Australian Mobile Telecommunications Association and Communications Alliance

Submission to the Department of Communications and the Arts

Possible amendments to telecommunications carrier powers and immunities

July 2017

1. Executive Summary

The Australian Mobile Telecommunications Association and Communications Alliance welcome the opportunity to provide comment on the Department of Communications and the Arts (DoCA) consultation paper *"Possible amendments to telecommunications carrier powers and immunities – Consultation paper"*, June 2017.

The Associations note that the amendments proposed in the consultation paper and accompanying mark-ups of the Low Impact Facilities Determination and the Telecommunications Code of Practice address many of the issues raised in previous submissions, particularly in regard to increasing flexibility in the types of infrastructure permitted as Low Impact and the planning zones in which such infrastructure is permitted. The amendments reflect the changes in technology and deployment practices in mobile and fixed wireless network infrastructure that have occurred over the very long period of time since these regulations were first introduced.

This submission provides general comment on the significant benefits of the amendments to community, government and industry by way of reduced regulatory burden and the earlier provision of better, more advanced mobile and fixed wireless services to communities across Australia. The submission also provides detailed comments on particular amendments where further detail or clarification can improve the effectiveness of the proposed amendments in achieving the overall objectives described in the consultation paper.

The Associations strongly support the suite of amendments proposed in the consultation paper, noting they will provide the increased flexibility in network deployment practices and certainty in timelines, processes and outcomes necessary for industry to make the very significant investments required to meet the ever-increasing demand for advanced communications services from Australian businesses and communities.

The Associations also note that the amendments will be important for not only meeting the immediate demands placed on industry to provide advanced communications services but will be vital in facilitating the imminent evolution to the new 5th Generation (5G) networks in the very near future. Continued flexibility in network deployment regulation must remain the goal of governments and industry alike if the promise of the 5G future is to be fully realised.

2. Introduction

The Australian Mobile Telecommunications Association (AMTA) is the peak industry body representing Australia's mobile telecommunications industry. Its mission is to promote an environmentally, socially and economically responsible, successful and sustainable mobile telecommunications industry in Australia, with members including the mobile Carriage Service Providers (CSPs), handset manufacturers, network equipment suppliers, retail outlets and other suppliers to the industry. For more details about AMTA, see www.amta.org.au.

Communications Alliance is the primary telecommunications industry body in Australia. Its membership is drawn from a wide cross-section of the communications industry, including carriers, carriage and internet service providers, content providers, equipment vendors, IT companies, consultants and business groups. Its vision is to provide a unified voice for the telecommunications

industry and to lead it into the next generation of converging networks, technologies and services. The prime mission of Communications Alliance is to promote the growth of the Australian communications industry and the protection of consumer interests by fostering the highest standards of business ethics and behaviour through industry self-governance. For more details about Communications Alliance, see www.commsalliance.com.au.

3. Background

In April 2015, AMTA submitted a suite of proposed amendments to the Low Impact Facilities Determination (LIFD), the Telecommunications Code of Practice (Tel Code) and the Telecommunications Act 1997, Schedule 3 (Act). The Associations are pleased that DoCA's Consultation Paper on possible amendments to the carrier powers and immunities addresses many of AMTA's proposed amendments at least to some degree. In framing the amendments, AMTA sought to improve the efficiency of network deployment for its members by:

- amending the 'Low Impact Facilities Determination' (LIFD) to reflect new technologies and deployment practices, especially small cells and minor upgrades and where these may be deployed;
- reducing and amending statutory waiting periods in the 'Telecommunications Code of Practice';
- clarification of the definition of registers relating to 'heritage significance' and 'areas of environmental significance' in Schedule 3; and
- implementing a number of minor detail amendments relating to dimensions, antenna types and ancillary items that would have minimal impact on visual amenity but greatly facilitate efficient deployment.

The improvements in efficiency that would be achieved by the proposed amendments, including some additional amendments targeting fixed network infrastructure, result in benefits that flow not only to the telecommunications industry in reduced cost and delays, but also to regulators in the form of reduced administration; and to public in the provision of better and more advanced telecommunication services that bring economic and social benefits over a broad sector of the community.

The Associations note the benefits derived from regulatory reform facilitating network infrastructure deployment, and the urgency of the need for implementation of such reforms, will only increase with the imminent evolution to 5G networks which will mark a step change in the use of mobile broadband in every aspect of society, industry and economy.

Economic benefits of Mobile Broadband

Mobile broadband continues to play a key role in stimulating Australia's economic growth and productivity. It is a driving force in connecting people and businesses, stimulating innovation and technological progress, and transforming industries. Future development of mobile and fixed wireless technologies, such as 5G, the Internet of Things (IoT) and Machine to Machine (M2M) applications will re-shape the Australian economy and drive productivity improvements.

Recent research by Deloitte Access Economics found that mobile telecommunications creates significant benefits in terms of productivity and workforce participation.[1]

Specifically, the research showed that Australia's economy was $42.9 billion (2.6% of GDP) bigger in 2015 than it would otherwise have been because of the benefits generated by mobile technology take-up with an increase in:

- long term productivity of $34 billion or 2% of GDP); and
- workforce participation of $8.9 billion, or 0.6% of GDP).[2]

The research also found that 65,000 full-time equivalent jobs were supported by the increased GDP attributable to workforce participation (equivalent to 1% of total employment in the Australian economy).[3]

Demand for Mobile Broadband continues to grow

The global demand for mobile broadband continues to grow and the evolution of 5G and IoT services will place even greater pressure on the capability of industry to meet growing demand without appropriate regulatory reform facilitating network deployment to support the new services.

Ericsson's Mobility Report (Jun 2017) forecast:

- 5G subscriptions will exceed half a billion by the end of 2022;
- 5 billion LTE subscriptions by the end of 2022;
- In 2022 there will be 9 billion mobile subscriptions and mobile broadband will account for more than 90% of all subscriptions;
- Mobile video traffic is forecast to grow by around 50% annually to 2022, when video will account for around 75% of mobile data traffic;
- More than 90% of mobile data traffic will come from smartphones in 2022;
- Asia- Pacific, as the most populous regions, has the largest share of mobile data traffic and total mobile data traffic for the regions is expected to exceed 30 Exabytes in 2022;
- There will be 1.5 billion IoT devices with cellular connection by 2022; and
- In 2022, around 15% of the world's population will be covered by 5G.[4]

Preparing for 5G

5G is the next generation of mobile and fixed wireless communications networks and it is anticipated to enable a fully and seamlessly connected society and economy. It will deliver substantial improvements in the speed, latency and reliability of mobile networks in order to meet the ever-increasing demand for mobile broadband.

5G will be an evolution that builds on 4G/LTE mobile networks and continues the convergence between fixed and mobile services.

5G will deliver smart, connected communities – where transport systems, infrastructure and services such as health and education are all supported by mobile communications technology. Building such

1 Deloitte Access Economics, Mobile Nation: Driving workforce participation and productivity, 2016.
2 Ibid
3 Ibid
4 Ericsson Mobility Report, June 2017

a fully connected 'mobile life' will require radical change to the way we use mobile broadband and support applications not previously dependent upon mobile connectivity.

The IoT is an environment that gathers information from multiple devices (e.g. computers, vehicles, smart phones and anything with a sensor or actuator) and applications (e.g. social media apps, e-commerce platforms, manufacturing systems or traffic control systems). It includes all business, organisational, operational and consumer data.

The IoT implies the connection of most devices and objects over time to the internet. Note that machine-to-machine communications (M2M), which can provide bespoke solutions within industries or even companies and which are characterised by process-specific sensors and devices, form an important subset of IoT.

IoT is an application that will be further enabled and expanded by 5G, according to 5G Americas:

> *"The vision of 5G is that the massive IoT market will explode with billions of devices and sensors that represent a digital representation of our real world, driven by low cost devices, long battery life, coverage everywhere, and innovative business applications. The promise of 5G is that it will be possible to realize critical IoT applications, which require real-time control and automation of dynamic processes in various fields such as vehicle-to-vehicle, vehicle-to-infrastructure, high-speed motion, and process control. Critical parameters to enable the performance required are network latency below milliseconds and ultra-high reliability and both are intrinsic components of the 3GPP work to define the new radio interface for 5G, NR. The 5G network architecture is being designed to cater for both IoT scenarios."*[5]

5G promises to be a comprehensive advance in mobile technology and the step from 4G to 5G will deliver broader and more diverse impacts on all sectors of the economy and community.

Deployment related policy and regulatory settings are critical inputs to support the implementation of 5G. Timely and efficient deployment of infrastructure requires a flexible regulatory framework as well as thoughtful consideration and timely decision-making by policy makers to ensure that the benefits of 5G are fully realised.

Industry is already preparing for 5G[6] and investment decisions are being made now, with demonstration trials slated for 2018 and commercial ready networks proposed for 2020. It is imperative that there is certainty around the ability to deploy the requisite infrastructure to provide certainty for the associated long-term investment decision-making processes.

The Associations note that these proposed amendments will pave the way for further flexibility to be built into the regulatory framework to enable a timely and efficient deployment of infrastructure to meet the demand for 5G services across Australia.

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[5] 5G Americas: LTE and 5G Technologies Enabling the Internet of Things, Dec 2016, p5

[6] http://www.amta.org.au/amta/news/51183.mobile-nation-preparing-for-5G

4. Consultation Paper Questions and responses

Many of the amendments to improve the efficiency of infrastructure deployment outlined in the consultation paper were requested by our members in previous submissions to DoCA. The Associations therefore overwhelmingly support the proposed amendments and the supporting statements made in the consultation paper.

In this section the Associations provide more detailed comments on the proposed amendments in the consultation paper. Item numbers are as they appear in the consultation paper. Not all amendments and associated questions in the consultation paper are addressed. Responses are only provided where substantial further detail, refinement or qualification are required.

Low Impact Facilities Determination

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?

The Associations are of the view that radio shrouds should be considered ancillary facilities to low impact facilities as proposed in our original submission by inclusion in the list of ancillary facilities at Part 3, clause (3.1) (4). This provides the greatest flexibility for designing appropriate shrouds to meet community expectations for minimising visual amenity impact, and minimises administrative costs and delays for carriers and local government authorities in obtaining necessary approvals.

The Associations note that as currently drafted, the shroud is required to be colour-matched to its background. Colour matching does not always provide the most harmonious design solution, and it is therefore proposed that wording be used to the effect that a shroud is:

(i) Colour-matched to the background; or
(ii) In a colour or finish agreed in writing between the carrier and the land owner

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 noted above, the Associations do not support the listing of radio shrouds as a distinct facility in the LIFD. This approach would be overly prescriptive, and in general is not practical, as it is not possible to consider *a priori* all the possible or potential shapes or sizes of radio shrouds for inclusion in the LIFD.

The inclusion of a shroud in a design means that the carrier has identified the need for special treatment of visual impact. It therefore follows that the carrier will select a shroud that works best for that building or situation. Being prescriptive will inhibit design possibilities for shrouds to reduce visual impact.

7.1—Does the proposed approach [definition of radiocommunication facilities] raise any issues?

7.2—Are the proposed dimensions for these facilities appropriate?

The Associations support the general definition of radiocommunications facilities based on their size and visual impact as proposed in the consultation paper. However, the Associations note

that an additional sub-category relating to wi-fi installations has been added. It is suggested that this sub-category (Item 6A) could easily be incorporated within the general category (Item 6) with some very minor redrafting. The only significant distinction between the two categories is the small size of the equipment box for wi-fi (which is already incorporated in the dimensions permitted in the general category) and the implicit provision for more than one external antenna (limited to the same dimensions as for the general category).

To avoid unnecessary confusion and requirement for interpretation between the two types of installations, it is therefore proposed that this amendment be redrafted as follows, incorporating the provisions outlined in (6A) within the single item at (6):

6	Radiocommunications facility: (a) with a cabinet or cabinets, the combined volume of which does not exceed 1 cubic metre (b) each external antenna is not more than 1.2 metres long	Residential Commercial Industrial Rural

The implicit provision for more than one external antenna and more than one cabinet or box is in any case an important requirement for small cells and other small radiocommunications facilities that were envisioned to be incorporated in this item, with the use of the singular in relation to these items being an oversight in the original drafting that requires correction.

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?

In the original submission to the DoCA on this item (Schedule Part 1, Item 8) it was proposed to permit equipment installed inside a structure to be considered low impact in residential areas as well as the currently permitted commercial, industrial and rural areas. The intent was to broaden the carriers' powers in relation to equipment installed, in particular, in roof spaces of buildings such as residential apartment blocks to overcome the counter-intuitive situation which currently applies and allows equipment to be installed on the top of such roofs (where it may be highly visible) rather than inside the roof space where it may be concealed and therefore far less visually impactful.

However, effectiveness of the amendment proposed in the consultation paper is significantly reduced by constraining this provision to non-residential buildings in a residential area. High-rise residential apartment blocks are an increasingly common feature of inner and middle suburban residential areas, and provide ideal opportunities for the location of mobile network infrastructure. Concealing the infrastructure internally rather than requiring it to be installed external to these buildings is considered to be a distinctly positive outcome for communities in these residential areas. However, it is an outcome which will be frustrated by the amendment as currently drafted.

The Associations also believe the drafting for this further item (Schedule Part 1., Item 8A) to be confusing and potentially incorrect. The amendment refers to State/Territory planning laws for residential occupancy or residential use (to define a residential building) but the Associations note that no such laws determine for what use or occupancy any given building may be put.

The Associations therefore urge the DoCA to reconsider adopting the amendment as originally proposed for Schedule Part 1, Item 8 whereby 'residential' was added to the areas where this item is permitted as a low impact facility without any further constraint.

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

The Associations are happy for the introduction of a new cabinet shape to add flexibility to the cabinet options available. However, in the original submission addressing the existing shelter types for Schedule Part 3, Items 4 & 5, it was proposed to exclude 'minor protrusions' such as cable ducting and air conditioning units from the dimensions defining the maximum base areas for such shelters. This provision, which may equally apply to the newly proposed cabinet at Item 2, does not seem to have been considered, even though its impact on visual or other amenity is minimal (proposed to be limited to 10%).

While of only minor visual impact, the lack of such provision may result in unnecessarily lengthy delays resolving the technicalities where the status of low impact is disputed for a given facility. carriers have previously experienced situations where local authorities have utilised minor protrusions required for cabling, air conditioning and ladders to dispute the status of shelters that would otherwise qualify as low impact (see for example Hutchison vs Monash City Council (2003) regarding an equipment shelter installed in a public reserve in Glen Waverly, an outer suburb of Melbourne). Such disputes, based on technicalities, potentially force a requirement for a development application (which may subsequently be refused), delaying or completely frustrating the deployment of important telecommunications facilities based on a trivial variation from the prescribed base area, yet which is still well within the intent of the LIFD.

The Associations therefore urge the DoCA to adopt the amendment as proposed in the original submission permitting minor protrusions for Items 4 & 5 (and potentially the newly defined Item 2A).

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

The Associations support permitting larger areas of solar panels as low impact facilities for telecommunications facilities in rural areas. Considering recent developments in solar panel technology, making them more efficient and cost-effective compared to other energy alternatives (e.g. significant trenching; the overhead provision of power cables or the provision of diesel generators), the Associations propose the permitted area to be further increased to $25m^2$. This not only reflects an increased utility of such energy alternatives, but is also in keeping with the public and carriers' ambitions to make greater use of sustainable and clean energy sources.

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?

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?

The Associations support increasing the length of trench that may be opened at any given time (Schedule Part 4, Item 1). In general, it is not efficient to limit the length of trench that may be open to less than the length of conduit or cabling that can be laid and the trench closed within a day. However, developments in technology and deployment methods make such a length unknown except for at the present time, with the likelihood that it could be considerably increased in the future without impact on public amenity.

Given other constraints within this Item, it is proposed that no limit be set on the length of the trench that may be opened at any given time, but simply that the length of trench left open ***at the end of the work period*** should not exceed 200 m (giving effect to a similar requirement as intended by the amendment but without further constraint on trench opening ***during*** the work period).

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?

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?

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

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

The Associations support the amendments to the volume restrictions relating to co-located facilities in residential and commercial areas (Schedule Part 7). The Associations also welcome the clarification of the definition of a co-located facility at Part 1, Section 1.3. However, it is noted that the logical flow of the text of the Schedule Part 7 could be improved by swapping the order of Items (2, existing) and (3, newly proposed).

Telecommunications Code of Practice

The proposed amendments as described in the consultation paper and provided as draft in the Tel Code are in keeping with those proposed by the Associations' members in their original submissions to DoCA. Consequently, the Associations support the proposed amendments as drafted noting they will facilitate considerable reductions in costs and delays when deploying mobile and fixed wireless network infrastructure and provide greater certainty in the process of managing any objections that may arise.

Telecommunications Act – Schedule 3

The Associations note the amendments proposed in the consultation paper for Schedule 3 of the Act are not provided as draft amendments in a mark-up of the Act, therefore final comment is subject to the precise drafting of the Act. However, the Associations are happy with the proposed amendments as described in the consultation paper, again noting the potential advantages in

facilitating mobile and fixed wireless network deployment and look forward to the opportunity to comment further once drafting of the Act is completed.

5. Concluding Remarks

The Associations commend the DoCA for proposing the suite of amendments to the LIFD, Tel Code and Schedule 3 of the Act as described in their consultation paper *"Possible amendments to telecommunications carrier powers and immunities – Consultation paper"*, June 2017.

The proposed amendments address many of the issues raised by the Associations' members in previous submission to DoCA over a number of preceding years and are therefore strongly supported. If adopted, the Associations note the net economic benefit flowing to community, government and the industry is 100s of millions of dollars annually, while the additional benefits in social connectivity, personal security and disaster management are incalculable.

With the imminent evolution to 5G mobile and fixed wireless networks, and the quantum leap in expansion of speed and range of services which such networks will supply to communities and businesses, the potential gains from these amendments will only increase.

Likewise, the evolution to 5G networks will place additional demands on deployment regulation and processes, so that not only is it important that these amendments be adopted as soon as possible, but that further regulatory flexibility remain a goal that both industry and government work towards in the near and medium term.

For any questions in relation to this submission, please contact Ray McKenzie, MCF Manager, AMTA at 02 6232 4488 or ray.mckenzie@amta.org.au or Craig Purdon, Project Manager, Communications Alliance at c.purdon@commsalliance.com.au.