Planning Report

(Statement of Environmental Effects)

Development Application for a Fixed Wireless Telecommunications Facility

3326 Hill End Road, HARGRAVES NSW 2850

(Lot 136 DP756885)

NBN Site Reference: Hargraves

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Contents

EXECUTIVE SUMMARY

Proposal	**nbn**™ propose to install a new fixed wireless facility at 3326 Hill End Road, HARGRAVES comprised of the following components: • 35m-tall monopole; • Installation of nine (9) panel antennas mounted on a circular headframe at the top of the monopole; • Installation of one (1) 1200mm diameter transmission dish (parabolic antenna) at a height of 20 metres; • The installation of a 2.4m high chain-link security compound fence (compound area approximately 10m x 10m) with 3m wide access gate • The installation of one (1) outdoor equipment cabinet at ground level (1.9m H x 0.8m W x 0.7m D), adjacent to the proposed monopole; • The installation of two (2) outdoor equipment cabinets at ground level (each 2.0m H x 0.7m W x 0.85m D), adjacent to the proposed monopole; • The installation of associated feeder cables that will run overhead from the equipment cabinets, and then internal to the monopole; • The installation of underground power mains; and • Ancillary equipment associated with operation of the proposed facility.	
Purposes	The proposed facility is necessary to provide **nbn**™ fixed wireless coverage to Hargraves and the rural area surrounding the proposed facility	
Property Details	Property description: Lot 136 DP756885 Street Address: 3326 Hill End Road, HARGRAVES NSW 2850	
Town Planning Scheme	Council: Mid-Western Regional Council Zone: C3 – Environmental Management	
Applicable LEP/DCP	Mid-Western Regional Council Local Environmental Plan 2012	
	Mid-Western Regional Council Development Control Plan 2013	
Application	Use and development of the land for the purposes of construction & operation of a Telecommunications Facility (Fixed Wireless facility)	

1 INTRODUCTION

The **nbn**™ rollout is an upgrade to Australia's existing telecommunications network. It is designed to provide Australians with access to fast, affordable and reliable internet.

nbn™ plans to upgrade the existing telecommunications network in the most cost-efficient way using best-fit technology and taking into consideration existing infrastructure.

nbn™ has engaged Ventia and SAQ Consulting to act on its behalf to design and deliver new fixed wireless equipment and infrastructure within the broader network which is already in operation.

To support the fixed wireless component of this network, **nbn**™ requires a fixed wireless site to provide internet coverage to the small township of Hargraves and rural surrounds, including Avisford, Windeyer and Maitland Bar. The proposed facility will be located at 3326 Hill End Road, HARGRAVES.

Prior to confirming this site as the preferred location for a fixed wireless facility, an in-depth site selection process was undertaken. This process matched potential candidates against five key factors, namely:

- The ability of the site to provide acceptable coverage levels to the area;
- The ability of the site to provide line of sight (LoS) to other facilities;
- Town planning considerations (such as zoning, surrounding land uses, environmental significance and visual impact);
- Construction feasibility and cost; and
- The ability of **nbn**™ to secure a lease agreement with the landowner.

This Statement of Environmental Effects (SEE) will provide assessment in respect of the relevant planning legislation and guidelines, and demonstrates site selection on the basis of the following:

- The site is designed to achieve the required coverage objectives for the area;
- The site is designed to be appropriately located & sited to minimise visual impact on the immediate & surrounding area;
- The proposal is designed to operate within the regulatory framework of Commonwealth, State and Local Government;
- The proposal has been designed to ensure that no adverse environmental impact will result from the proposal
- The facility is designed to operate within all current and relevant standards and is regulated by the Australian Communications and Media Authority.

1.1 Owner's Consent

The subject land is privately owned and consent has been reached to allow for this application to be lodged.

2 BACKGROUND

2.1 nbn™ and the National Broadband Network

nbn™ is the organisation responsible for overseeing the upgrade of Australia's existing telecommunications network and for providing wholesale services to retail service providers. The **nbn** is designed to provide Australians with access to fast, affordable and reliable internet and landline phone services.

nbn plans to upgrade the existing telecommunications network in the most cost-efficient way using best-fit technology and taking into consideration existing infrastructure.

The **nbn**'s fixed wireless network uses cellular technology to transmit signals to and from a small antenna fixed on the outside of a home or business, which are able to achieve Line of Sight (LoS) towards the fixed wireless facility.

nbn's fixed wireless network is designed to offer service providers with wholesale access speeds of up to 50Mbps for downloads and 20Mbps for uploads[1].

2.2 What is Fixed Wireless and how is it different to Mobile Broadband?

The **nbn**'s fixed wireless network, which uses advanced technology commonly referred to as LTE or 4G, is engineered to deliver services to a fixed number of premises within each coverage area.

This means that the bandwidth per household is designed to be more consistent than mobile wireless, even in peak times of use.

Unlike a mobile wireless service where speeds can be affected by the number of people moving into and out of the area, the speed available in a fixed wireless network is designed to remain relatively steady.

2.3 The Fixed Wireless Network – Interdependencies

Although fixed wireless facilities are submitted to Council as standalone developments, for planning purposes, they are highly interdependent. Each fixed wireless facility is connected to another to form a chain of facilities that link back to the fibre network. This is called the 'transmission network'.

The transmission network requires LoS from facility to facility until it reaches the fibre network via a hub site. The fixed wireless network will remain unconnected without the transmission network and a break in this chain can have flow on effects to multiple communities.

A typical fixed wireless facility will include a number of antennas mounted above a structure on a headframe. Each antenna is designed to cover a set area to maximise signal strength. In turn, these network antennas communicate to a small antenna installed on the roof of each customer's home or business.

The nature of the Fixed Wireless network is visually demonstrated through **Figure 1** below.

[1] **nbn**™ is designing the **nbn** to provide these speeds to our wholesale customers, telephone and internet service providers. End user experience including the speeds actually achieved over the **nbn** depends on some factors outside **nbn**™'s control like equipment quality, software, broadband plans and how the end user's service provider designs its network.

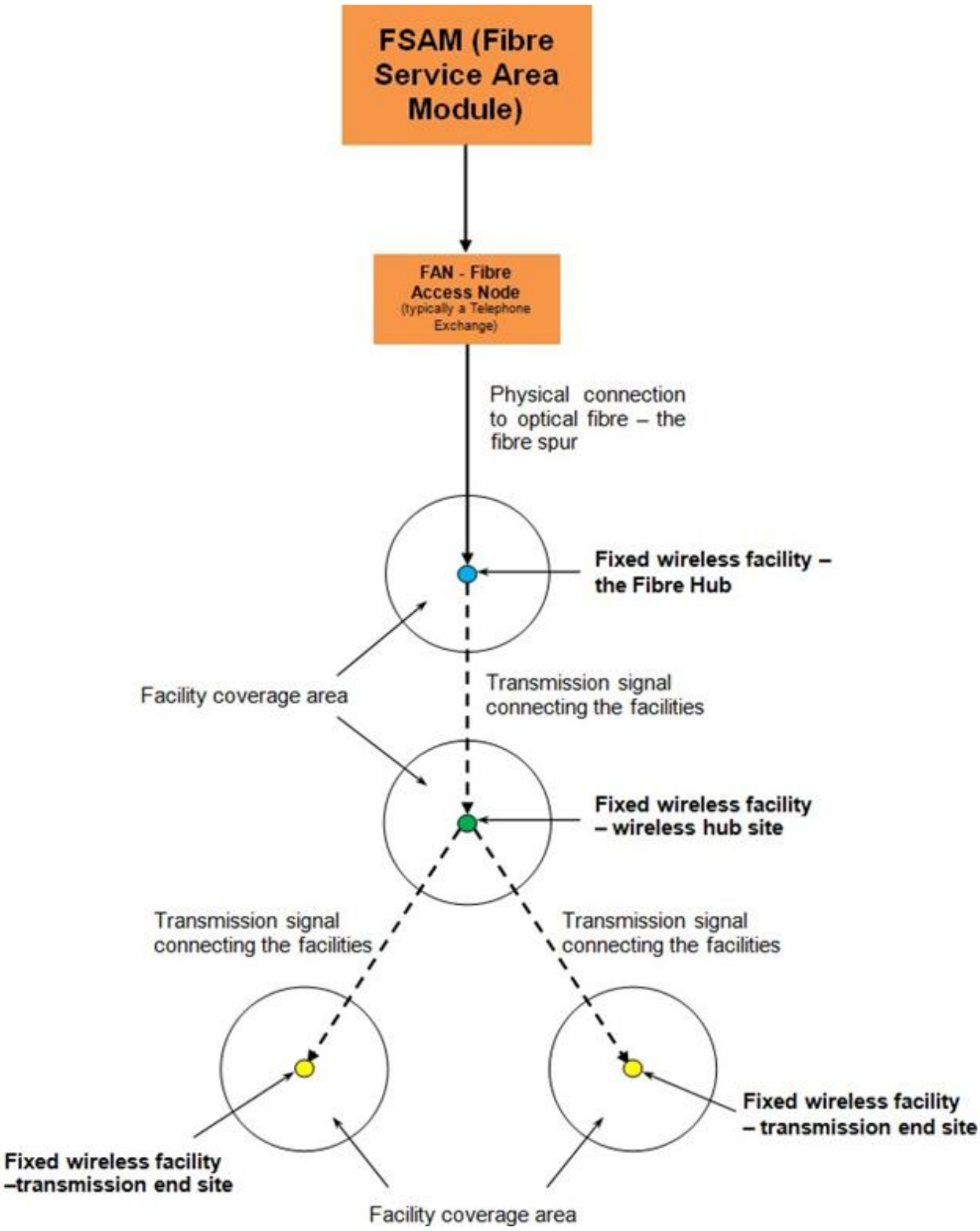

Figure 1 The Fixed Wireless Network

3 SITE SELECTION

Planning for a new fixed wireless broadband facility is a complex process. **nbn**™ conducts a rigorous multi-stage scoping process, as outlined in this section of the SEE.

3.1 Identification of areas requiring Fixed Wireless coverage

nbn's Fixed Wireless locations are determined by many factors including the availability of both the **nbn** Fibre transit network and the availability of Point of Interconnect (POI) facilities to allow for the installation of **nbn** fibre equipment.

nbn uses a number of methods to identify those parts of Australia that require fixed wireless coverage. When an area is identified as requiring fixed wireless coverage, investigations are undertaken to determine the measures required to provide this coverage.

nbn has identified a requirement to provide a Fixed Wireless facility at Hargraves. The facility is designed to provide fixed wireless internet services to the small township of Hargraves and the surrounding rural locality.

3.2 Site Selection Parameters

nbn™ generally identifies an area where the requirement for a Fixed Wireless facility would be highest known as a 'search area.' A preliminary investigation of the area is then undertaken, in conjunction with radio frequency engineers, planning and property consultants and designers to identify possible locations to establish a facility.

Generally speaking, new sites must be located within, or immediately adjacent to, the identified search area. Search areas are produced by radio frequency engineers who work on the network and are areas where a facility is technically feasible and can meet **nbn** coverage objectives.

While the operational and geographical aspects of deploying new facilities are primary factors, there are also many other issues that influence network design, which should be considered.

Some of the issues that are considered throughout selection include:

- the availability and suitability of land;
- the ability to find a willing landowner to host the proposal;
- topographical constraints affecting network LoS and NTP count;
- construction constraints;
- occupational health and safety; and
- cost constraints

These compounding factors often severely restrict the available search area within which a facility can be established to provide fixed wireless broadband services to a local community.

3.3 Candidate Sites

3.3.1 Opportunities to Collocate

The only existing telecommunications structure in the locality is a 30m-tall Telstra monopole, used as part of its mobile network, and is located on the same property as the proposed **nbn**™ facility, roughly 60 metres to the west. As the Telstra facility is only 30 metres tall, the 35 metre requirement for antennas for **nbn** purposes cannot be achieved and as such, collocation is not possible in this instance.

3.3.2 Existing Structures

There are no existing tall structures in the locality and as such no opportunities to place the required infrastructure on an existing structure in this instance.

3.3.3 New Site Candidates

Following desktop and field investigations of a number of potential candidates, a total of 3 candidates were short-listed and are summarised in the table below. The preferred location for the new structure at 3326 Hill End Road was selected, with the other locations dismissed for the reasons set out in the table.

Candidate	Address and Lot Number	Facility Type	Description
A	3327 Hill End Road	New structure	Rural zone (probably complying development), greater visual impact, topographical issues with achieving desired coverage
B	3326 Hill End Road	Collocation	As noted above, the height of the existing monopole is insufficient for **nbn**'s requirements.
C	3327 Hill End Road **preferred location**	New structure	Environmental management zone, no vegetation clearance required, low visual impact due to screening and setback

4 SUBJECT SITE & SURROUNDS

The telecommunications facility is proposed to be located at 3326 Hill End Road, HARGRAVES and is indicated by the red dot on the aerial image below.

Figure 2 Locality Map

The locality is comprised largely of a rural area to the east and north-east of the small township of Hargraves. The locality is a mix of cleared farming lots and extensive vegetated areas, split between the rural and 'environmental management' zones.

The nearest dwelling to the proposed facility is more than 450 metres away from the proposed facility's location and the topography of the area is undulating to steep, which combined with the extensive vegetation, greatly assists in mitigating or eliminating views of both the existing Telstra facility and the proposed **nbn** facility.

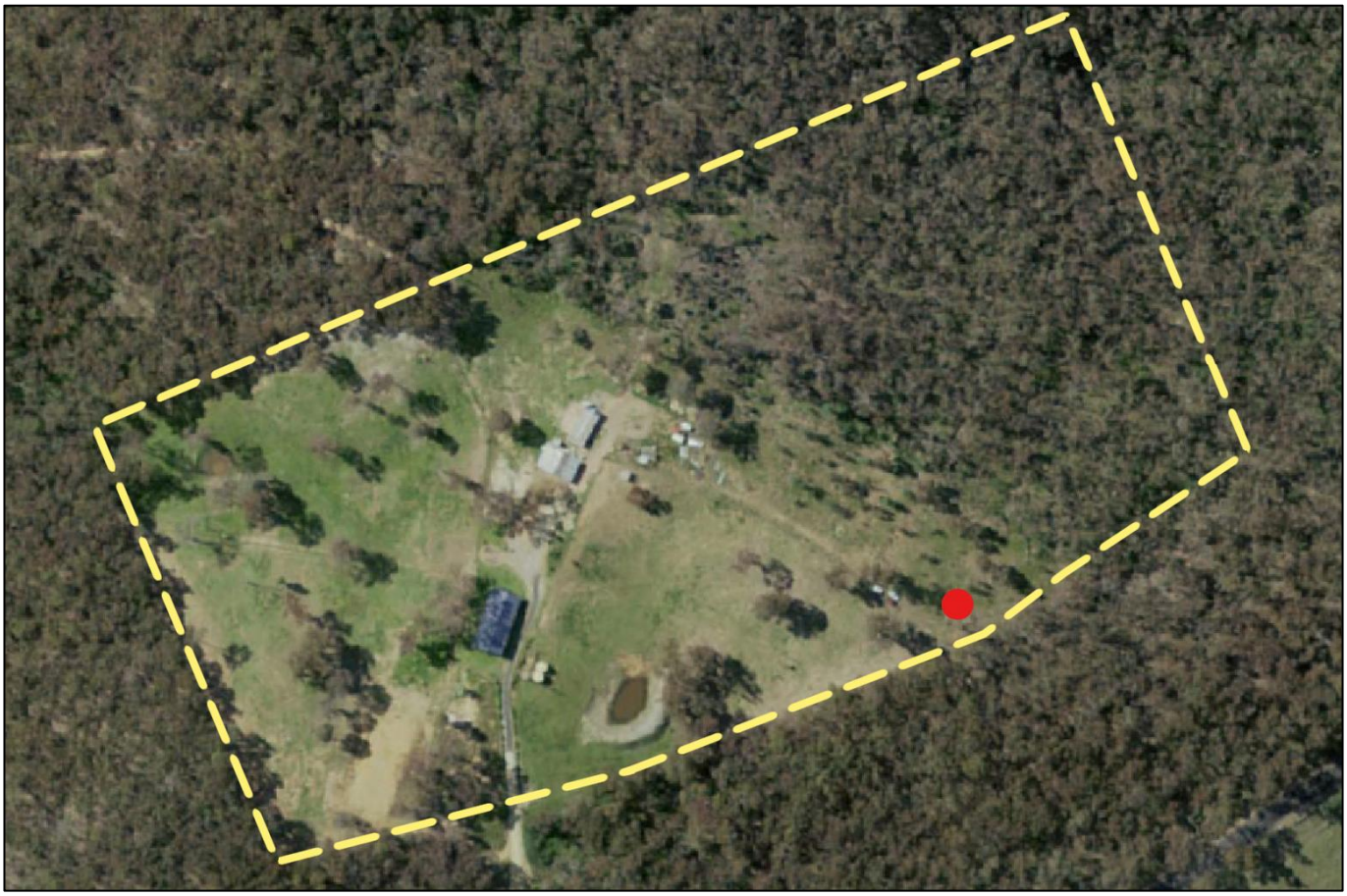

Figure 3 Site Map

The subject land is a regularly-shaped parcel around 8.1 hectares in size about a kilometre north-east of the small township of Hargraves. It is located in the *C3 – Environmental Management Zone* and separated from Hill End Road by thick vegetation located on the adjacent Crown land. The entirety of the land and all of its immediate surrounds are mapped as being an area of 'terrestrial biodiversity.'

The land is used for rural-living purposes and contains a dwelling and several farm buildings (sheds). About half of the land is cleared of vegetation and is undulating in its southern half and steeper to the north.

As noted above, there is an existing 30m-tall Telstra monopole on the property to the east of the dwelling and the proposed **nbn** facility will be located about 60 metres further east of that.

The proposed facility will be located in a 100sqm compound near the southern edge of the property, about 150 metres east of the dwelling. An existing access track will be extended by about 10 metres to reach the proposed compound location. No vegetation clearance is required to establish the facility.

5 THE DEVELOPMENT APPLICATION

5.1 The nbn™ Fixed Wireless Facility and Equipment Details

The Development Application seeks approval for the use and development of an **nbn**™ telecommunications facility, comprising a 35m-tall monopole, antennas and ground equipment within a secure compound which measures approximately 100m2.

The specific components of the proposed installation are described below:

- The installation of a 35m-tall monopole with a circular headframe
- The installation of nine (9) panel antennas on the proposed headframe
- The installation of one (1) transmission dish (parabolic antenna), 1200mm in diameter, at a height of 20m to enable a transmission link to a proposed facility at Erudgere
- The installation of one (1) outdoor equipment cabinet (1.9m H x 0.8m W x 0.7m D), and two (2) outdoor equipment cabinets (each 2.0m H x 0.7m W x 0.85m D) at ground level adjacent to the proposed tower. The outdoor cabinets will be installed on a concrete slab.
- The installation of associated feeder cables via an overhead cable tray from the equipment cabinets, and then run internal to the monopole;
- The installation of a 2.4m high chain-link security compound fence (compound area approximately 10m x 10m), with 3m wide access gate
- Ancillary equipment associated with operation of the proposed facility

This **nbn**™ Fixed Wireless facility is a wireless end site within the network, providing **nbn**™ broadband coverage to Hargraves and surrounds and a transmission link back to a proposed facility at Erudgere for connection into the **nbn**™ network.

5.2 Construction Schedule

During the construction phase, trucks will be used to deliver the equipment to the site and a crane will be utilised to lift most of the equipment into place. Any traffic impacts associated with construction will be of a short-term duration and are not anticipated to adversely impact on the surrounding road network. In the unlikely event that road closure will be required, **nbn** will apply to the relevant authorities for permission.

A total construction period of approximately ten weeks (including civil works and network integration and equipment commissioning) is anticipated.

Construction activities will involve four basic stages:

- Stage 1 (Week 1) – Site preparation works, including field testing, excavation and construction of foundations;
- Stage 2 (Weeks 2, 3 and 4) – Construction of the monopole;
- Stage 3 (Weeks 5 and 6) – Construction of the equipment shelter and fences;
- Stage 4 (Weeks 7 – 10) – Installation of antennas and radio equipment, as well as equipment testing.

Once operational, the facility will function on a continuously unstaffed basis and will typically only require maintenance works three times a year.

5.3 Construction and Noise

Noise and vibration emissions associated with the proposed facility are expected to be limited to the construction phase outlined above. Noise generated during the construction phase is anticipated to be of short duration and accord with the standards outlined in the relevant EPA guidelines. Construction works are planned only to occur between the hours of 7.00am and 6.00pm or as stipulated by council through consent conditions.

There is expected to be some low-level noise from the ongoing operation of air conditioning equipment associated with the equipment shelter and cabinets, once installed. Noise emanating from the air conditioning equipment is expected to be at a comparable level to a domestic air conditioning installation, and should generally accord with the background noise levels prescribed by relevant guidelines.

Given the proposed location well away from dwellings and sensitive land uses, noise from construction and operation is not expected to be an issue.

6 RELEVANT PLANNING LEGISLATION AND CONTROLS

6.1 Commonwealth Legislation

As a licensed telecommunications carrier, **nbn**™ must operate under the provisions of the *Telecommunications Act 1997* and the following supporting legislation:

- The Telecommunications Code of Practice 1997;
- The *Telecommunications (Low-impact Facilities) Determination 2018* (as amended); and
- The *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*.

6.1.1 The Telecommunications Act

This legislation establishes the criteria for 'low impact' telecommunication facilities. If a proposed facility satisfies the requirements of a 'low impact' facility, the development is exempt from the planning approval process.

Further clarification of the term 'low impact' is provided in the Telecommunications Act 1997 and the *Telecommunications (Low Impact Facilities) Determination 2018*, which was gazetted subsequent to the Act. The *Telecommunications (Low Impact Facilities) Determination 2018* establishes certain facilities, which cannot be considered 'low impact' facilities.

The proposed facility is not considered to be low impact under the definitions contained in the Commonwealth legislation as it involves the construction of a new monopole.

6.1.2 Telecommunications Code of Practice 1997

Under the *Telecommunications Act 1997*, the Government established the Telecommunications Code of Practice 1997, which sets out the conditions under which a carrier must operate.

Section 2.11 of the Telecommunications Code of Practice 1997 sets out the design, planning and installation requirements for the carriers to ensure the installation of facilities is in accordance with industry 'best practice'. This is required to:

"… minimise the potential degradation of the environment and the visual amenity associated with the facilities." [Section 2.11(3)]

The siting and design of the proposal has taken place in accordance with Section 3 (Planning and Siting) of the Australian Standard – Siting of Radio Communications Facilities (AS 3516.2).

Furthermore, following an assessment of the available options, it became evident that there were no suitable existing telecommunications facilities or other structures (including buildings or power poles) located within the search area that could provide the required site objective/co-location opportunities.

6.1.3 The Telecommunications (Low-impact Facilities) Determination 2018

The *Telecommunications (Low-impact Facilities) Determination 2018* identifies both the type of facilities that can be "Low-impact", and the areas in which these facilities can be installed. Importantly, this current facility is not defined as a "low impact facility" and is therefore subject to State and Territory Planning Laws and Regulation.

6.1.4 The Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* obliges telecommunications carriers to consider 'matters of national environmental significance'. Under this legislation, an action will require approval from the Minister of Environment if the action has or is likely to have an impact on a matter of 'national environmental significance'. According to the *EPBC Act 1999*, there are seven matters of national significance which must be considered.

All relevant EPBC matters have been considered. It is not anticipated that the proposal will have a significant impact on any matters of national environmental significance. Accordingly, approval from the Minister of Environment is not required in this instance.

6.2 Environmental Planning & Assessment Act 1979

The principal legislation regulating land use and development in NSW is the *Environmental Planning and Assessment Act 1979* (EP&A Act). The *EP&A Act* provides a framework for the making of Environmental Planning Instruments (EPIs) such as State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs) and Development Control Plans (DCPs). Part 4 of the *EP&A Act* also provides a framework for the assessment of certain development types.

The telecommunications facility proposed is classified under the *EP&A Act* as development that needs consent. Therefore, the environmental assessment provided in this SEE has been undertaken pursuant to Section 4.15 of the *EP&A Act*.

6.3 State Environmental Planning Policy, Legislation and Guidelines

6.3.1 SEPP (Transport and Infrastructure) (2021)

The *SEPP (Transport and Infrastructure) 2021* provides for a consistent planning framework for infrastructure and the provision of services across NSW, along with providing consultation with relevant public authorities during the assessment process. The relevant sections establish a framework for the deployment of telecommunications facilities within NSW aimed at improving efficiency and providing consistent planning regime for telecommunications infrastructure and the provision of services such as mobile phone coverage and broadband.

Certain telecommunications development that are permitted without consent, with consent and exempt from local environmental approvals, as set out in Schedule 4 of the SEPP. The proposed development is deemed to be development as it exceeds the maximum structure height permissible list as complying development with the Schedule. As such, it is necessary to obtain planning approval.

While telecommunications facilities are permissible with consent in any zone in accordance with the SEPP, consideration has also been given to Clause 2.142(2) which states:

> *Before determining a development application for development to which this clause applies, the consent authority must take into consideration any guidelines concerning site selection, design, construction or operating principles for telecommunications facilities that are issued by the Secretary for the purposes of this section and published in the Gazette.*

The proposed **nbn**™ facility has been sited and designed with consideration given to the principles of *NSW Telecommunications Facilities Guideline, including Broadband (October 2022)*, including:

- Supports the roll out of broadband in NSW
- Has been sited and designed to minimise visual impact

- Has assessed potential for collocation
- Meets health standards for exposure to radio emissions
- Has minimised disturbance and risk and maximised compliance
- An assessment of alternate sites has occurred prior to the selection of the preferred location

6.4 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) provides a framework to avoid, minimise and offset impacts on biodiversity. In conjunction with the *Local Land Services Amendment Act 2016*, the *BC Act* repeals the *Native Vegetation Act 2003*, the *Threatened Species Conservation Act 1995* (TSC Act), and parts of the *National Parks and Wildlife Act 1974*.

The *BC Act* introduces the Biodiversity Assessment Method (BAM), a consistent method for the assessment of biodiversity on a proposed development. The BAM must be applied by an accredited assessor and a Biodiversity Development Assessment Report (BDAR) prepared for all proposals assessed under Part 4 of the *EP&A Act* which:

- Exceed the relevant clearing threshold as set out in Section 7.2 of the *Biodiversity Conservation Regulation 2017* (The Regulation)
- Are located within an area identified on the 'Biodiversity Value Map", which identifies land of high biodiversity value as defined by the *Biodiversity Conservation Regulation 2017*.
- Are located in a declared Area of Outstanding Biodiversity Values (AOBVs). Note listed areas of declared critical habitat under the now repealed TSC Act have become AOBVs under the new legislation.
- Are considered "likely to significantly affect threatened species" using the test of significance in Section 7.3 of the Act.

An ecological assessment has been undertaken in accordance with the *BC Act 2016* and assessed that the BAM will not be triggered by the proposal for an **nbn**™ facility at the selected location.

6.5 Mid-Western Regional Council Local Environmental Plan 2012

The relevant Local Environmental Plan (LEP) applicable to the subject site is the Mid-Western Regional LEP 2012. This Plan aims to make local environmental planning provisions for land in accordance with the relevant standard environmental planning instrument under section 33A of the Act.

6.5.1 LEP Zoning

The subject lot is zoned *C3 – Environmental Management* under the Mid-Western Regional LEP.

The C3 zone objectives state:

- *To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values.*
- *To provide for a limited range of development that does not have an adverse effect on those values.*
- *To manage development within the water supply catchment lands of Windamere and Burrendong Dams, to conserve and enhance the district's water resources.*

With respect to these objectives:

- The proposed facility is proposed on a part of the land already cleared of vegetation and accessible via existing tracks (albeit with a short 10m extension) and will not impact on any special ecological, scientific, cultural or aesthetic values;

- The proposed facility is a type of land use which is commonly found, and often preferred, within rural-type zones such as this and can be established (as has the existing Telstra facility) without any adverse impacts on the values listed;
- The proposed facility does not require any water supply nor does it generate any waste (or even material runoff) and does not threaten any district water supplies.

As such, the proposed facility's siting is generally consistent with the C3 zone objectives.

There are no provisions within Parts 4 or 5 of the LEP that are applicable to the subject proposal.

With respect to Part 6 of the LEP:

- 6.3 Earthworks – the proposed facility requires earthworks to varying degrees to enable the erection of the monopole, establishment of the compound and access track extension. Given the small size of the compound, the already cleared nature of the location selected and the setting well away from more sensitive land uses and public roads, it is not anticipated there will be any detrimental issues arising with respect to earthworks.
- 6.5 Terrestrial Biodiversity – the entire allotment is mapped as being within an area of terrestrial biodiversity (high sensitivity on BIO_006). The proposed facility is located on an already cleared part of the land and there is no expected to be any impact on flora, fauna or biodiversity.

There are no other provisions of the LEP that are applicable to the subject proposal.

6.5.2 Mid-Western Regional Development Control Plan 2013

Chapter 5 *Development Standards* contained within the Mid-Western DCP is broadly applicable to the subject proposal in some respects and the following comments are made.

- 5.1 - There is no need for dedicated carparking, given there is ample room on the subject land for construction and maintenance vehicles;
- 5.2 - Given its position in the landscape, there is no risk of flooding nor will the facility increase the risk of flooding;
- 5.3 - Stormwater runoff from the facility will be minimal given its very small roofed/hardstand area and can easily be accommodated by the surrounding land;
- 5.4 – Environmental controls
    - A search of the Heritage NSW AHIMS has been undertaken and there are no Aboriginal sites or locations near the proposed facility;
    - The location selected is located within a mapped bushfire risk area, with the selected location within 'vegetation category 1'. **nbn** relies on the Rural Fire Service document and has considered bushfire risk in the design and siting of the facility;
    - The proposed facility does not generate any waste; and
    - The proposed facility is within an area already cleared of vegetation.

  As such, the proposed facility has been appropriately sited and designed in accordance with the desired outcomes of the DCP.

7 LIKELY IMPACTS OF THE DEVELOPMENT

7.1 Visual Impact

The proposed facility is for a 35-metre tall monopole within a rural-type zone. The monopole will have various equipment mounted on it, both for wireless internet purposes and transmission requirements with other **nbn**™ facilities.

The structure is well set back from dwellings and main roads and screened by extensive vegetation (as is the current Telstra facility). This type of structure is common in rural areas and for the reasons stated above is considered to have an acceptable visual impact on the locality.

7.2 Flora and Fauna

The selected location is already cleared and used for rural purposes. There is no impact on vegetation or habitat.

7.3 Aboriginal and Non-Aboriginal Heritage

The selected location is already cleared and have been previously disturbed. A search of the Aboriginal Heritage Information Management System reports there are no Aboriginal sites or places recorded near this location.

7.4 Bushfire Risk

The location selected is located within a mapped bushfire risk area, with the selected location within 'vegetation category 1'. The location selected is clear of vegetation and has sufficient space around it for asset protection. Further, the facility is unmanned and does not increase the risk of bushfire in the locality.

nbn™ relies on the Rural Fire Service document and has considered bushfire risk in the design and siting of the facility.

7.5 Electrical Interference

The **nbn**™ fixed wireless network is licensed by the Australian Communications and Media Authority (ACMA) for the exclusive use of the OFDMA9800 frequency band. As **nbn** is the exclusive licensee of this sub-band, emissions from **nbn** equipment within the frequency band should not cause interference.

Filters will also help to ensure that each facility meets the ACMA specifications for emission of spurious signals outside the **nbn** frequency allocations. **nbn** intends to promptly investigate any interference issues that are reported.

7.6 Erosion, Sedimentation Control and Waste Management

All erosion and sediment control mitigation measures will comply with the Building Code of Australia, The Blue Book, and local Council standards where applicable. In addition, contractors must comply with the '**nbn**™ Construction Specification' that requires contractors to undertake the necessary erosion and sediment control measures to protect the surrounding environment.

It is expected that a condition pertaining to erosion and sediment control will be implemented as a condition of development consent if granted by Council.

7.7 Traffic Generation

After the construction period, the only traffic generated by the base station will be that associated with maintenance vehicles. In this respect, it is estimated that maintenance of the facility will generate only three to four visits per year and will remain unattended at all other times. The traffic generation will therefore be minimal and not sufficient to create any adverse impacts.

7.8 Utility Services

All services required for the ongoing operation of the base station are capable of being provided to the facility without impacting on the supply or reliability of these services to any existing consumers in the locality.

7.9 Noise

Noise and vibration emissions associated with the proposed facility will be limited to the initial construction phase. There will be some low-level noise from the ongoing operation of air conditioning equipment associated with the equipment shelter, once installed. Noise emanating from the air conditioning equipment is at a comparable level to a domestic air conditioning installation and will generally accord with the background noise levels prescribed by Australian Standard AS1055.

7.10 Social and Economic Impacts

Access to fast internet is an essential service in modern society. Initially, small to medium business customers accounted for a significant part of the demand for broadband technology, but internet services have now been embraced by the general public. Usage of internet services continues to widen as new technologies become progressively more affordable and accessible to the wider community.

The new **nbn**™ network is designed to provide the community with access to fast and reliable internet services. A reliable internet service is important to help promote the economic growth of communities, and the facility is anticipated to have significant social and economic benefits for the local community.

7.11 Public Safety – Radiofrequency Emissions

In relation to public safety and specifically Electromagnetic Emissions (EME) and public health, **nbn**™ network operates within the operational standards set by the Australian Communication and Media Authority (ACMA) and Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). ARPANSA is a Federal Government agency incorporated under the Health and Ageing portfolio and is charged with the responsibility for protecting the health and safety of both people and the environment from the harmful effects of radiation (ionising and non-ionising).

All **nbn**™ network installations are designed and certified by qualified professionals in accordance with all relevant Australian Standards. This helps to ensure that the **nbn**™ facility does not result in any increase in the level of risk to the public.

The proposed facility will comply with Australian Government regulations in relation to emission of electromagnetic energy (EME) - specifically being *Australian Standard Radiation Protection Series S-1 Standard for Limiting Exposure to Radiofrequency Fields – 100 kHz to 300 GHz* published by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) in 2021.

Moreover, all **nbn**™ network equipment has the following features, all of which help to minimise the amounts of energy used and emitted:

- Dynamic/Adaptive Power Control is a network feature that automatically adjusts the power and hence minimises EME from the facility.
- Varying the facility's transmit power to the minimal required level, minimising EME from the network, and
- Discontinuous transmission, a feature that reduces EME emissions by automatically switching the transmitter off when no data is being sent.

7.12 The Public Interest

The public benefits of access to high quality broadband have been widely acknowledged for many years. Broadband access is now more than ever considered an integral component of daily life, so much so that its absence is considered a social and economic disadvantage.

Across the Mid-Western Regional LGA, the Fixed Wireless network is designed to service rural and rural residential communities that have traditionally been significantly disadvantaged both in terms of basic access to broadband and in terms of the quality and reliability of broadband that these communities receive.

The Government's National Map illustrates the substantial disparity and inequity in service between larger townships and smaller communities, and often even within individual rural communities.

The proposed **nbn**™ facility is expected to have significant benefit for residents and businesses in the Hargraves area and surrounds. It will assist by providing improved internet services within the area.

8 Conclusion

The **nbn**™ facility proposed at 3326 Hill End Road, HARGRAVES has been sited in a manner which allows **nbn**™ to provide broadband services effectively and efficiently. The facility has been strategically sited and designed to ensure that the target coverage area is able to be provided with **nbn**™ broadband services.

The selected location is set well away from dwellings and main roads and as evidenced by the existing Telstra facility is well screened by extensive vegetation on the adjacent Crown land and more widely.

The location and proposal is consistent with the objectives of the C3 zone and has minimised its impacts to the extent it can. It is also generally consistent with the relevant parts of both Council's LEP and DCP.

The proposed **nbn**™ facility is expected to have significant benefit for residents and businesses in the locality and will assist by providing improved internet services and contribute socially and economically within the area.

For all of those reasons, the proposed facility should be granted approval.