



Audit of Telecommunications Infrastructure Assets – Record Keeping Rules

Consultation paper

Date

20 October 2021

Australian Competition and Consumer Commission
23 Marcus Clarke Street, Canberra, Australian Capital Territory, 2601
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1. Introduction

1.1. Purpose

The purpose of this Consultation Paper is to seek stakeholders' views on the Australian Competition and Consumer Commission's (ACCC) proposed amendments to the *Audit of Telecommunications Infrastructure Assets - Record Keeping Rules* (the Rules). The ACCC is proposing to update and make amendments to the Rules and seeks submissions on the proposed changes set out in this document.

1.2. Submission process

The ACCC encourages submissions from all stakeholders, including industry participants, end-users of telecommunications services and members of the public.

Submissions should be provided by **5.00 pm on 19 November 2021**.

Submission of commercial-in-confidence material

All submissions will be considered by the ACCC as public submissions and will be posted on the ACCC website. Interested parties wishing to submit commercial-in-confidence material to the ACCC should submit both a public version and a commercial-in-confidence version of their submission. The ACCC has issued a guideline setting out the process parties should follow when submitting confidential information to communications inquiries commenced by the ACCC. The guideline is available on the ACCC website at:

<https://www.accc.gov.au/publications/communications-inquiries-submitting-confidential-material>

Contact officer and submission lodgement details

Enquiries in the first instance should be directed to Steve Williams on (07) 3835 4602.

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2. The Infrastructure RKR

2.1. Regulatory framework

The Australian Competition and Consumer Commission has the power to collect information from industry to undertake its telecommunications regulatory functions under the *Competition and Consumer Act 2010* (CCA) and relevant telecommunications legislation.

Section 151BU of the CCA provides that the ACCC may make record-keeping rules (RKRs) requiring carriers and carriage service providers to keep records and provide reports on the information in those records to the ACCC. The ACCC cannot require records to be kept unless they contain information relevant to the operation of certain parts of the CCA or certain other legislation.¹

2.2. Use of data collected under the Rules

The information collected under the Rules assists the ACCC in administering a range of its regulatory functions and responsibilities under Part XIB and Part XIC of the CCA, including the investigation of anticompetitive conduct in telecommunications markets and the regulation of telecommunications services.

2.3. Background

On 19 December 2007, the ACCC made the *Audit of Telecommunications Infrastructure Assets – Record Keeping Rules 2007* (the Rules) to help inform its analysis of competition in relevant telecommunications markets. The 2007 Rules required specified carriers (record-keepers) to report on the extent and location of their core network and customer access network (CAN) infrastructure.

In March 2013, the ACCC amended the Rules to update the list of record-keepers to reflect market developments and introduce an obligation for record-keepers to identify leased infrastructure and infrastructure operated on behalf of third parties.

In December 2017, the Rules were amended again to update the list of record-keepers and clarify the information required to be reported on mobile infrastructure, fibre to the building infrastructure and the geographic boundaries of CANs.

An amendment in May 2020 updated again the list of record-keepers, and clarified and expanded the information to be reported in relation to mobile infrastructure.

2.4. Summary of proposed changes to the Rules

The ACCC seeks stakeholders' views on updates to the list of record-keepers and amendments to the Rules to clarify the information requirements and further specify the format of reports to facilitate the analysis of the information and improve the comparability across record-keepers.

Updating and adding record keepers

The ACCC proposes to update the list of record-keepers to ensure that the information it relies upon in making its regulatory decisions reflects the current state

¹ s. 151BU (4) of the CCA

of telecommunications infrastructure in Australia. The proposed amendments add to the list of record-keepers five operators that are developing significant infrastructure assets. The amendments also recognise changes of ownership due to mergers or acquisitions that have taken place since the Rules were last amended. The ACCC is also seeking views on whether satellite service providers should be included in the list of record-keepers.

Customer access network changes

The ACCC seeks to improve the current rules in relation to the reporting of NBN Co's infrastructure and any other non-NBN customer access network infrastructure. The ACCC considers it necessary to further amend the rules to specify that the customers' end of a customer access network be identified. This is intended to largely apply to NBN Co but also to other providers with a similar type of fixed-line and wireless infrastructure, where the customer is in a fixed location.

Mobile coverage map clarifications

To aid the interpretation of reports on mobile infrastructure, the ACCC proposes that mobile coverage maps be qualified, where appropriate, to indicate whether they relate to 'outdoor' coverage or to 'external-antenna' coverage. Under the proposed amendments, Mobile Network Operators (MNOs) would also be required to indicate the type of cell operating at each mobile site (i.e., 'macro cell', 'small cell' or 'other').

Improving comparability of networks

To facilitate analysis of the information reported and comparability across operators, the ACCC also considers the Rules should specify the required level of aggregation of the information provided in the reports. This means that where a record-keeper reports data for the same network type (for example, FTTN, 3G mobile), that data should be aggregated and reported on one single map. This would then represent the record-keeper's entire national footprint for that particular network technology.

The amendments also clarify that any symbol depicted in maps must be accompanied by a full description of the type of asset it represents. We also propose that record-keepers advise the ACCC about any change in the methodology used to prepare the reports, particularly in relation to coverage.

Minor changes to remove provisional provisions

Finally, the ACCC seeks to amend the Rules to remove provisional sections relevant to the 2020 reporting period, together with minor amendments of procedural nature.

All proposed amendments are collectively marked up in the draft revised Rules at **Attachment A**.

3. Matters for consultation

To inform its decision on the appropriate amendments to the Rules, the ACCC is seeking views on the following matters.

3.1. Updating the list of reporting entities (Record-keepers)

Part 1 of Schedule 1 to the current Rules contains a list of 24 record-keepers required to provide specified information to the ACCC.

To inform its regulatory assessments and decisions, the ACCC must ensure that record keeping information is up to date and reflects the full extent of telecommunications infrastructure. For this purpose, the ACCC regularly updates the list of entities that own and operate significant infrastructure. We regularly monitor existing and emerging entities to gauge the significance of telecommunications infrastructure owned or operated by those entities in relation to:

- the impact or potential impact on the ACCC's assessment of competition in the telecommunications market, and
- whether the entities are subject to the ACCC access regulations and as such, relevant to the ACCC's decision making processes.

The ACCC seeks views on its proposal to amend the list of record-keepers to add five entities that, by organic growth or acquisition, own or operate significant telecommunications infrastructure. In particular, the ACCC is seeking views on whether:

- Aussie Broadband Limited ACN 132 090 192 (Aussie Broadband)
- DGtek PTY LTD ACN 600 896 115 (DGtek)
- FibreconX PTY LTD ACN 637 460 425 (FibreconX)
- Edge Data Centres PTY LTD ACN 632 303 827 (Leading Edge), and
- Springfield City Group PTY Limited ACN 055 714 531 (Springfield City Group)

should be added to the list of record-keepers under the Rules.

Profile of proposed record-keepers

Aussie Broadband is a telecommunications service provider (and currently the 5th largest NBN RSP) with its own fibre infrastructure currently under development. It has announced the construction of a fibre network for interconnection between 75 NBN points of interconnect (POIs) and 24 datacentres.²

DGtek builds and operates high-speed optical fibre networks in the Greater Melbourne area, offering wholesale point-to-point fibre links for corporate customers, in addition to its traditional offering of ultra-fast broadband services to businesses and households, with symmetrical speeds of up to 1Gbps. DGtek also provides dark fibre services.³ DGtek's network footprint appears to cover over 20,000 businesses and 70 km of fibre optic network.⁴

FibreconX specialises in the supply of wholesale dark fibre services to datacentres. It is deploying its own fibre network, connecting a number of datacentres in Sydney with a multiple ring topology.⁵

Leading Edge is deploying dark fibre from each of its regional datacentres directly into NBN's points of interconnect (POIs), with:

- an initial roll-out across 14 locations in New South Wales, and
- a subsequent fibre roll-out to connect NBN POIs to datacentres in Victoria and Queensland.⁶

² CommsDay, 'Aussie Broadband begins \$1.8 fibre optic network expansion', 22 April 2020, p.5

³ 'DGtek rolls out Melbourne fibre network into CBD, suburbs', CommsDay, 5 December 2019, p. 1

⁴ 'Exetel signs on as DGtek retailer', CommsDay, 13 May 2020, p. 6

⁵ 'FibreconX nears completion, launch of massive Sydney fibre ring network', CommsDay, 11 February 2021, pp.1-2

Springfield City Group has recently completed a 140 km fibre ring connecting the Springfield's Data Centre to Brisbane City. This ring expands dark fibre availability to connect a number of datacentres across Southern Brisbane.⁷

The ACCC is considering the merits of adding the carriers listed above to the list of record-keepers, given that their assets appear to be of sufficient size as to have a material impact on the ACCC's analysis of rival infrastructure in the market.

Satellite service providers

The ACCC recognises the increasing importance of satellite services in complementing terrestrial networks through the supply of connectivity in regional and remote areas. In particular, it notes the impending deployment of low earth orbit (LEO) satellites. The ACCC is considering the merits of incorporating satellite providers as record-keepers, and seeks stakeholders' views on the matter.

Mergers and acquisitions among record-keepers

The ACCC also intends to update the list of record-keepers to reflect mergers and acquisitions that have taken place since the last amendment to the Rules in 2020. Specifically, the ACCC proposes to:

- remove Vodafone Hutchison Australia Pty Limited as record keeper, as its infrastructure will be reported together with the infrastructure of TPG Telecom Limited, following the merger between the two companies,
- remove OptiComm Co Pty Ltd as a stand-alone record-keeper and re-list it as a Uniti Group Limited (Uniti) subsidiary, to recognise its acquisition by Uniti, and
- merge the 'Group A' and 'Group B' lists of record-keepers in Part 1 of Schedule 1 to the current Rules into a single list, to remove a distinction that was relevant to the 2020 reporting period and is no longer required.

The amended list of record-keepers is set out in Part 1 to Schedule 1 to the draft instrument at **Attachment A**.

Questions for Stakeholders

- 1) Is it appropriate to include Aussie Broadband, DGtek, FibreconX, Leading Edge and Springfield City Group in the list of record-keepers set out in Part 1 to Schedule 1 to the Rules?
- 2) Are there other providers that should be included in the list of record-keepers? Are there any record-keepers that should be removed from the list at Schedule 1?
- 3) Should satellite service providers be included in the list of record-keepers? If so, which providers should be included?

Please provide an explanation for your answers.

3.2. Reporting on CAN infrastructure at end-users' premises

⁶ 'Leading Edge Datacentres signs WBA with NBN Co', CommsDay, 18 January 2021, p.10

⁷ 'Springfield City Group launches 140km dark fibre ring in southeast QLD', CommsDay, 24 August 2021, pp.1-2

The full extent of a CAN includes equipment located in an end-user's premises. The information reported under the current Rules in many cases does not allow the ACCC to determine the location of the equipment located at the customer end of a customer access network. For example, in the case of NBN Co, the Rules only require NBN Co to provide coverage areas for its wireless and satellite networks and the location of fibre in its fixed network up to the point where it connects with lead-in infrastructure. It does not require details of lead-in infrastructure in its access network.

Knowing the location of the end-user end of a CAN would allow the ACCC to ascertain the level of competition (if any) between different access technologies and providers in a particular area and, consequently, the type of services available to consumers. Accordingly, the introduction of this requirement will allow the ACCC to identify areas where connectivity is poor or the technology options are limited.

The ACCC considers that information on the location of the end-users' side of the CAN is already present in carriers' existing information systems and the additional requirement will require minimal additional burden on record keepers.

To implement this new proposal, the draft instrument at **Attachment A**:

- defines '*End-user equipment*' as the part of the CAN that is located at an end-user's premises
- adds '*Radio (satellite)*' to the categories of access media listed in Part 2 of Schedule 1 to the Rules, and
- amends Sub-rules in 5(2) (b) to require:
 - record-keepers that report on fixed-wireless networks to include details on the location of end-users' equipment
 - relevant record-keepers to report the geographic extent of '*Radio (satellite)*' networks, including the location of satellite transmission sites (ground stations) and the location of end-user's equipment, and
 - relevant record-keepers to report on the location of end-users' equipment for all fixed-line access media listed in Schedule 1, (except for legacy copper customer access networks).

Question for Stakeholders

- 4) Should relevant record-keepers be required to provide information on the location of equipment on the end-user side of the CAN? Are the proposed amendments to the RKR appropriate to achieve this? Please provide an explanation for your answer.

3.3. Changes to the information to be reported by mobile operators

The ACCC is proposing to introduce amendments to the Rules to ensure that operators of mobile infrastructure, that is, the MNOs, provide an Australia-wide coverage map for each technology in operation (i.e., 3G/4G/5G). The proposed amendments also require MNOs to provide maps for two standards of coverage (outdoor and external antennae) and to identify the type of cell operating at each mobile site.

Coverage maps by technology type

Currently, the MNOs provide coverage maps by frequency bands operating on each technology type (i.e., 3G/4G/5G). For the purpose of assessing the full geographic coverage of a network across Australia, the ACCC currently needs to combine the coverage maps of all frequency bands used for each technology type.

This process has proven to be technically difficult due to the size and complexity of some of the coverage maps provided by the MNOs.

The ACCC considers coverage maps that encompass an MNO's full coverage footprint for each technology type could be more easily produced by the MNOs, as their public-facing coverage maps already (although in less detail) depict coverage in this way. As such, the ACCC proposes to amend the Rules to require the MNOs to provide coverage maps for each technology type as a whole (i.e., 3G/4G/5G), in addition to the current requirement to provide coverage maps for each frequency band in operation.

Standard of coverage

There is currently no consistency in the standard of coverage in coverage maps reported under the Rules. For example, some MNOs report both 'outdoor' coverage (regular street-level coverage able to be reached by a standard handheld device), and 'external antenna' coverage (the extended reach of a mobile network where an external antenna is utilised). Other MNOs either provide only external antenna coverage, or do not identify the standard of the coverage they are reporting on.

The ACCC recognises that the MNOs' coverage maps mainly show predicted coverage and that the underlying assumptions used in producing the coverage maps may differ across MNOs. This means that direct comparison of coverage maps across the MNOs is not feasible or reliable. However, given that MNOs have adopted a common terminology in describing the different standards of coverage, the ACCC is of the view that there is merit in amending the Rules to require the MNOs to provide coverage maps of the same, and identifiable, standard.

We consider that, for most consumers, outdoor coverage is the most relevant as this reflects coverage that could be accessed by a typical handheld device. However, it is possible that external antenna coverage may also be of interest to some consumers, particularly those in regional and remote areas where there may be an increased need to use coverage-enhancing devices. To that end, the ACCC is interested in assessing the maximum reach of coverage available to consumers when an external antenna is in use.

As such, the ACCC proposes to amend the Rules to clarify that the MNOs should provide coverage maps based on both outdoor coverage and external-antenna coverage for each mobile technology in operation.

The ACCC is also interested in views of stakeholders as to whether the assumptions relied upon by MNOs to determine coverage should also be disclosed when providing coverage maps. We understand that MNOs use different assumptions which affect the coverage calculations that they provide both in their reports, and on their websites. Understanding these assumptions may assist the ACCC in making more direct comparisons across networks. This is likely to be of particular interest for the analysis of coverage in regional and remote areas.

Cell type

The ACCC proposes to amend the Rules to require MNOs to identify the cell type (e.g., macro cell, small cell or other) for each of the active mobile sites in their networks.

Currently, the MNOs provide a number of details for each mobile site in operation without having to identify the cell type. While the number of mobile sites an MNO operates provides a broad indication of the scale of its network, the MNOs deploy different types of sites for different purposes.

An indication of the cell type would allow for a more accurate comparison of network infrastructure in a particular area. A cell type description would also provide a more meaningful picture of the primary focus of MNOs' investments over time. This is particularly relevant as the cost and time of deploying different types of mobile sites varies.

To implement these changes, the ACCC proposes to amend the Rules to:

- require MNOs to:
 - report coverage maps for each mobile technology in operation (i.e., 3G, 4G and 5G) based on both outdoor coverage *and* external-antenna coverage⁸
 - clarify that coverage maps by frequency band will be solely based on outdoor coverage, and
- add a requirement for MNOs to report the type of cell operating at each mobile site.

We are also interested in views of whether MNOs should disclose the assumptions relied upon to determine coverage. The ACCC seeks stakeholders' views on these proposed amendments in relation to mobile infrastructure, set out at **Attachment A**.

Again, the ACCC considers that the additional information required under the amended rules is information readily available from MNOs current information reporting systems, and the additional reporting would impose a limited extra burden on operators.

Questions for Stakeholders

- 5) Do you have any comments on the requirement for relevant record keepers to provide a single coverage map for each mobile technology in operation?
- 6) Do you have any comments on the requirement for relevant record-keepers to report both outdoor and external-antenna mobile coverage? Are the definitions of outdoor coverage and external-antenna coverage in the draft Rules at **Attachment A** correct?
- 7) Should record-keepers be required to report on the assumptions they use to calculate coverage for mobile networks? If not, why not?
- 8) Do you have any comments on the requirement for relevant record-keepers to report the type of cell operating at each mobile site? Is the cell-type classification proposed in the draft adequate?

Please provide an explanation and any relevant information to support your answers.

⁸ The ACCC expects that external antenna coverage to be at the moment only relevant for 3G and 4G coverage, as 5G coverage is limited and is largely in metropolitan areas at this point in time.

3.4. Level of aggregation and further description of infrastructure reported

The ACCC has observed some divergence in the way record-keepers provide the information required under the Rules. In particular, a number of record-keepers provide information in a way that, while compliant with the Rules, often displays information in a complex arrangement. In other cases, some of the infrastructure assets depicted on the maps lack the necessary references for them to be interpreted by the ACCC in a meaningful and conclusive way.

For example, information that relates to different parts of the same network technology is sometimes included across a large number of electronic files. In some instances, this results in the ACCC having to aggregate hundreds of files from a single record-keeper to be able to obtain a meaningful picture of the current state of that operator's network.

In other cases, the type of infrastructure or the meaning of other elements or symbols in the maps reported is not apparent and the ACCC needs to seek further clarification on a case-by-case basis.

A fragmented depiction of an operator's network is of limited utility for the ACCC's analysis, particularly if significant further modification is required. This unnecessarily takes up the ACCC's time and resources.

In order to facilitate a more efficient analysis of the information, the ACCC proposes to amend Rule 7 to add a requirement that the information reported be provided in an individual electronic file, representing the aggregate 'national' extent of a network, and that record-keepers provide a detailed description of each element depicted in their maps.

The ACCC believes that a national-level depiction of an operator's network is the appropriate scale for information to be reported on, and should be aligned with the operator's own records. On the same note, the ACCC believes that every element represented in maps provides an essential piece of information to their users and, as such, an appropriate description for each of those elements should be already part of operators' systems and could be easily included in reports.

Questions for Stakeholders

- 9) Should record-keepers be required to provide one individual file representing the national geographic extent of their networks? Are the proposed amendments to the RKR appropriate to achieve this?
- 10) Are the proposed amendments to Rule 7 adequate to ensure a comprehensive interpretation of maps provided under the Rules?

Please provide an explanation for your answers.

3.5. Change in the methodology used in preparing reports

In analysing the information reported under the Rules, the ACCC has occasionally identified significant changes or discrepancies in the information provided by a record-keeper between consecutive reporting periods. While in some instances, the

discrepancy may be the result of an error, in others it may arise from a change in methodology or assumptions adopted in preparing the report.

The ACCC is wary of any unusual changes in infrastructure reported, and considers that a requirement for record-keepers to report methodological changes over time would mitigate the risk of misinterpretation.

Accordingly, it is proposed that record-keepers be required to advise the ACCC in writing if the method for defining, recording and reporting information under the RKR has changed from the previous reporting period. In doing so, the record keeper must provide a description or explanation of the change.

The inclusion of this proposed requirement in Rule 8 at **Attachment A** will allow the ACCC to distinguish between genuine changes in infrastructure assets and those that may not be accurate because of changes between reporting methods.

Questions for Stakeholders

11) Are the proposed amendments to rule 8 adequate to ensure that changes in methodology are not misinterpreted by the ACCC?

Please provide an explanation for your answer.

4. Consolidated list of questions

Update to the list of record-keepers

- 1) Is it appropriate to include Aussie Broadband, DGtek, FibreconX, Leading Edge and Springfield City Group in the list of record-keepers set out in Part 1 to Schedule 1 to the Rules?
- 2) Are there other providers that should be included in the list of record-keepers? Are there any record-keepers that should be removed from the list at Schedule 1?
- 3) Should satellite service providers be included in the list of record-keepers? If so, which providers should be included?

Reporting on end-user equipment

- 4) Should relevant record-keepers be required to provide information on the location of the end-user's end of the CAN? Are the proposed amendments to the RKR appropriate to achieve this?

Further information on mobile infrastructure

- 5) Do you have any comments on the requirement for relevant record keepers to provide a single coverage map for each mobile technology in operation?
- 6) Do you have any comments on the requirement for relevant record-keepers to report both outdoor and external-antenna mobile coverage? Are the definitions of outdoor coverage and external-antenna coverage in the draft Rules at Attachment A correct?
- 7) Should record-keepers be required to report on the assumptions they use to calculate coverage for mobile networks? If not, why not?
- 8) Do you have any comments on the requirement for relevant record-keepers to report the type of cell operating at each mobile site? Is the cell-type classification proposed in the draft adequate?

Aggregation of infrastructure reports at a national level and Explanation of map elements

- 9) Should record-keepers be required to provide one individual file representing the national geographic extent of their networks? Are the proposed amendments to the RKR appropriate to achieve this?
- 10) Are the proposed amendments to Rule 7 adequate to ensure a comprehensive interpretation of maps provided under the Rules?

Notice on Changes in methodology

- 11) Are the proposed amendments to rule 8 adequate to ensure that changes in methodology are not misinterpreted by the ACCC?

Please provide reasons and any relevant information to support all your answers. If you consider there are other matters that should be addressed or included in the RKR, please outline those matters.

Attachment A- Draft Rules



**Audit of Telecommunications Infrastructure Assets – Record keeping
Rules - Amendment**

Competition and Consumer Act 2010

The AUSTRALIAN COMPETITION AND CONSUMER COMMISSION amends these Rules under subsection 151BU(1) of the *Competition and Consumer Act 2010*.

These amendments commence on the date this amendment instrument is signed.

Dated

.....
Anna Brakey
Commissioner
Australian Competition and Consumer Commission

Audit of Telecommunications Infrastructure Assets

Record Keeping Rules

Section 151BU

Competition and Consumer Act 2010

Australian Competition and Consumer Commission

1 Name of Rules

These Rules are the *Audit of Telecommunications Infrastructure Assets - Record Keeping Rules*.

2 Commencement

These Rules commenced on the day they are made ~~26 March 2013~~.

3 Interpretation

(1) In these Rules:

ACCC means the Australian Competition and Consumer Commission.

Act means the *Competition and Consumer Act 2010*.

CAN means the Customer Access Network and is that part of the telecommunications network that allows end-users to connect to the local switch, base station, node, ~~or~~ exchange or ground station.

Consolidated information report means an information report that includes infrastructure records of all subsidiaries and/or related entities of the record-keeper.

Copper means twisted pairs of copper line.

Core network means that part of the network that is not the CAN.

Distribution point unit (DPU) means an NBN Co owned device located in an underground pit, or mounted on a pole close to the end-user premise.

End-user means a consumer of communications carriage services and other services supplied using communications carriage services.

End-user's equipment means the part of the CAN that is located at or near an end-user's premises,— and includes (without limitation) any premises connection device, outdoor unit or network termination device.

ESA means the geographical area of copper wire served by one local telephone exchange.

External-antenna coverage means the reach of mobile coverage that includes areas where the connection to the mobile network requires an external antenna attached to the mobile device.

Fibre (point to multipoint) means a shared optical fibre service from the core network to the end-user.

Fibre (point to point) means a dedicated optical fibre service from the core network to the end-user.

Fibre to the building (FTTB) means a combination of optical fibre used to connect a multi-tenant site's communications room with an access network

whether that be fibre, copper or wireless. It has the capability of delivering a superfast broadband service.

FTTB equipment means the main equipment usually installed in the communications room (e.g., MDF room) of a multi dwelling unit or multi premise site.

Fibre to the curb (FTTC) means a combination of optical fibre and copper used in the CAN to connect the end-user to the core network. Optical fibre is delivered to an underground pit or pole locations where it then connects with a DPU. Copper is then used to deliver services from the DPU to the end-user. It has the capability of delivering a superfast broadband service.

Fibre to the premises (FTTP) means optical fibre used in the CAN to connect the end-user to the core network. It has the capability of delivering a superfast broadband service.

Fibre to the node (FTTN) means a combination of optical fibre and copper is used in the CAN to connect the end-user to the core network. It has the capability of delivering a superfast broadband service.

GDA94 means Geocentric Datum of Australia 1994.

Geographic extent means the physical location of infrastructure and includes the geographic boundaries normally associated with that infrastructure (such as ESA or SAM boundaries) as well as the predicted propagation of wireless infrastructure.

Ground Station means the facilities on the ground that support the sending of radio signals to an associated satellite.

HFC means Hybrid Fibre-Coaxial and is a combination of optical fibre and coaxial cable used in the CAN to connect the end-user to the core network.

Microwave radio means a microwave electromagnetic signal.

Mobile site means the site where mobile infrastructure (such as base stations, towers etc.) is located.

Fixed wireless site means the site (such as towers or other facilities) where fixed wireless infrastructure is located.

Optical fibre means a glass or plastic fibre designed to guide light along its length.

Outdoor coverage means the reach of mobile coverage that can be accessed with a handheld device, without the need of an external antenna.

Radio (fixed) means the CAN that is provided by means of air interface using point-to-point or point-to-multipoint topology.

Radio (mobile) means the CAN that is provided by means of air interface using a cellular topology which offers roaming from interconnected geographic regions of service.

Radio (satellite) means the CAN that is provided by means of air interface using a satellite to relay the signals.

Record-keeper is a carrier or carriage service provider listed as a record-keeper in Schedule 1, and includes all its subsidiaries and related entities.

RFNSA is the Radio Frequency National Site Archive, a repository of information on mobile network infrastructure managed by the Australian Mobile Telecommunications Association (AMTA)

RFNSA ID is a unique numerical identifier for each mobile site set by RFNSA based on the site's physical location.

Rules means the *Audit of Telecommunications Infrastructure Assets - Record Keeping Rules*.

Serving Area Module (SAM) means a geographical region which includes premises served by the NBN Co Network.

TAB vector format means the MapInfo proprietary format that contains a spatial representation of data using points, lines, and polygons.

Type of cell means a macro cell, or a small cell or other cell

Types of mobile coverage means outdoor coverage and external-antenna coverage.

- (2) Unless the contrary intention appears, an expression used in these Rules that is also used in the Act has the same meaning in these Rules.

4 Application

These Rules apply to the record-keepers listed in Part 1 of Schedule 1.

5 CANs

- (1) A record-keeper who is listed in Part 1 of Schedule 1 must supply the information specified in subrule 5(2).
- (2) For each CAN owned and operated by a record-keeper, the record-keeper must specify:
- (a) whether any access media of the types listed in Part 2 of Schedule 1 is deployed on the network; and
 - (b) if so, the national geographic extent of each access medium deployed, including where relevant:
 - i. for radio (mobile) – the site's -RFNSA identificationID, the location of mobile sites, the cell type, the technology type and frequency band/s of the radiofrequency spectrum used at each mobile site, in accordance with the template at Appendix 1;

- ~~ii.~~ for radio (mobile) – the outdoor geographic coverage and the external-antenna coverage for each mobile technology type
 - ~~ii.~~ for radio (mobile) – the outdoor geographic coverage by technology type and frequency band/s for each technology type;
 - ~~iii.~~ for radio (fixed) – the location of fixed wireless sites and the location of end-users' equipment;
 - ~~iii.~~~~iv.~~ for radio (fixed) - the technology type and frequency band/s of the radiofrequency spectrum used at each fixed wireless site;
 - ~~v.~~ for radio (fixed) – the geographic coverage by technology type;
 - ~~vi.~~ for Radio (satellite) – the location of satellite ground stations and the location of end-users' equipment;
 - ~~iv.~~~~vii.~~ for FTTB – the location of FTTB equipment and the number of premises served by each FTTB equipment; and
 - ~~v.~~~~viii.~~ for FTTP, FTTN, FTTB, FTTC, HFC – the geographic boundary of CAN modules (for NBN Co services this will include each SAM boundary) and the location of end-users' equipment.
- (c) for radio (mobile) – whether the construction of each mobile site was funded under a co-contribution program (whether under federal, state or local government) and if so, details of the relevant program, in accordance with the template at Appendix 1.

- (3) For the purposes of sub-rule 5(2) (c) above, the record-keeper is only required to identify the relevant co-contribution programs for sites that received funding on and after 18 May 2020, unless the co-contribution program is the Federal Government's Mobile Black Spot Program, for which the record-keeper is required to identify the sites that received funding on and after 1 January 2015.

Note: For the purposes of subrule 5(2)(b) a record-keeper is required to provide this information in accordance with rule 7.

6 Core Network

- (1) A record-keeper who is listed in Part 1 of Schedule 1 must supply the information specified in subrules 6(2), 6(3), and 6(4)
- (2) For each core network owned and operated by a record-keeper, the record-keeper must specify the geographic extent of any:
- (a) optical fibre core network;
 - (b) microwave radio core network; and
 - (c) other core network.

- (4) The record-keeper must separately identify core network that it leases to third parties.
- (5) The record-keeper must separately identify core network that it operates on behalf of third parties.

Note: For the purposes of this rule a record-keeper is required to provide this information in accordance with rule 7.

7 Format

- (1) For the purposes of subrule 5(2) and rule 6, information provided to the ACCC by a record-keeper must be:
 - (a) in a TAB vector format using the GDA94 coordinate system; or
 - (b) in such other format as the ACCC agrees in writing or notifies on its website,
 - (c) a consolidated information report of subsidiaries and/or related entities;
 - (d) contained in an individual electronic file representing the national geographic extent of a CAN and a core network. For Radio (mobile), the report must include an individual electronic file for each mobile technology in operation and type of mobile coverage. Such files must aggregate the coverage of all frequency bands operating in the corresponding mobile technology type.
- (2) A record-keeper must provide a detailed description of each element and symbol depicted in the maps provided under sub-rule 7 (1) of these Rules.

8 Reporting requirements

- (1) ~~(1)~~ Subject to Rule 9, a record-keeper is required to record and produce a report on the information specified in subrules 5(2), 6(2), 6(3) and 6(4) as at 31 January of each year.
- (2) ~~(2)~~ Subject to Rule 9, a record-keeper must provide the ACCC with a report containing the information specified in subrule 8(1) on or before 1 March of each year.
- (4)(3) In providing a report specified in Rule 8(1) for a particular year, a record-keeper must advise the ACCC in writing of any variation in the assumptions and/or methodology employed from those adopted in producing the report for the reporting period immediately prior to that year.
- (4) ~~(3)~~ The report containing the information specified in subrule 8(1) must be provided to the ACCC by email or by another mode of

delivery approved in writing by the ACCC. Reports provided by email must be sent to both of the following addresses:

- (a) rkrinbox@acc.gov.au
- (b) irdadmin@acc.gov.au

~~9 Variation of reporting requirements for the 2020 report~~

- ~~1) For the 2020 reporting year, a Group B record keeper must prepare a report containing the information specified in Rule 5 and Rule 6 as at 30 June 2020 and provide it to the ACCC on or before 31 July 2020.~~
- ~~2) For the reporting year 2020, a record keeper must provide to the ACCC a report containing the information required under Sub-rule 5 (2) (c) as at 30 June 2020 and provide it on or before 31 July 2020.~~

Note 1: Under section 151BX of the Act a person who contravenes a record-keeping rule may be subject to pecuniary penalties.

Note 2: Subsection 36(2) of the *Acts Interpretation Act 1901* (Cth) provides that where the last day of any period prescribed falls on a Saturday, on a Sunday or on a day which is a public holiday in which the thing is to be done, the thing may be done on the first day following which is not a Saturday, a Sunday or a public holiday.

Schedule 1 Record-keeping requirements for CANs and Core Networks

Part 1 List of record-keepers

Group A

Record-keeper/ACN	Subsidiaries and/or related entities
AARNet Pty Ltd 084 540 518	
<u>Aussie Broadband Limited 132 090 192</u>	
Basslink Telecoms Pty Ltd 129 550 563	
<u>DGtek PTY LTD ACN 600 896 115</u>	
Digital Distribution Australia Pty Ltd 093 095 419	
<u>Edge Data centres PTY LTD ACN 632 303 827</u>	
Ergon Energy Telecommunications 106 459 465	
<u>FibreconX PTY LTD ACN 637 460 425</u>	
Macquarie Telecom Pty Ltd 082 930 916	
NBN Co Limited 136 533 741	
<u>Pivotel Group Pty Limited 102 274 322</u>	
<u>OptiComm Co Pty Ltd 117 414 776</u>	
<u>Queensland Capacity Network Pty Ltd 633 081 517</u>	
Queensland Rail Limited 132 181 090	
Rail Corporation New South Wales ABN 59 325 778 353	
SA Power Networks ABN 13 332 330 749	
SingTel Optus Pty Limited 052 833 208	Optus Networks Pty Ltd Optus Mobile Pty Ltd

	Uecomm Pty Ltd
Spirit Telecom Ltd 089 224 402	
<u>Springfield City Group PTY Limited ACN 055 714 531</u>	
Superloop Limited ABN 96 169 263 094	Big Air Group Limited
Tasmanian Networks Pty Ltd ABN 24 167 357 299	
Telstra Corporation Limited 051 775 556	
TPG Telecom Limited 093 058 069	AAPT Limited Adam Internet Pty Ltd Agile Pty Ltd iiNet Limited Soul Pattison Telecommunications Pty Ltd TransACT Capital Communications Pty Ltd
TransGrid ABN 19 622 755 774	
<u>Uniti Group Limited 158 957 889</u>	<u>LBN Co Pty Ltd</u> <u>OPENetworks Pty Ltd</u> <u>OptiComm Co Pty Ltd</u>
Verizon Australia Pty Ltd 081 001 194	
Victorian Rail Track Corporation ABN 55 047 316 805	
Vocus Group Limited 084 115 499	Amcom Pty Ltd NextGen Networks Vocus Fibre Pty Ltd
Vodafone Hutchison Australia Pty Ltd 096 304 620	

Group B

Queensland Capacity Network Pty Ltd 633 081 517	
Pivotel Group Pty Limited 102 274 322	

~~Uniti Group Limited 158 957 889~~

~~LBN Co Pty Ltd, OPENetworks
Pty Ltd 118 525 821,~~

Part 2**Types of access media deployed**

Copper

Fibre (point to multipoint)

Fibre (point to point)

Fibre to the building (FTTB)

Fibre to the curb (FTTC)

Fibre to the Node (FTTN)

Fibre to the premises (FTTP)

HFC

Radio (fixed)

Radio (mobile)

Radio (satellite)

Other

Appendix 1

Input template

RFNSA ID	Latitude	Longitude	Technology/Frequency Band (e.g. LTE700)	Cell type	Co-funded?	Co-contribution program	Round
Unique identification number			Y or N (Add one column for each active Technology/freq. band)	<u>(e.g. macro cell / small cell/other)</u>	Y or N	Identify the funding program that co-contributed to the site cost or leave blank (e.g. Federal Government Mobile Black Spot Program)	