime in the spirit of competition principles. The Licence Agreement will include a fee to cover TMR's costs and may also include a commercial component. The Licence Agreement complies with the intention of Clause 11 of the *Telecommunications Act 1997* (the Act) and in particular mitigates the risks to TMR's operations as a utility, as defined under the Act.
- TMR requires an implementation period of at least 12 months for any significant changes, so as to allow TMR to develop and implement process and staffing changes to accommodate the increased time, cost and risk pressures of these proposed changes.

Please refer to the attached case studies for examples of works undertaken in Queensland:

- Case Study 1 – Impact on structures
- Case Study 2 – Poor engineering standards
- Case Study 3 – Inadequate information for response
- Case Study 4 – Impact of telecommunication assets on bridges being considered low-impact
- Case Study 5 – Successful agreements between TMR, utility providers and third parties

# Responses

The Australian Government seeks views on possible amendments to telecommunications carrier powers and immunities. In particular, the government seeks views on:

## 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?

TMR has the following engineering concerns:

a) The installation of additional telecommunications assets on any structure could exceed the original design limits of that structure, and therefore create an un-scoped risk that the structure could not safely accommodate. In addition, many TMR structures, such as road signs or wooden poles, have a shorter functional life than telecommunications infrastructure and are inappropriate as a host structure.
b) Structural certification undertaken by the telecommunications carriers would be required for each installation. This would delay telecommunications works, be difficult to resource (as the number of structural engineers in Queensland are limited), and be costly to both the telecommunications carriers having to pay for the structural certification, and TMR having to undertake due diligence checking of structural assessment for each installation.

TMR has the following road safety concerns:

c) Road infrastructure is required to be frangible for the safety of road users. The installation of telecommunications assets on road infrastructure would reduce the frangibility of the structure, or result in an infrangible device, significantly compromising the safety of road users (not compliant with AS/NZS 3845.2:2017 Road safety barrier systems and devices – Road safety devices).
d) TMR does not permit installations on road signs or traffic lights due to safety concerns and because road signs are relocated several times during major road projects increasing the risk of damage and/or disruption to the services of any telecommunications infrastructure attached.
e) Electrical safety on powered road infrastructure, such as traffic lights, could be compromised if the telecommunications carriers are not required to comply with appropriate Queensland standards for electrical connections such as fuses and 'disconnect switches' when utilising power for telecommunications assets.
f) A significant increase in the telecommunications asset footprint within the clear zone increases the number of potential impact points within this critical zone impacting adversely on the safety risk to road users.
g) The distance defining this co-location rule is not specified.

TMR has the following concerns regarding cost transfer:

h) The proposed changes could result in new telecommunications facilities inside the road carriageway and clear zone. The proposed changes could significantly increase the cost and complexity of road projects and operations. Relocations for road projects could cost significantly more for each project, TMR would be required to move additional telecommunications assets in order to undertake upgrade projects. TMR is neither funded for, nor can it absorb, the additional work and costs the proposed changes would require. Therefore, TMR would have to require telecommunications carriers absorb the additional costs associated with these proposed changes.
i) This would also apply to electricity poles and water assets in the road corridor, further complicating relocations due to road upgrade projects.
j) Maintenance would likely be made significantly more complicated, as coordination with telecommunications carriers would now be required prior to access, and more expensive where for example a road sign requires upgrade or replacement.
k) Increased compliance costs would be likely, for example, ensuring safety requirements are met due to radiation hazards and other considerations within road infrastructure.
l) Tenure and commercial agreement risks if telecommunications carriers consider billboards as signs that could be used for relocation.

## 2. Local government heritage overlays

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

No comment.

## 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?

Radio shrouds should be listed as distinct facilities in the Schedule of the LIFD.

TMR has the following road safety concerns:

m) Radio shrouds take up more space than antenna creating a visual impediment for road users.
n) Wind shear and loading impacts on the integrity of any host structure being used to support additional telecommunications infrastructure would not have been included in the original design and therefore an un-scoped risk exists that the addition of telecommunications assets could exceed the designed capacity of the structure.

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?

An engineering assessment should be made to determine the impact of the addition of any shroud on a structure.

TMR has the following engineering concerns:

Comment **a** above.

TMR has the following road safety concerns:

Comment **c** 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)?

TMR has the following engineering concerns:

o) Due to the size and potential wind shear of this device it should be considered as if it were a tower as per a mobile tower from an engineering perspective.

Additional comments **a** and **n** above.

TMR has the following road safety concerns:

p) This proposal presents an un-scoped risk of telecommunication electrical equipment interfering with road infrastructure electrical equipment (traffic signal operations and so on.)

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)?

TMR has the following engineering concerns:

Comments **a**, **n** and **o** 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?

An engineering assessment should be made to determine the impact of the addition height on the structure to which it is attached.

TMR has the following engineering concerns:

Comments **a** and **b** above.

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?

From an amenity point of view yes, but the point still holds that an engineering assessment should be made to determine the impact of the addition height on the structure to which it is attached.

TMR has the following engineering concerns:

Comments **a** and **b** 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?

TMR has the following engineering concerns:

Comments **a** and **b** above.

TMR has the following road safety concerns:

q) Commercial and residential areas typically experience significantly higher traffic volumes and experience higher demand from public utilities for the allocation of space in the road corridor. Consequently additional construction or maintenance activities in these areas presents a greater risk of negative impact on road user safety.

Additionally comments **d** and **e** above.

TMR has the following concerns regarding cost transfer:

Comments **j** and **k** above.

## 7. Radiocommunications facilities

7.1 Does the proposed approach raise any issues?

TMR has the following road safety concerns:

r) The primary concern with the installation of these facilities is placement. Where they are to be installed on a state-controlled road TMR would strongly prefer that radiocommunications facilities be installed on the cadastral boundary and that the safety impact on pedestrians and cyclists is given appropriate consideration. Installation elsewhere can create a visual impediment for road users.

7.2 Are the proposed dimensions for these facilities appropriate?

No comment.

## 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?

As this appears to apply to TMR structures within residential areas, including rail and bus stations; rail; busway and road traffic control structures, TMR does not agree that carriers should be able to do this. Un-scoped risks exist for the following:

- Bridges.
- Awnings.
- Heavy vehicle decoupling sites.
- Structures in rest areas.
- Electric charging and service stations.

TMR has the following engineering concerns:

Comments **a** and **b** above.

TMR has the following road safety concerns:

Comments **c, d** and **e** above.

TMR has the following concerns regarding cost transfer:

Comments **h**, **i**, **j** and **k** above.

## 9. Tower extensions in commercial areas

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

TMR has the following engineering concerns:

Comments **a** and **b** above.

## 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?

TMR has the following engineering concerns:

Comments **a** and **b** above.

TMR has the following road safety concerns:

s) The infrastructure would be larger and more visually intrusive and would create a visual impediment for road users and make TMR structures more intrusive in residential areas.

Comments **c**, **d**, **e** and **f** above.

TMR has the following concerns regarding cost transfer:

Comments **h**, **I**, **j** and **k** above.

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

t) A restriction to industrial and rural areas would be preferred.

## 11. Cabinets for tower equipment

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

TMR has the following engineering concerns:

Comments **a** and **b** above.

TMR has the following road safety concerns:

Comments **c**, **d, e** and **f** above.

TMR has the following concerns regarding cost transfer:

Comments **h**, **j** and **k** 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?

TMR has the following engineering concerns:

u) Reflectivity of solar panels in the road corridor could easily cause a distraction or visibility issue for road users.

v) If installed on the ground, this would likely create a hazard when vegetation clearing occurred in the corridor.

Additionally comment **a** and **b** above.

TMR has the following road safety concerns:

Comments **c**, **d, e** and **f** above.

TMR has the following concerns regarding cost transfer:

Comments **j** and **k** above

## 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?

TMR has the following road safety concerns:

w) While it is acknowledged that this would allow telecommunications work to be carried out more quickly in the short term it is likely to have a significant impact on safety and access risks, as occurred at the Nambour police station, a telecommunications carrier's delivery partner trenched across the driveway at a different day and time than was promised and trapped all police cars inside the station property.

x) This is a workplace health and safety issue and needs to be assessed for each site by a WHS advisor paid for by the telecommunications carrier.

### 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?

200m is appropriate as long as the risks are managed appropriately.

TMR has the following road safety concerns:

Comments **w** and **x** 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?

TMR has a number of issues with cable and conduit being allowed on bridges as low-impact facilities. TMR has the following engineering concerns:

y) In line with the Telecommunication (Bridge) Determination by the Telecommunications Industry Ombudsman in 2015 TMR does not consider the installation of facilities on bridges to be a low impact activity.

- One of TMR's bridges has been identified as a potential terrorism target.
- Some bridges play an integral part of Queensland's airport and port control infrastructure.
- There is sensitive and dangerous infrastructure already installed on TMR bridges that requires protection.
- Lead paint and asbestos pose a serious health risk to anyone working on bridges and anyone using the bridges while they are being worked on.
- TMR understands the design parameters of a specific bridge with respect to future maintenance for example, jacking/bearing replacements and requires confidence that third parties undertaking works on TMR bridges understand and will operate within these parameters:
  - Bridge articulation is unique for each structure – for example, magnitude of expansion/contraction at joints and locations of any attached services need to be able to cope with such movements.
  - Durability requirements need to be considered – vibration, corrosion – this affects the selection of attachments fixtures (for example, size of bolts, type of fixtures, chemical vs mechanical anchors and material types for example, galvanised or stainless steel).
  - Extreme events need to be catered for – for example flood loading and debris.
  - Attachment activities must not detrimentally affect the existing structure, for example, drilling into prestressed concrete components is not permitted.
  - Service installation must allow for planned or future bridge modifications – widenings/demolition/replacement and this will be dependent on the existing bridge condition and age.
  - Service installation must not impede waterway areas under structures (potential flood impacts).
- Damage to bridges can occur where additional infrastructure is not properly installed – a recent example in Queensland is a bridge in Innisfail where the conduit was installed above the maintenance points, causing them to deteriorate more quickly than scoped and requiring the removal of the conduit before maintenance could be undertaken
- There are structural integrity risks such the potential for the structure to fail under load where the steel reinforcement structure has been breached.
- There is a risks that the infrastructure of other third parties already on bridges (for example, gas pipelines) will get damaged.
- All works on bridges present traffic risks, even where the appropriate traffic permits and operational.

- There are commercial opportunities which arise when conduits are installed on bridges by TMR. These opportunities should reside with the party which installed the conduit.
- Installation of third party services should not impede TMR's regular routine maintenance and servicing activities.

## 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?

TMR has the following engineering concerns:

Comments **a** and **b** above.

TMR has the following road safety concerns:

Comments **c**, **f** and **s** above.

TMR has the following concerns regarding increased risks and costs:

Comments **j** and **k.**

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?

TMR has the following engineering concerns:

Comments **a** and **b** above.

TMR has the following road safety concerns:

Comments **c,** **f** and **s** above.

TMR has the following concerns regarding increased risks and costs:

Comments **j** and **k** above.

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

No comment.

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

z) Co-located facilities should not be low impact.

## 16. Updates to environmental legislation references in the LIFD

16.1 Are there any issues with the proposed updates?

No comment.

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

aa) s37 Schedule 3 of the Telecommunications Act 1997 lists what telecommunications carriers are exempt from but does not indicate which laws those topics apply to. The Act itself does not define what a law about "the use of land" or "tenancy" or "planning" is.

# 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?

bb) Telecommunications carriers' powers and responsibilities are not transferable to another party. TMR will require that the telecommunications asset owner take responsibility for all risks the proposed changes would precipitate. The risk associated with any installation would be shared equally by the joint venture partners.

## 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?

It is already difficult to develop an informed position, and potentially an objection under the current provisions.

cc) Reducing this time is not an equitable arrangement as it puts onus on the road authority, not the telecommunications carriers regarding applications.

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?

It is already difficult to develop an informed position, and potentially an objection under the current provisions.

dd) Not for large organisations, such as state government departments with many complex areas of responsibility which may require input from several parties. It is already challenging for road authorities to assess Land Access Applications from telecommunications carriers, and undertake an informed position, or form an objection, within current provisions.

## 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?

ee) This would pose a considerable concern for TMR, as rather than attempt to reach an agreement, telecommunications carriers may be inclined to progress straight to the Telecommunications Industry Ombudsman (TIO). This makes the interaction of these organisations much more adversarial and would also, very likely, be quite costly to all parties in legal and administrative fees.

## 20. Updates to references in the Tel Code

20.1 Are there any issues with the proposed changes?

No comment.

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

ff) 'good engineering practice' should be defined and linked to a quantifiable standard such as the 'National Construction Code 2016' or 'AS/NZS3845.2: 2017 Road safety barrier systems and devices-Road safety devices'.

gg) A broadening of Part 5 Division 2 2.23(3) of the Telecommunications Code of Practice 1997 to reflect potential risk and damage to persons and to the states of Australia.

In addition comment **aa** 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?

The current Act explicitly prohibits the Minister from specifying towers as low-impact facilities.

hh) Changing this is not supported.

TMR has the following engineering concerns:

Comment **a** above.

TMR has the following road safety concerns:

Comment **f** above.

TMR has the following concerns regarding cost transfer:

Comment **h** above.

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

Comment **hh** above.

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

Comment **hh** 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?

Comment **hh** above.

## 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?

TMR has the following road safety concerns:

ii) While these are low risk if placed in a safe location for a set time (to accommodate the emergency or disaster) they can create a significant safety risk, if illegally parked, to sightlines and pedestrian access. Removing state conditions may remove consideration of these aspects.

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?

TMR has the following road safety concerns:

Comment **ii** above.

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?

TMR has the following road safety concerns:

jj) Currently the Act only allows these for defence purposes or for the management of a natural disaster and the LIFD defines emergency, for the purposes of the installation of a facility as a telecommunications emergency i.e. loss of communications or a degradation of service or for the health/safety of persons, property or the environment. Often these facilities are required after the emergency has passed and the area is declared a disaster zone. Standardising the definition of emergency with the state could help ensure that the appropriate activities are all occurring together.

In addition comment **ii** above.

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

TMR has the following road safety concerns:

kk) The timeframe for how long these installations would remain is not defined. It is critical for the time to be restricted so that portable and temporary facilities do not have extended or permanent periods in the road corridor.

In addition comment **ii** above.

## 23. Replacement mobile towers

23.1 Is the proposal reasonable?

The location of each tower with relation to the travelling public is significant and the location of each tower should be considered on its own merits.

TMR has the following road safety concerns:

ll) This is taking the definition of maintenance well beyond the care or upkeep of existing assets.

mm) This cannot be supported. TMR cannot countenance any tower in the transport corridor to be installed and considered as maintenance. TMR may not have a suitable alternative available within the corridor and may increase the risk to the road users.

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

The location of each tower with relation to the travelling public is significant and the location of each tower should be considered on its own merits.

TMR has the following road safety concerns:

Comments **ll** and **mm** above.

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

TMR has the following road safety concerns:

Comments **ll** and **mm** above.

## 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?

An engineering assessment must be made to determine the impact of the addition height on the structure to which it is attached. The cost of this should not be borne by road authorities.

TMR has the following engineering concerns:

Comments **a** and **b** above.

TMR has the following concerns regarding cost transfer:

Comment **J** above.

# Case Study 1 – Impact on structures

## Requirements

### 8 Carrier to do as little damage as practicable

In engaging in an activity under Division 2, 3 or 4, a carrier must take all reasonable steps to ensure that the carrier causes as little detriment and inconvenience, and does as little damage, as is practicable.

*Notes:* *Division 2 – Inspection of Land*

*Division 3 – Installation of facilities*

*Division 4 – Maintenance of facilities*

### 10 Management of activities

A carrier must, in connection with carrying out an activity covered by Division 2, 3 or 4, take all reasonable steps:

(a) to act in accordance with good engineering practice; and
(b) to protect the safety of persons and property; and
(c) to ensure that the activity interferes as little as practicable with:
    i. the operations of a public utility; and
    ii. public roads and paths; and
    iii. the movement of traffic; and
    iv. the use of land; and
(d) to protect the environment.

*The Telecommunications Act 1997 (Cwth) Schedule 3*

The Act determines the carrier "…do as little damage as practicable" and in addition must take all reasonable steps to; act in accordance with good engineering practice, protect the safety of persons and property.

## Issue

The installation of conduits and telecommunication assets has the potential to impact on the Department of Transport and Main Roads (TMR) structures when not assessed and conditioned. When good engineering practice has not been followed the impacts on property and the eventual interruption of traffic as additional maintenance is carried out does not conform to the requirements listed above.

The integrity of TMR structures is dependent on regular inspections, assessment of works to be carried out and adherence to design specification and limitations. Work on structures, particularly bridges, can have significant effects on the life of the structure and potentially expose the public to risk of premature failure of the structure. Concrete Cancer is a major concern for concrete bridges that is caused when the reinforcing steel used in bridges is exposed to moisture through cracking or drilling into the surrounding concrete. This will cause a significant reduction in the strength and lifespan of the structure. Costly additional maintenance is required to rectify this condition, with such activity adding risk and complicating TMR operations.

## 25. Concrete Cancer

Concrete cancer is concrete degradation caused by the presence of contaminants or the action of weather combined with atmospheric properties. It includes rusting of concrete reinforcement bar and any number of concrete failures, notably carbonisation or the Alkali-silica reaction.

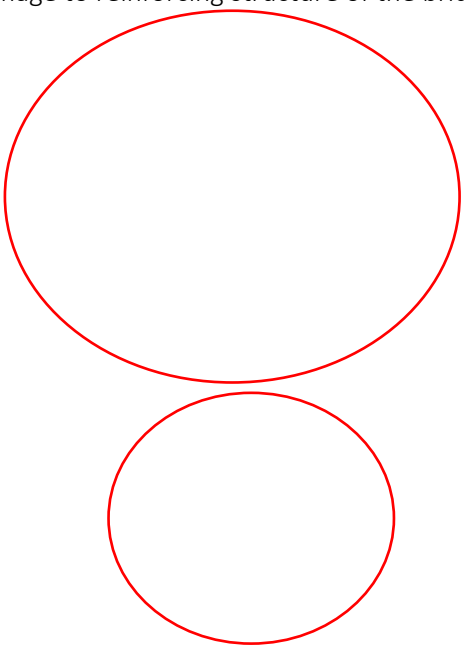
## Example 1 - Tramway Overpass Bridge, Innisfail-Japoon Road

Telecommunication conduit has been installed without TMR assessment or approval. The placement of the conduit has obstructed the maintenance point, requiring it to be relocated. In addition the conduits location has caused a concentration of water to be directed onto the steel causing increased corrosion and accelerating its deterioration. This has required TMR to bring forward maintenance plans to address increased risk associated with required

maintenance.

Tramway Overpass Bridge, Innisfail-Japoon Road

Damage to reinforcing structure of the bridge



# Case Study 2 – Poor engineering standards

## Requirements

10 Management of activities

A carrier must, in connection with carrying out an activity covered by Division 2, 3 or 4, take all reasonable steps:

(e) to act in accordance with good engineering practice; and
(f) to protect the safety of persons and property; and
(g) to ensure that the activity interferes as little as practicable with:
    i. the operations of a public utility; and
    ii. public roads and paths; and
    iii. the movement of traffic; and
    iv. the use of land; and
(h) to protect the environment.

*Telecommunications Act 1997 (Cwth), Schedule 3 Part 1, Division 5*

4.7 Compliance with industry standards

A carrier must engage in a low-impact facility activity in accordance with any standard that:

(a) Relates to the activity: and
(b) Is recognised by the ACA as a standard for use in that industry; and
(c) Is likely to reduce a risk to the safety of the public if the carrier complies with the standard

*Telecommunications Code of Practice 1997*

Together the *Telecommunications Act 1997 (Cwth)* and the *Telecommunications Code of Practice 1997* specify that a carrier must take all reasonable steps to act in accordance with 'good engineering practice' as well as adherence to appropriate industry standards.

## Issue

Telecommunication assets that have not been installed in accordance with 'good engineering practice' generate additional inspection and rectification works for TMR to ensure the integrity of the structures has not been impacted. Works not carried out in accordance with appropriate standards exposes TMR to substantial risk for future works and costs in rectification.

## Example 1 - Houghton Highway, Brighton

Telecommunications conduit has either not been installed in accordance with good engineering practice, or has not been adequately maintained. The installation is  not in accordance with any national or state standard with the use of electrical tape to repair the conduit.

## Example 2 - Ross Street Bridge, Nerang River

Telecommunications contractors have conducted work on and around a pit without permission or notification. Contractor has removed the footpath without TMR approval and has made little effort to reinstate to appropriate standard. The condition of the pit could not be considered in accordance with good engineering practice or any national or state construction standard.

## Example 3 - Bermuda Street Bridge, Lake Intrepid Canal

Telecommunications conduits are strapped above an existing water main using blue and yellow rope. This work was not approved by TMR and displays no adherence to any appropriate construction standard.

# Case Study 3 – Inadequate information for response

## Requirements

### 4.9 Notice to roads authorities, utilities etc

Before engaging in a low-impact facility activity mentioned in subclause 19 (1) of Schedule 3 to the Act as part of a low-impact facility activity, a carrier must give written notice of its intention to do so to the authority responsible for the care and management of the thing affected by the activity.

*Notes:* The activities mentioned in subclause 19 (1) are:

1. closing, diverting or narrowing a road or bridge
2. installing a facility on, over or under a road or bridge
3. altering the position of a water, sewerage or gas main or pipe
4. altering the position of an electricity cable or wire

### 4.10 Records for certain facilities

(1) If a carrier owns or operates designated overhead lines, the carrier must keep and maintain records of the kind and location of the lines.

(2) If a carrier owns or operates telecommunications transmission towers, the carrier must keep and maintain records of the kind and location of the towers.

(3) If a carrier owns or operates underground facilities, the carrier must keep and maintain records of:

(a) the kind and location of the facilities; and

(b) if any of the facilities is an eligible underground facility — the capacity of the facility to hold further lines.

*Telecommunications Code of Practice 1997.*

## Issues

The practice of telecommunications contractors making applications without sufficient or correct information imposes significant resourcing issues in attempting to make considered assessments of the works involved. Communication to TMR of the installation of telecommunication infrastructure is inconsistent and lacking detail. The requirement for TMR to respond to works based on insufficient or incomplete information would result in greater number of objections based on the risk incurred from unknown engineering and design elements.

Further complications arise when the locations of existing telecommunication infrastructure is either unknown or not communicated in detail so that a full and unambiguous assessment can be undertaken.

TMR does not receive any design drawings from utilities post installation which would give greater clarity in the positioning and particulars of the telecommunication assets, despite being stipulated as a condition and being required by legislation.

Some examples of limited information provided which precludes a reasonable assessment being made on the application:

- LAAN's with multiple schedules on the single application
- Blanket LAAN's covering multiple locations, suburbs and regions
- LAAN's with 'boundaries' and 'polygons' of vast work areas with very limited location details
- Inadequate legends of supplied drawings
- Drawings that are "snips' or 'print-screens' with no route locations, alignments or installation methodologies.

## Example – Tillyroen Overpass

The Motorway Overpass (Bridge) at Tillyroen Road provides a vital arterial connection between communities either side of the Motorway where limited alternative access points exist to the north and south. The Bridge forms an important link uniting the local community and facilitating travel across the Motorway.

The initial request for TMR to make an assessment on the installation of fibre optic cable was devoid of detail and proposed the boring of a conduit under the Pacific Motorway (M1). TMR does not generally object to the boring of cable beneath structures provided appropriate engineering assessments are made.

Subsequent to this a Land Access Activity Notice (LAAN) was received from the telecommunications carrier that detailed a completely different proposal that required access to the Tillyroen Bridge to haul cable through. As per the Ombudsmen's determination TMR immediately objected to the proposed activity.

Sent: Friday, 13 January 2017 1:23 PM
To: SouthCoast <SouthCoast@tmr.qld.gov.au>
Subject: [redacted] Tillyroen Road BTS PRELIMINARY CONSULTATION FOR PROPOSED FIBRE OPTIC ROUTE

[redacted]

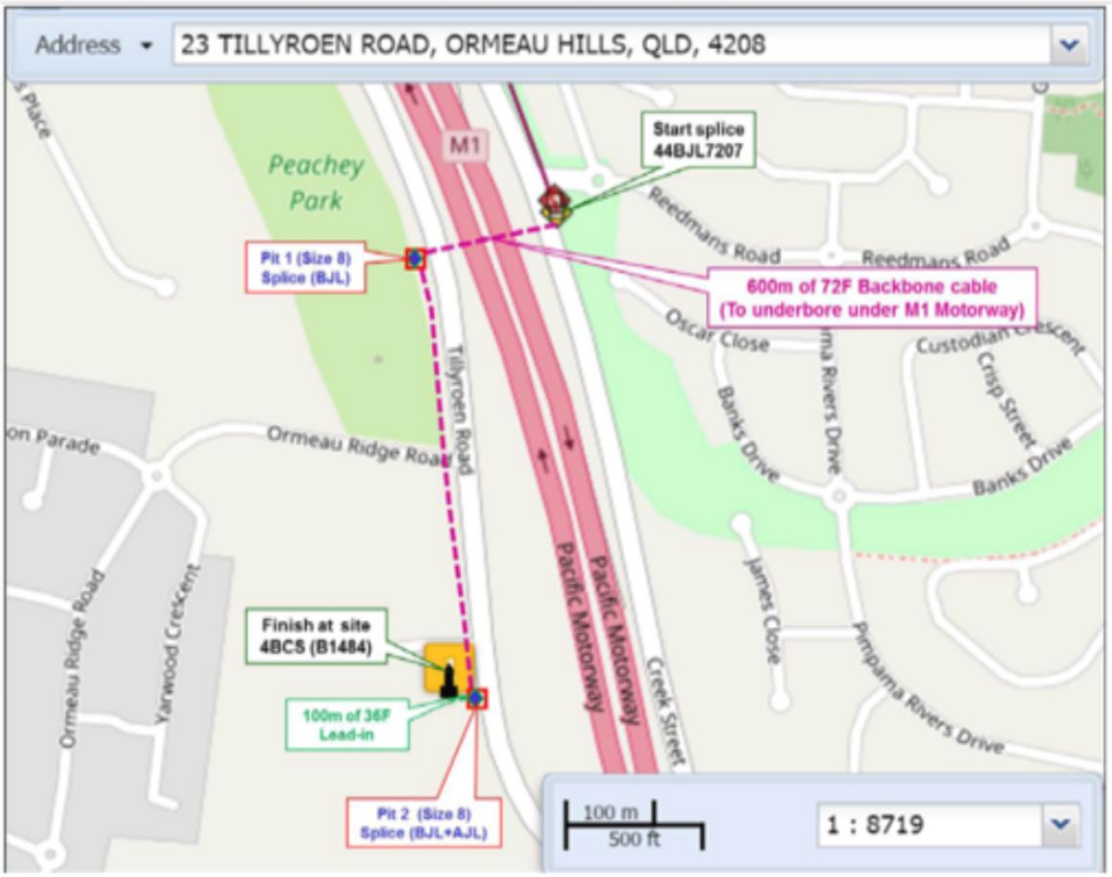
Good afternoon,

As a way of introduction, my company [redacted] is working on behalf of [redacted] to design and obtain Town Planning and Property approvals for fibre cable installations in **Ormeau Hills.**

Please find below proposed fibre route. Please note that once the design has been finalised, the CAD drawings and photo pack will be supplied for Council to review.

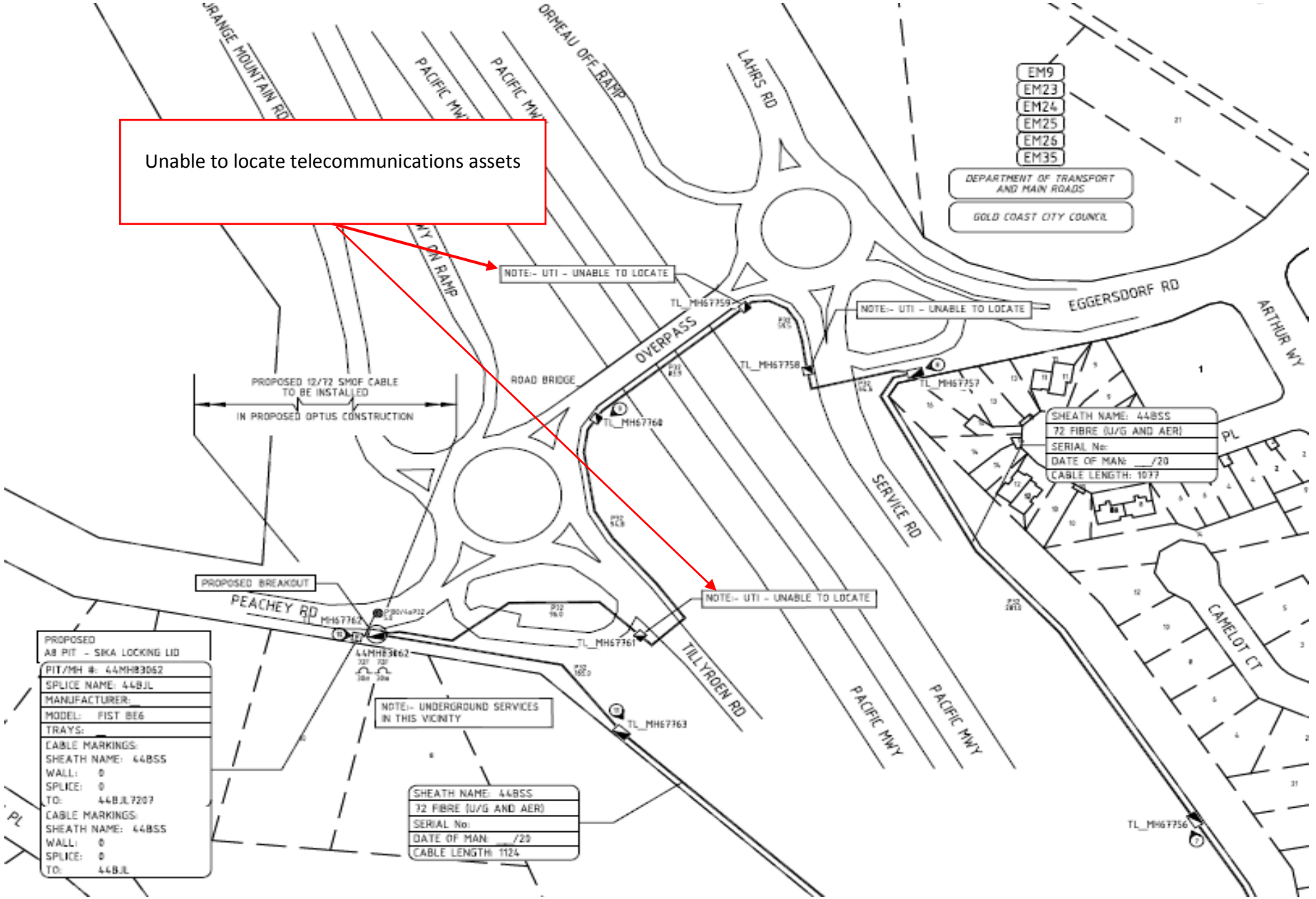
**Can TMR please advise on the following issues if relevant:**

1. Does TMR have any comments to make in regard to the installation?
2. Does TMR have any potential road works/road widening within the area which may impact this installation?
3. Can you advise of any TMR permits, which may be required for this project
4. Does TMR have a restoration office that needs to be notified?



Indicative drawings and screen shots do not provide sufficient details as to the actual impacts of the activity within the road corridor.

Telecommunications carriers are unwilling or unable to accurately locate their assets. Lack of accurate information has significant impacts on the ability of TMR to make a timely and meaningful assessment of the proposed works



# Case Study 4 – Impact of telecommunication assets on bridges being considered low-impact

## Requirements

There are no requirements for telecommunications carriers to consult or advise road authorities as to their planned works or location requirements. TMR holds annual forums to inform and consult with other agencies, organisations and contractors to discuss future works. TMR produces the QTRIP document which outlines the 10 to 15 year plan for developments of the transport network to facilitate forward planning for businesses and utilities.

## Issue

Telecommunication carriers resist coordinating their planned works with TMR.

## Example – Vines Creek Bridges Replacement (Slade Point Road – Mackay)

The Vines Creek Bridges Replacement Project was fast-tracked by the Queensland Government as part of its Accelerated Works Program. The Queensland Government has committed $28 million to replace 2 bridges at Vines Creek which were built in the 1950s. The Vines Creek Bridges are a key link in Mackay's transport network as they are the sole access for heavy vehicles travelling to the Port of Mackay.

Detailed design for the project was completed in November 2016, which included the structural design of the replacement bridges, the bridge approaches and integration of Mackay Regional Council's levee wall. The design process included planning for the relocation of services such as telecommunications, electricity and water infrastructure.

Under the Accelerated Works Program, tenders for the project were called in November 2016 and the contract was awarded to Queensland Bridge and Civil in April 2017. Early works including service relocation are currently underway with the main construction activities starting in May 2017.

## Unique Powers of nbn™

Under the current version of the Telecommunication (Low-impact Facilities) Determination 1997, nbn™ has the power to treat TMR bridges as low impact.

nbn™ has in many instances, despite having increased powers, worked closely with TMR to minimise their impact on bridges and maintained a collaborative approach. nbn™ have noted that this is due to a similar attitude to TMR regarding both organisations being ultimately accountable to Australian taxpayers. This attitude is quite different from other telecommunication carriers.

Due to nbn™'s power, TMR has very limited opportunity to prevent nbn™ from putting assets on a bridge. This means that either TMR or nbn™ would have to pay for relocation of the assets (should nbn™ install them on the bridge) potentially multiple times due to the bridge demolition. Relocating assets can take significant time to schedule with telecommunications carriers, delaying critical bridge projects.

Delay costs to road projects can reach $1 million per day per project.

This case study also highlights the continued poor quality of information from the telecommunication carrier's delivery partners. Below are examples of the only plans provided with the Land Access Activity Notification and is indicative of the poor quality of information made available to TMR for assessment.

Figure 1: Worksite between River Street and Evans Avenue: Initial TMR Assessment: nbn™'s intention is to install new optic fibre cable on both Forgan and Barnes Creek bridges through unspecified means.


Barnes Creek Bridge
Cremorne
Forgan Bridge
© State of Queensland 2016
Google earth

# Case Study 5 – Successful agreements between TMR, utility providers and third parties

## Requirements

All structures placed or erected in a state-controlled road require written permission from the Chief Executive under the *Transport Infrastructure Act 1997* (Qld). Structures within the road corridor have specific safety requirements and must be assessed. The introduction of attachments or modifications to structures can significantly increase the risk of failure of the structure.

## Issue

Utilities have generally embraced the concept of forward planning and have been actively involved in the six monthly planning forums held by TMR. These industry focused events highlights opportunities for contractors, planners and infrastructure delivery coordinators. In addition to this, TMR and utilities actively engage with each other in early planning stages of major projects to deliver the best outcomes for all parties.

Telecommunications carriers resist coordinating their planned works with TMR. Repeated attempts by TMR to engage telecommunications providers in licence agreements have been rebuked. TMR has consequently followed the Telecommunications Industry Ombudsman  low-impact facilities determination and refused carriers entry onto TMR bridges.

## Resolution

TMR's best practice has been to engage with mining and utility providers such as gas pipelines, water and electricity in pre-planning meetings; combined works and ongoing communications. Negotiated agreements are entered into with these third parties to coordinate, plan and manage their activity within the road corridor. Such agreements provide all parties with the opportunity to engage in discussions regarding:

- Risk and associated costs of mitigation
- Installation and disruption of services
- Assessment of proposed structure or activity
- Any relocation or temporary interruptions to the activity or structure
- Eventual decommissioning of the TMR structure.

## Examples of successful agreements

The following organisations have successfully negotiated agreements with TMR for access to the road corridor (this list is not exhaustive):

- Private gas company – Licence Agreement to maintain, operate and conduct the Gas Pipeline Assets on State-controlled Roads
- Electricity providers – MOU to maintain and repair within the road reserve
- Privately funded and owned solar farms – Agreement to allow infrastructure within the road corridor

- Irrigation GOC – Licence Agreement to locate, maintain and inspect water assets within the road corridor
- Water distributor/ retailers – Agreement to maintain and repair water infrastructure within the road reserve.

There are no current agreements in place with any Telecommunications providers that provide similar beneficial outcomes.