

Prepared on behalf of: Telstra Corporation Ltd

Australian Competition & Consumer Commission
Domestic mobile roaming declaration inquiry 2016

Statement of Robert John Joice

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Date: 1 December 2016

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[CIC begins] = information not to be released without a confidentiality undertaking

[CIC begins] = information not to be released even with a confidentiality undertaking

I, Robert John Joice, General Manager for Wireless Strategic Solutions, Wireless Network Engineering – Telstra Operations at Telstra Corporation Ltd (**Telstra**) of Level 6, 231 Elizabeth Street, Sydney, say as follows:

- 1 I am the General Manager for Wireless Strategic Solutions, Wireless Network Engineering within the Operations business unit at Telstra.
- 2 I make this statement from my own knowledge as General Manager for Wireless Strategic Solutions, from my experience accrued as an employee of Telstra across 13 years, from 20 years in the telecommunications industry and from having consulted and made enquiries of relevant staff and the records of Telstra.
- 3 Unless otherwise defined in this statement, terms used in this statement have the same meaning as defined in the Submission which this statement supports.

1 BACKGROUND

- 4 I have been employed by Telstra since 7 April 2003.
- 5 As General Manager for Wireless Strategic Solutions I am responsible for:
 - (a) engagement with Singtel Optus Pty Limited (**Optus**), Vodafone Hutchinson Australia Pty Limited (**VHA**) and NBN Co Limited (**NBN Co**) in relation to sharing of telecommunications facilities, the resolution of inter-carrier disputes in relation to site sharing issues on a site by site basis, and variations to agreements;
 - (b) negotiation of tenure agreements and rentals with major national and state based property owners including Crown land authorities;
 - (c) negotiation of reforms to statutory planning schemes with local and state government authorities;
 - (d) negotiation of regulatory reforms to the *Telecommunications Act 1997* (Cth) to enhance the timely and cost effective deployment of telecommunications facilities;
 - (e) resolution of legacy tenure negotiations; and
 - (f) oversight of planning appeals upon refusal of development applications for new telecommunications facilities.
- 6 My career in telecommunications commenced in or about November 1996 and I have been involved in site acquisition and facilities access issues since this time. Prior to my role as General Manager for Wireless Strategic Solutions I held the following positions:
 - (a) National Manager, Site Acquisition in the Operations business unit of Telstra, 2003-2013;

- (b) Site Acquisition Manager, Hutchison Telecommunications (Australia) Limited (**Hutchison**), 2002-2003;
- (c) Regional Acquisition Manager / National Site Acquisition Manager, Vodafone Networks Pty Ltd (**Vodafone Networks**), 1996-2002; and
- (d) from 1985 to 2003, I worked as consultant licensed property valuer.

7 I hold a Valuation of Real Estate Certificate from Sydney Technical College.

8 My most recent curriculum vitae is attached as Annexure “**RJJ-1**”.

2 **TELSTRA’S MOBILE TOWERS AND FACILITIES**

9 As at November 2016, Telstra utilises more than 8,500 unique mobile network sites. These figures are not static as Telstra is constantly expanding its network.

2.1 **Telstra owned mobile towers and facilities**

10 As at November 2016, for approximately [REDACTED] of these sites, Telstra owns the mobile structure (these structures include free-standing towers, monopoles and guyed masts) and either owns or occupies, via a lease or other arrangement, the land on which the structure is located. For the purposes of this statement, I refer to these Telstra owned facilities as ‘**Telstra Mobile Facilities**’.

11 Table 1 below provides a breakdown, on an approximate basis, of current Telstra Mobile Facilities by area, classified in accordance with the Australian Bureau of Statistics Remoteness Structure. These figures have been extracted from Telstra records. Details on the number of these facilities shared with other carriers is set out below in paragraph 31.

Table 1: Breakdown of Telstra Mobile Facilities by area (classified in accordance with the Australian Bureau of Statistics Remoteness Structure)

Area	Percentage of Telstra Mobile Facilities
Major cities	30 per cent
Inner regional	27 per cent
Outer regional	24 per cent
Remote	10 per cent
Very remote	9 per cent

2.2 Alternative mobile towers and structures used by Telstra

- 12 The remaining facilities currently used by Telstra to deploy mobile radio communications equipment are not owned by Telstra. These facilities include other structures, such as monopoles, building rooftops, power poles, light poles, traffic signage, in building coverage systems, silos, and water reservoirs. They include radio and mobile towers and structures owned by other companies.
- 13 Other owners of radio or mobile towers include:
- (a) Axicom Pty Limited (**Axicom**) (previously Crown Castle Australia);
 - (b) BAI Communications Pty Limited (**Broadcast Australia**);
 - (c) Optus (although I understand that Optus sold some of its towers to Axicom in April 2000);
 - (d) VHA (although I understand that VHA sold some of its towers to Axicom in April 2001 and between 2003 and 2008); and
 - (e) NBN Co.
- 14 I do not have details of the precise number of towers owned by each of the above companies. However, Telstra co-locates on approximately 1,200 sites owned by [REDACTED].
- 15 When considering whether a structure is suitable as a mobile facility, amongst other considerations, Telstra requires clear line of sight to propagate the radio signal to the desired coverage area. Where a suitable elevated structure (such as a water tower) is available with sufficient height, structural capacity and aperture availability, Telstra considers whether it can utilise the structure as an alternative to building a new tower or monopole.
- 16 In my experience, these alternative structures provide a lower capital cost alternative than Telstra building its own new structures in those areas, and can often be deployed faster than a new purpose built structure. This is because new structures often need to go through lengthy local council planning and development approval processes (including community consultation) and protracted tenure negotiations.
- 17 I estimate, based on my experience, that approximately 40 per cent of the alternative structures Telstra currently utilises (excluding light poles and power poles) are shared with another party, which may include another mobile carrier, utility organisations, broadcasters, local councils, community radio or a government department for radio communications.

3 THE FACILITIES ACCESS TOWER SHARING REGIME

3.1 Legislative framework

- 18 Tower sharing is required under the *Telecommunications Act 1997* (Cth) (the **Act**). Part 5 of Schedule 1 of the Act requires carriers who own existing telecommunications transmission towers or structures (Telstra, Optus, VHA and NBN Co) to provide other carriers with access unless any of the criteria in the Act are not met or if one of the other exceptions to the Act apply (for example, if providing access is not technically feasible).
- 19 In accordance with this facilities access obligation, Telstra has developed processes and policies and agreed commercial arrangements to facilitate other carriers' access to their existing and proposed networks. I am aware that other carriers have done the same. This access is called 'co-locating' or 'tower sharing'.
- 20 The Act also provides that carriers planning the provision of future carriage services, must co-operate with other carriers to share sites and eligible underground facilities. Similarly, the carriers have developed a process to enable this as well, which is set out below in section 4.2.
- 21 The Australian Competition and Consumer Commission (**ACCC**) has also released *A Code of Access to Telecommunications Transmission Towers, Sites of Towers and Underground Facilities* (the **Facilities Access Code**) which sets out conditions that carriers must comply with when providing access under Part 5 of the Act including provisions relating to confidentiality, queuing policies, dispute resolution and non-discriminatory access.

3.2 Access agreements

- 22 The tower sharing regime has been in place since I commenced working in this area in 1996 (at which time I worked for Vodafone Networks). During my career, I have worked for both access seekers and access providers operating under the regime. Although Telstra is typically an access provider, it also seeks access to other carriers' network facilities. In addition, prior to Telstra, I was employed at Hutchinson and Vodafone Networks where I managed the staff responsible for making tower sharing applications to Telstra and other tower owners. During this period, the process for tower sharing was relatively similar, with the same kinds of issues and considerations, to what is described in section 6 in my statement below.
- 23 Since I commenced working at Telstra in 2003, members of my team have been involved in reviewing and responding to applications from other mobile carriers to install equipment on Telstra's Mobile Facilities from an operational perspective. I also work from time to time with staff from Telstra Wholesale in negotiating tower sharing arrangements with other carriers and assisting with issues that have been escalated.
- 24 As noted above in paragraph 10, Telstra currently owns approximately [REDACTED] [REDACTED] Telstra Mobile Facilities over which it is possible for other carriers to apply to co-locate in

accordance with the Act. Arrangements between Telstra and carriers co-locating on Telstra Mobile Facilities under this regime are governed by commercially negotiated access agreements within the framework of the Act and the Facilities Access Code.

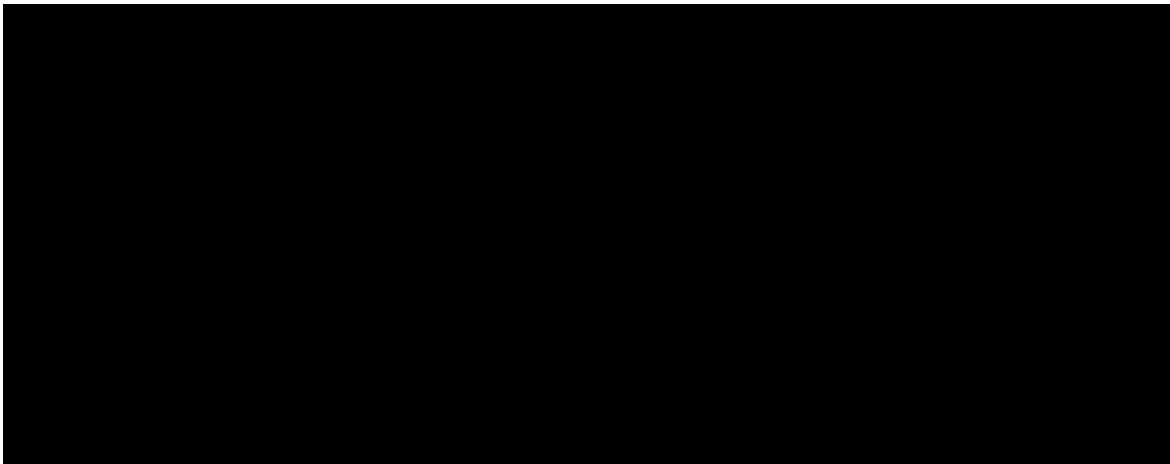
25 Under the Facilities Access Code, carriers who own and operate towers must develop a 'queuing policy'. The Facilities Access Code provides that the queuing policy must include the infrastructure owner's applications. In accordance with Telstra's queuing policy, Telstra may reserve space for itself on a tower where it has genuine plans for a specific future use of that tower.

26 Telstra's commercially negotiated access agreements with other carriers include provisions which deal with Telstra reservations. Generally these provisions provide that the customer's proposed equipment can be co-located on Telstra's towers unless, at the requested date of access, Telstra has a valid reservation for that space (as determined under the relevant access agreement).

27 Telstra's commercially negotiated access arrangements with other carriers also allow access seekers to reserve their own space on Telstra's towers by submitting requests for access to space on a Telstra tower. An "approval in principle" by Telstra (Level 2 of the tower sharing process), gives an access seeker a reservation of space on a Telstra tower for a period determined by the relevant access arrangement. Included in this period is the period an access seeker has to commence its construction activity once a design and construction proposal (**D&CP**) is approved. Once the access seeker has obtained approval of its D&CP, the access seeker has 2 years in which to commence construction activity

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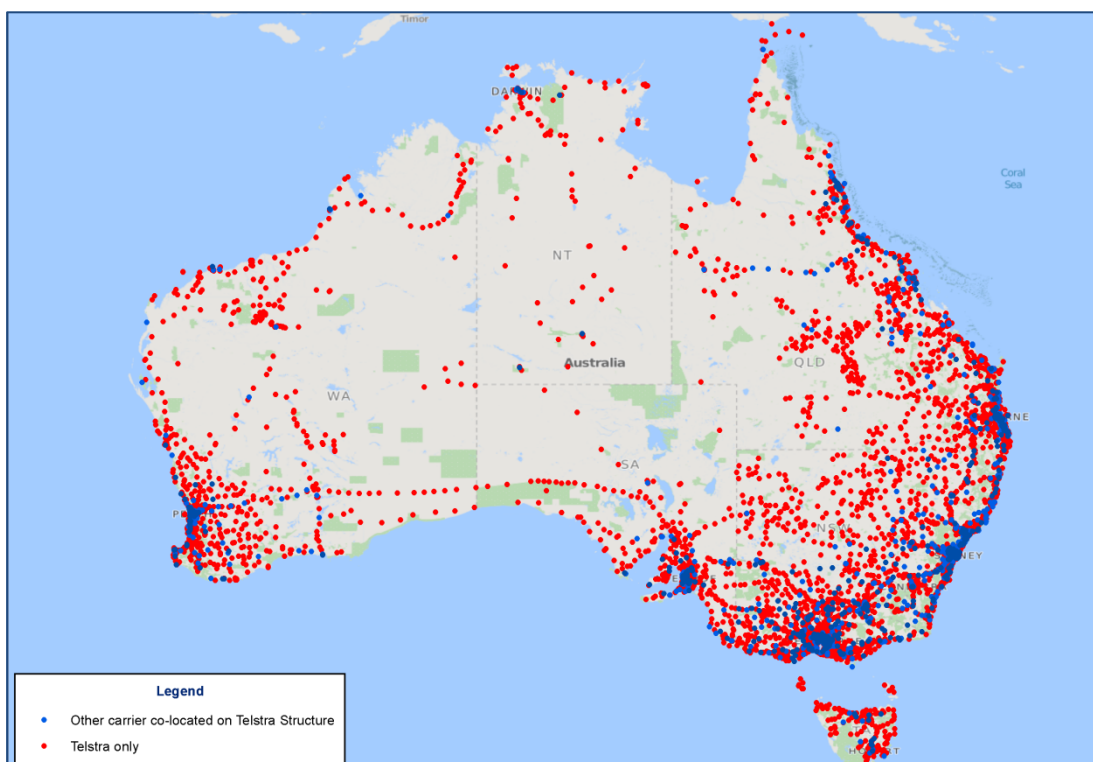
4 TOWER SHARING ON TELSTRA'S MOBILE TOWERS

30 In my experience, the co-location regime described above is robust and works effectively to promote co-location opportunities between carriers. Co-location has a number of advantages for carriers including lower initial capital cost, a shorter timeframe to deliver new services and

avoiding community opposition to new telecommunications infrastructure (particularly in metro and regional areas).

- 31 As at November 2016, approximately [REDACTED] Telstra Mobile Facilities are shared with [REDACTED]
- 32 Figure 1 illustrates the location of Telstra mobile sites (both owned and not owned), alongside those Telstra owned sites on which another carrier is co-located. In my view, tower sharing is less common in major cities and regional areas as most carriers have developed their own infrastructure in these areas or can utilise alternative structures.

Figure 1: Map of carriers co-located on Telstra sites



4.1 Historical tower sharing applications

33 The ongoing effectiveness of the co-location process is demonstrated by the increasing number of applications Telstra has been receiving and granting since the co-location regime was introduced. Table 2 below sets out the number of Level 3 design and construction applications (described in section 6.2 below) Telstra has received from wholesale customers over the past ten years. I note that, depending on the date the Level 3 application was received, it may have been approved in the following year. Consequently, in some years (for example 2009 and 2012) more Level 3 applications were approved than received.

Table 2: Level 3 applications received by Telstra from wholesale customers over past ten calendar years

Calendar year	Level 3 applications received by Telstra	Level 3 applications approved by Telstra
2006	134	109
2007	177	171
2008	520	506
2009	193	200
2010	216	206
2011	392	348
2012	502	543
2013	307	276
2014	378	375
2015	496	488
2016 (to 15 November)	396	393

34 This information shows that in addition to a general year on year increase in Level 3 applications over the past ten years, there was a significant increase in applications in both 2008 and 2012. In my view, the spike in applications in 2008 was likely a reaction to the launch of Telstra's NextG network in October 2006, as Optus and VHA were prompted to expand their 3G network to catch up with Telstra's launch. I also believe that the spike in 2012 is likely a reaction to Telstra's deployment of 4G, as Optus and VHA were seeking to facilitate the launch of their 4G networks.

4.2 Maximising tower sharing opportunities

35 In addition to the tower sharing regime described above, which is initiated by the access seeker, Telstra, as both a tower owner and a potential tower sharing party, actively seeks to maximise tower sharing opportunities at new tower build sites (ie. greenfield sites) in accordance with the Act.

- 36 When any carrier is planning to build a greenfield tower, details of the proposed location is uploaded to and published on the RNFSA. This allows interested parties access to information on where carriers are planning on building new sites. In addition, Telstra, Optus and VHA provide a list of these proposed new sites to the Mobile Carriers Forum (**MCF**). MCF is an industry forum that I attend five times a year on behalf of Telstra.
- 37 MCF regularly collates this greenfield information and sends a complete list of proposed builds to each carrier, usually on a six monthly basis. Telstra then reviews this list with a view to determining where there may be an opportunity for co-location. If an opportunity is identified, Telstra will approach the carrier to determine whether its requirements may be met. If they are and an agreement is reached, one carrier will take primary responsibility for the build, and the other will seek to co-locate on that site in due course. Through this process, the parties will co-operate to ensure that the new facility will meet both parties requirements. Occasionally, the co-locating carrier may contribute to some of the installation costs.
- 38 In my view, participating in this process at the MCF leads to substantial benefits for both parties in terms of reduced costs and reduced administration because only one party needs to go through the development approval process and conduct necessary community consultation prior to the installation works. This initiative by the carriers helps to address community sensitivities around multiple mobile towers in one location by reducing unnecessary duplication of infrastructure, especially in more built up areas.
- 39 In addition to the MCF process, I understand that a requirement of Telstra's arrangements for Round 1 of the Federal Government Mobile Black Spots Program was that all new Telstra sites built under that Program were constructed on a "plus one basis" to ensure that there was capacity available for at least one additional carrier to co-locate at each site if requested.

5 RELATIVE COSTS OF TOWER SHARING

5.1 Greenfield mobile sites

- 40 In my experience, the financial cost of tower sharing is generally lower than the cost of constructing a new tower, particularly in regional and rural areas. The estimated approximate cost of building a new 40 metre tower or monopole is set out in Table 3 below.



5.2 Co-location mobile sites

- 41 The estimated general cost of co-locating on a 40 metre existing tower or monopole is set out in Table 4 below. These estimates are reflective of the costs Telstra would face when it is co-locating on another carrier's facility. An explanation of each of these components is set out in paragraphs 42 and 43 below, including the key assumptions that have been made in respect of the cost components.

5.3 Description of cost items

42 The upfront cost components for co-location include:

- (a) Build costs – This amount covers service costs associated with design, planning, project management, construction, installation and commissioning in relation to components (b)-(i) below.
- (b) Site acquisition – The fee that must be paid to site acquisition consultants who are retained to negotiate a lease of the land required for the access seeker's equipment shelter and to undertake the necessary planning approvals and community consultation. For co-location requests, whilst planning approvals may not be required, community notification and / or consultation often is, and that process is the responsibility of the access seeker in that instance.

- (c) Shelter and feeders – It is standard practice that each party with equipment on the facility will have its own shelter to house its on-ground equipment and feeder cables connecting the facility equipment to the shelter.
- (d) Power extension – This covers the cost of a power extension that may be needed to upgrade or replace the existing transformer (or substation) in order to cope with the additional power consumption load.
- (e) Transmission link – This cost assumes that a fibre transmission link is readily available. If this is not the case, transmission costs can vary significantly depending on point of interconnection as the longer the extension of fibre required to enable the site to connect to the access seeker’s core network, the greater the cost.
- (f) Backhaul (“the last mile”) – This is the cost of connecting the site to the access seeker’s existing fibre transmission link or to the Telstra transmission capacity acquired by the access seeker, and is often referred to as the “last mile”. Generally, these costs will be limited in metro areas where distances are short and fibre backhaul is available. Microwave transmission is commonly used in regional and remote areas where there is no fibre backhaul available. In my experience, carriers who are co-locating on Telstra’s towers will often use microwave transmission to connect to their closest tower, where they have existing fibre backhaul already installed, rather than installing their own backhaul at every shared tower or leasing backhaul from Telstra. The costs for backhaul set out in Table 4 above do not include the cost of licenced spectrum or the ongoing cost of providing backhaul capacity. There may also be opportunities for the access seeker to acquire backhaul transmission services from Telstra Wholesale on existing or upgraded Telstra backhaul to the cell site. Depending on the location this may provide a more cost effective solution for the access seeker than establishing its own backhaul in which case costs in Table 5 could be lower.
- (g) Antenna – Equipment purchased by access seeker.
- (h) Base technology – Equipment purchased by access seeker.
- (i) Batteries – The cost of back up batteries for the access seeker’s equipment. As outages are often longer in regional and rural areas more batteries are required.

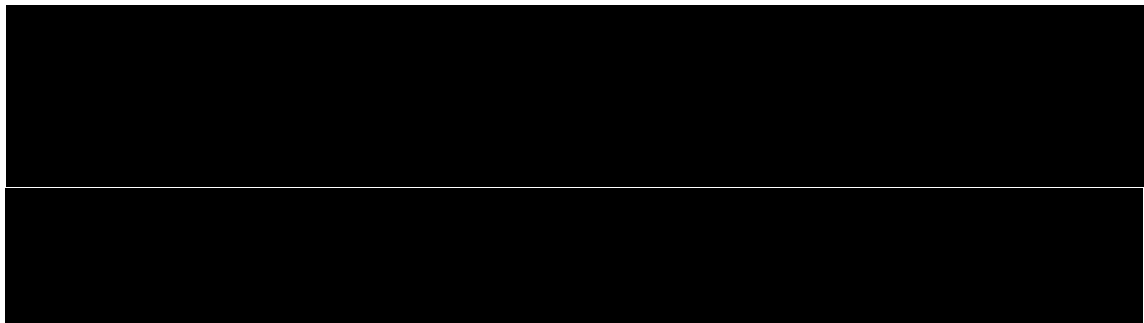
43 The ongoing operating cost components for co-location towers include:

- (a) Power – Ongoing power costs associated with running their equipment on the tower.
- (b) Rental – The fees that the access seeker pays to the land-owner in order to access the site. The access seeker negotiates these costs directly with the land owner.

(c) Facilities access – This is the fee that access seekers pay to Telstra for ongoing access to the Telstra Mobile Facility. These fees are negotiated as part of the access arrangements.

44 I note that the costs in Table 4 do not include the costs of structural upgrades which could be an added expense for an access seeker (see further information on this set out below in section 6.3). The range of these costs will vary depending on the type of structural upgrade required. For example, I consider it would cost approximately [REDACTED] to undertake minor strengthening of a tower. A more extensive structural upgrade, such as replacement of a facility, could cost up to [REDACTED]. Occasionally, Telstra may share the costs of a structural upgrade with an access seeker. This decision is made on a case by case basis.

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6 TOWER SHARING APPLICATIONS FOR TELSTRA'S MOBILE FACILITIES

6.1 Overview of the co-location process

46 The step by step process followed when an access seeker makes a request to co-locate on Telstra Mobile Facilities is set out in the access agreements however I have set out a general summary of this process in section 6.2 below. It is my experience that Telstra follows substantively the same process when making a co-location application to other carriers (Optus, VHA or NBN Co). A similar process has also been adopted by non-carriers, such as Axicom and Broadcast Australia, even though they are not carriers and therefore not covered by the Act.

47 Telstra's co-location process is identical across all access seekers and managed by Telstra Wholesale and Telstra Operations, including myself, where required.

48 Although this step by step process is the same in the way that it applies to all access seekers, each co-location request is unique and must be assessed on a case by case basis against the particular circumstances of the relevant Telstra Mobile Facility and the equipment which the access seeker is proposing to co-locate there. The bespoke nature of this process means that the timeframes set out below for Telstra's response at various stages of the application process reflect reasonable endeavours. Although Telstra endeavours to comply with these timeframes,

in my experience, they are not always achievable for a variety of business reasons, some of which I describe below. I also note that these timeframes generally reflect Telstra's current policies and practice, however, they may differ between access seekers depending on the terms of their commercially negotiated access arrangement.

49 Some factors which may affect the co-location process, including timing, are:

(a) Complexity – Based on my experience, the more complex a co-location request, the more time Telstra and the access seeker will need to progress the request. For example, if a structural upgrade is required as part of a co-location request, both Telstra and the access seeker will need additional time and business input to consider the appropriate design. If an equipment shelter is proposed to be installed on the site, property stakeholders must be consulted. If a power upgrade is needed, electrical engineer input may be required. This individual analysis is crucial to ensure that the access seeker's requirements can be met and the integrity of Telstra's network is not impacted during the co-location process.

(b) Bulk requests – Occasionally, access seekers will send through bulk co-location applications rather than staggering their requests. [REDACTED]

[REDACTED]

Given the reasonable endeavours timing turnaround on a preliminary information request is quite short (5 working days), it is difficult to meet that timeframe for bulk requests. Telstra has taken steps to attempt to address this, which include asking access seekers to periodically provide forecasts setting out their expected requirements for co-location sites. However, this request is not strictly complied with by all access seekers. Given this, Telstra produces its own forecasts based on historical data, however these are unlikely to be as accurate as those produced by the access seekers themselves.

(c) Network requirements – Ensuring the integrity of Telstra's network and safety of those working on the network is always a key priority for Telstra. I am aware of occasions when changes in network policy may have affected both Telstra and access seekers, including the timing of co-location requests. For example, in 2014, Telstra undertook a review of Telstra's electromagnetic emission controls at its radio facilities. This review recommended more stringent controls for occupational health and safety reasons. While those changes were being implemented by Telstra, co-location requests and/or current construction work being undertaken by both Telstra and access seekers on Telstra's network was delayed.

50 Due to the reasons set out above, in my view, Telstra's process to address co-location requests must retain a degree of flexibility and requires ongoing co-operation between the parties. As

part of this co-operation, Telstra seeks to keep in contact with the access seeker, updating them on the progress of its application and the steps being undertaken.

6.2 Step-by-step process for co-location

51 To assist access seekers with their participation in this process, Telstra Wholesale publishes a 'Co-location Submission Guide'. This guide sets out further detail on each of the steps below. A copy of this guide is attached as **Annexure "RJJ-2"**.

Level 1: Preliminary information request and response

52 The tower sharing request process begins when an access seeker makes a request to Telstra for preliminary information about a Telstra Mobile Facility. As part of the request, the access seeker is required to provide:

- (a) contact details for the access seeker; and
- (b) details of the Telstra Mobile Facility they are seeking to access, including site number and name, site address, landlord details and a description of the existing facility (if known).

53 Telstra uses reasonable endeavours to undertake a preliminary study within 5 working days of a receipt of a tower sharing request and to advise the customer of the following:

- (a) contact details for the relevant Telstra team;
- (b) confirmation of the site details, including site number and name, site address, landlord details and a description of the existing facility;
- (c) existing Telstra and other access seeker equipment on the site;
- (d) queuing information of the site (including existing Telstra reservations and prior access requests from the other access seekers that have been given Level 2 or above approval);
- (e) any special conditions; and
- (f) any other reasonable requirements of Telstra in connection with the access requested to enable the customer to complete a request of an "approval in principle" study.

54 Where Telstra cannot provide the preliminary information to the customer within 5 working days, Telstra will notify the access seeker of the expected date the information will be provided. In the event an access seeker has filed multiple applications, in my experience, Telstra Wholesale will liaise with the access seeker to determine which applications are of highest priority, so Telstra can concentrate its efforts on completing these responses first.

- 55 In completing the preliminary information response, Telstra will check the availability of space on the tower from its records, including taking into account any existing Telstra and access seeker infrastructure on the tower, and any reservations on that tower by Telstra and other access seekers. It will consider in more detail the particular requirements of the access seeker and its own reservations to ensure that they are still current and required.
- 56 This preliminary response is valid for 90 working days from the date Telstra provides it to the customer. This preliminary information is not intended to conclusively demonstrate that access is available or unavailable.
- 57 From my experience, the preliminary information stage is used as a way of getting a sense of the available capacity on the facility and determining whether it will be suitable for its requirements prior to proceeding with a co-location application. At the same time as making a Level 1 application, access seekers will be exploring other infrastructure options, such as building their own tower or co-locating on a different structure. In my experience, access seekers do not usually provide reasons for not proceeding further.
- 58 In the last two financial years, FY15 and FY16 respectively, Telstra has received and responded to approximately 851 and 1,277 preliminary information requests from wholesale customers.

Level 2: Approval in Principle

- 59 Within 90 working days of receiving the preliminary information response from Telstra, the access seeker may choose to make a Level 2 application, seeking approval in principle from Telstra to install the access seeker's infrastructure on a particular Telstra Mobile Facility. This is called a request for an Approval in Principle study, or an "AIP" study.
- 60 As part of a Level 2 application, the access seeker must pay an administration fee and provide Telstra with information pertaining to the works they wish to undertake including:
- (a) details of the proposed equipment they wish to install and technical information about this equipment;
 - (b) details of proposed equipment housing to be included on the site;
 - (c) the nature of access sought;
 - (d) site plans/drawings marked up with the access seeker's proposed installation; and
 - (e) the work schedule proposed by the access seeker.
- 61 If requested by either party, the access seeker and Telstra will meet to discuss this request and resolve any issues around the information supplied. In my experience, if the information supplied by an access seeker is incomplete, Telstra will generally deal with this by contacting

the access seeker and giving them an opportunity to provide the information required, rather than rejecting the application outright and requiring the access seeker to resubmit. This can, however, result in time delays.

62 Generally, within 15 working days of receipt of a request for an AIP study, Telstra uses its best endeavours to review the Level 2 application, assess the proposed equipment and provide a response to the customer stating that:

- (a) approval in principle is granted;
- (b) approval in principle is conditionally granted. Conditional approvals are discussed further in section 6.3 below; or
- (c) the request for approval in principle is rejected. Rejections are discussed further at section 6.4 below.

63 In the last two financial years, FY15 and FY16, respectively, Telstra has received and responded to approximately 652 and 535 Level 2 requests from wholesale customers and has approved (some with conditions) 572 and 520 Level 2 requests.

Level 3: Design & Construction Proposal

64 If Telstra approves a request (conditionally or unconditionally), the access seeker has 90 working days to notify Telstra of its intention to proceed and submit a Level 3 D&CP.

65 This request must contain information of sufficient quality and detail to permit Telstra to assess the proposal for the purpose of approving the design and construction of the tower sharing. Telstra endeavours to review the D&CP provided and approve or reject it within 20 working days. These are provisions that allow for extensions to these timeframes if needed.

66 Telstra's response to a D&CP may state:

- (a) that the D&CP is approved;
- (b) that Telstra requires further information (in which case Telstra will endeavour to respond within five working days of that information being provided);
- (c) that the D&CP is conditionally approved and what conditions must be met including, if relevant, any make ready work required and any specific security arrangements applicable to that site; or
- (d) that the D&CP is rejected, the technical and other reasons for rejection.

67 Telstra may reject a D&CP if the proposal:

- (a) does not relate to the installation of equipment for a permitted use;
- (b) is not in accordance with the Level 2 application and approval;
- (c) is not technically feasible; or
- (d) is not in accordance with the access agreement.

68 In parallel with a Level 3 application, it is my experience that the access seeker will also progress other processes necessary for co-location, for example, inquiries around site acquisition and necessary site preparations.

69 The number of Level 3 applications that Telstra has received from wholesale customers and approved over the past ten years is set out in Table 2 above at paragraph 33. In my experience, similar to the approach taken to AIP requests described above in paragraph 61, if the information supplied by an access seeker is incomplete, Telstra will contact the access seeker and request they either provide the additional information or make a new Level 3 application, rather than rejecting the D&CP outright and requiring the access seeker to start the co-location process again.

Level 4: Order for facilities access

70 Prior to sometime in 2008, the access seeker had to lodge an order for facilities access with Telstra at the time of, or following, approval of the DC&P.

71 The feedback from access seekers and the Telstra team dealing with co-location requests was that this step was unnecessary, consequently, it was removed and Telstra does not require this step even if it is set out in the access seeker's current commercial contract.

Level 5: Construction activity request

72 An approved DC&P is valid for 24 months. At any time during this period, the access seeker can submit a Construction Access Request (**CAR**) in relation to the relevant Telstra Mobile Facility. As part of the CAR, the access seeker must submit information and forms related to the proposed construction work including the following:

- (a) an attendance request application form;
- (b) a method of procedure;
- (c) a safe work method statement or safety analysis; and

(d) a planned service interruption request.

- 73 After the CAR is submitted, Telstra and the access seeker need to agree when this work will take place and if there is to be any outage at the Telstra Mobile Facility as a result of the construction activity, agree when the outage will take place. This is important for network management as any outage will affect some customers' network service and quality. Telstra will use reasonable efforts to respond to a CAR within 2 working days.
- 74 In my experience, prior to lodging a CAR, the access seeker will negotiate with the relevant land holder to get access to the site and with the local council if any development approvals are required as a result of the co-location request. Generally development approvals are only required in the case of major structural upgrades. Telstra is not usually involved in this part of the process, although it does require the access seeker to confirm, prior to approving the CAR, that these have been obtained.
- 75 Once Telstra has approved the CAR, all of the construction work is carried out by the access seeker on the terms agreed. Telstra is not responsible for completing any of this work.
- 76 In the last two financial years FY15 and FY16, Telstra has approved more than 500 Level 5 CARs for other carriers to install equipment on Telstra's towers. Over 450 of these applications were requests lodged on behalf of Optus, VHA or NBN Co. The remainder were lodged by smaller carriers.

Level 6: Post-construction activities

- 77 Within two working days following the completion of construction activity, the access seeker must notify Telstra that the construction is completed. Within 10 working days, the access seeker must provide an update on any variations as a result of the construction activity. Within 20 working days, the access seeker must provide Telstra with "as built" drawings so that Telstra has an accurate record of what work has been undertaken. However, this step is not required if there are no changes to the drawings provided to Telstra as part of the D&CP process.

6.3 Conditional approval of co-location requests

- 78 As noted in paragraph 62 above, following receipt of a Level 2 application requesting Telstra to approve a co-location request, Telstra may grant an approval in principle, grant an approval in principle subject to certain conditions or reject a request. Below, I set out further details on the circumstances where Telstra may approve a request subject to certain conditions or reject a request.
- 79 If Telstra conditionally grants approval in principle, it will provide the access seeker with details of the Telstra Mobile Facility, any make ready work required and the special conditions to be fulfilled prior to co-location.

80 In my experience, the majority of conditions placed on an approval in principle relate to the capacity of the Telstra Mobile Facility in question. Capacity issues can arise due to physical space restrictions or the loading limitations of the particular structure. Some co-location requests require structural upgrades due to capacity constraints on a tower, but this is typically in densely populated areas. In rural and remote areas, a high proportion of Telstra Mobile Facilities have more physical capacity, meaning co-location is more straightforward. This is due to a variety of factors including the Telstra towers in rural areas tending to be larger structures, lower demands for infrastructure and more available physical space on them.

Space availability

81 All Telstra Mobile Facilities have a finite amount of physical space available. If some, but not all, of the required space is physically available, Telstra may approve an access seeker's request subject to a reduction or alteration to the access seeker's request (for example, installation of 18 antennas rather than 24).

Structural loading limits

82 For safety reasons Telstra Mobile Facilities are subject to structural loading limits and must be designed and constructed in accordance with relevant Australian Standards and the Building Code of Australia.

83 As part of the response to a Level 2 application, Telstra conducts a review of the loading that will be placed on the relevant Telstra Mobile Facility following installation of the access seeker's proposed equipment. This review takes into account any current reservations (including Telstra and access seeker reservations) on the Telstra Mobile Facility. If the additional proposed equipment will not exceed the total loading capacity of the Telstra Mobile Facility (i.e. loading will be less than 100 per cent) inclusive of Telstra's and access seeker reservations, a structural upgrade to the Telstra Mobile Facility is not required and Telstra will approve the co-location request. However, if the total loading capacity will exceed 100 per cent inclusive of Telstra and access seeker reservations as a result of their proposed equipment, a structural upgrade to the Telstra Mobile Facility will be necessary. Telstra can therefore only approve new access seeker requests subject to the access seeker agreeing to undertake that structural upgrade. This may include a contribution by Telstra in certain circumstances.

84 If an access seeker already has equipment present on the Telstra Mobile Facility, and the proposed additional equipment would result in a less than 2.5 per cent increase in the overall structural loading on the facility (taking into account all reservations), access seekers will still be permitted to install their equipment without a structural upgrade provided that the structural loading on the facility will be less than 100 per capacity where Telstra's current reservations are

not taken into account. This is available to each existing access seeker on a tower once per tower.

- 85 This discounting of existing Telstra reservations in the structural loading analysis allows existing access seekers to upgrade their equipment or make minor additions without needing to perform a structural upgrade. However, if the loading is going to be greater than 100 per cent, even discounting Telstra reservations, a structural upgrade to the Telstra Mobile Facility is necessary. Telstra will therefore only approve such requests subject to the access seeker agreeing to undertake that structural upgrade.

Wind Code requirements

- 86 In my experience, another key structural factor that may affect a Telstra Mobile Facility's capacity is wind loading standards. Part 2 of *AS1170 Structural design actions - Wind actions*, commonly referred to as the "Wind Code" sets out the procedures for determining wind speeds in various regions around Australia and resulting structural design factors that must be taken into account.
- 87 In the case of antenna support structures (towers and monopoles), the loading due to wind action is usually more significant than loads due to either self-weight (the structure and equipment on it) and/or live loads (people related). This issue is particularly relevant in regional areas of Queensland or the Northern Territory that are considered 'cyclonic' regions.
- 88 These standards are updated by the Australian Standards Board from time to time which can alter the existing structural loading limitations on affected Telstra Mobile Facilities. For example, in December 2012, Australian Standards revised the drag coefficient for circular cylinders and for lattice towers and frameworks made up of circular members. This change affected structural loading calculations for monopoles. In particular, Telstra has been informed by its structural suppliers that this amendment has resulted in an increase in the structural loading for monopole structures from 18 per cent to 20 per cent. This means that the structural loading on the monopole is higher than previously assumed and will need to be taken into account the next time the structural loading limit is calculated for the purposes of assessing a co-location request.
- 89 Telstra undertakes a review against these standards as part of its assessment with a Level 2 application. If installation of an access seeker's equipment would place a structure outside these standards, Telstra can only approve these requests subject to the access seeker agreeing to undertake a structural upgrade.

6.4 Reasons why Telstra may reject a co-location request

90 Based on my experience, Telstra uses all reasonable endeavours to approve a co-location request and, consistent with the requirements of the Act and the Facilities Access Code, will only reject a co-location request if the proposal is not 'technically feasible' or otherwise not in accordance with access agreement between Telstra and the access seeker. There are a number of reasons why a project may not be technically feasible, including:

- (a) the requested equipment cannot be properly accommodated on the site either because capacity issues may exist which cannot be overcome by a structural upgrade, for example, certain types of structural upgrades, such as increasing the height of a structure may be limited by state and territory planning laws and restrictions; or
- (b) installation of the equipment requested by the access seeker may result in electromagnetic interference between that equipment and equipment already installed on the facility. Rejection for this reason is relatively rare, but may arise in circumstances where there is insufficient vertical and horizontal separation between the access seeker's proposed antennas and the existing equipment; or
- (c) installation of the equipment requested by the access seeker may result in significant technical and/or engineering difficulties, for example, if there is a reasonable risk that such access would cause damage to Telstra's or a third party's equipment or unreasonably jeopardise the integrity, confidentiality or security of Telstra or third party communications, or give rise to a significant risk to the health and safety of Telstra or third party employees. Rejection for this reason is relatively rare, as Telstra and the access seeker will generally try to negotiate an alternative proposal to address the difficulties.

91 In the event a Level 2 request is granted conditional approval or rejected, Telstra provides access seekers with the reasons for the conditions or rejection. If requested by the access seeker, Telstra will further discuss these reasons and what amendments, if any, can be made by the access seeker to overcome this rejection. In my experience, Telstra will use its best endeavours to agree an amended request for an approval in principle and provide the access seeker with an additional period to submit this amended request.

92 In my experience, there can also be a range of internal business reasons why access seekers do not proceed with co-location requests including the cost of necessary structural upgrades, lack of available capex, an alternative location may be available or the available aperture height may not be suitable for the access seeker's requirements.

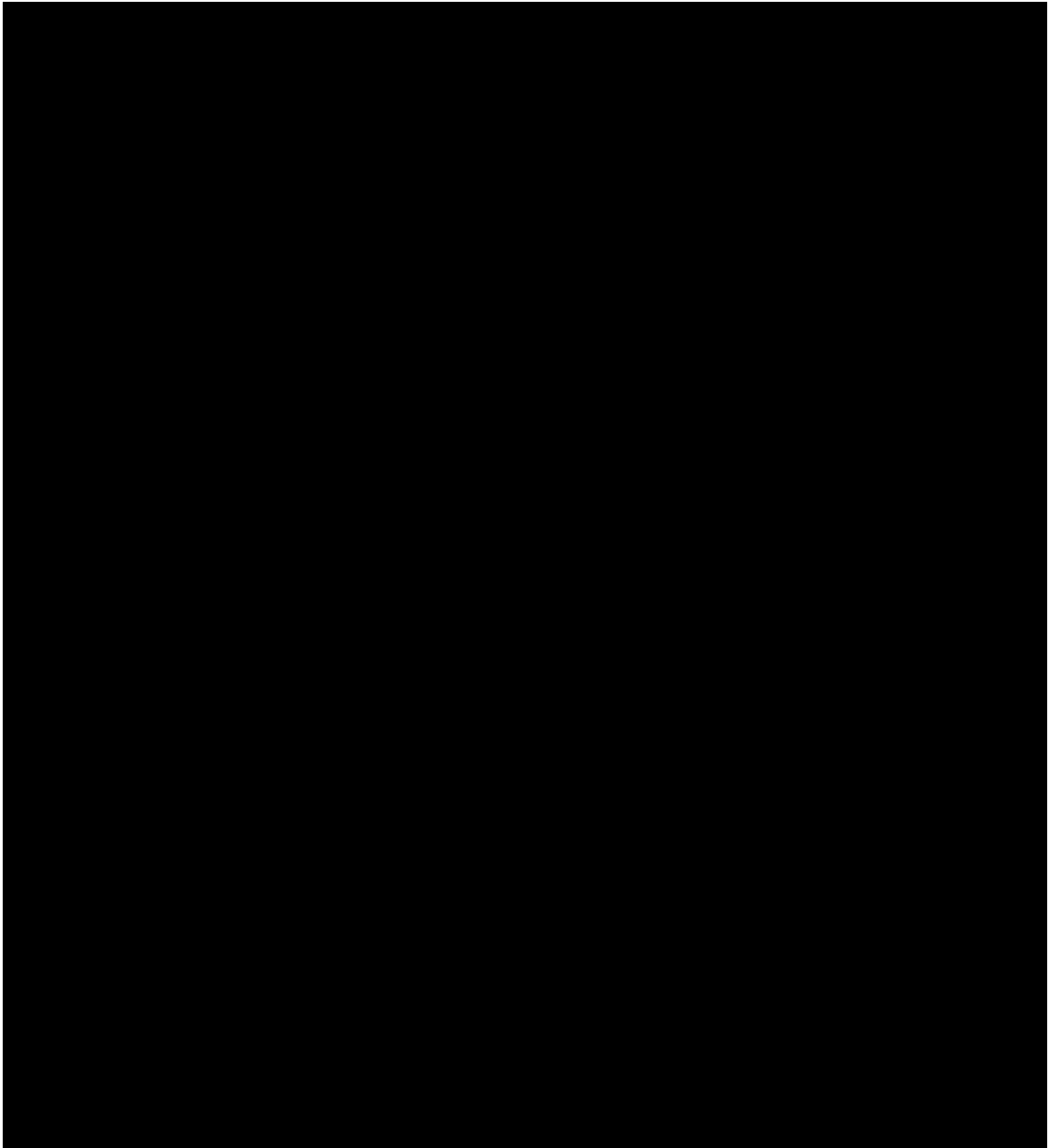
93 In the previous two financial years (FY15 and FY16), Telstra has:

- (a) received approximately 2,128 Level 1 requests from wholesale customers;
- (b) received approximately 1,187 Level 2 requests from wholesale customers and has approved approximately 92 per cent of these requests; and
- (c) received approximately 926 Level 3 requests from wholesale customers and has approved 98 per cent of these requests.

94 As set out above, in most instances Telstra will not be informed of the reason why the access seeker decides not to progress a co-location request.

7 TOWER SHARING CASE STUDIES

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Signature

Robert John Joice, General Manager for Wireless
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