COUNCIL ASSESSMENT REPORT

DEVELOPMENT SERVICES

APPLICATION FOR DEVELOPMENT APPROVAL

APPLICATION NO: MCU17/2007

AUTHOR: DEVELOPMENT PLANNER

PROJECT DIRECTOR: PRINCIPAL DEVELOPMENT PLANNER

APPLICATION SUMMARY	
Division:	1
Applicant:	NBN
Consultant:	Aurecon Australasia
Proposal:	Development Permit for Material Change of Use of Premises (Telecommunications Facility)
Properly Made Date:	05/07/2017
Street Address:	Old Peachester Rd, PEACHESTER
RP Description:	No RP – land is within road reserve west of Lot 5 RP85875
Assessment Type:	Impact
Number of Properly Made Submissions:	245 properly made submissions
State Referral Agencies:	Not applicable.
Referred Internal Specialists:	• Development Engineer • Environment Officer • Urban Designer • Ecology Specialist

PROPOSAL:

The application seeks approval for Development Permit for Material Change of Use of Premises (Telecommunications Facility). More specifically, the Telecommunications facility is an NBN tower comprising a 40m monopole, and ancillary components including two outdoor units (ODU) enclosed within a secure compound which measures approximately 80m^2.

The specific components of the proposed installation are described below:

- *The installation of a 40m monopole* [overall height of 41m from top of foundation]
- *The installation of two (2) parabolic dish antennas (1 x 0.9m and 1 x 0.6m in diameter) for transmission purposes, at an elevation of 34m on the monopole*
- *The installation of four (4) panel antennas (dimensions 0.75m high x 0.30m wide x 0.15m deep), located at an elevation of 40m on the monopole*

- *The installation of a 2.4m high chain link security compound fence (compound area 8m x 10m), with 3m wide access gate*
- *The installation of two (2) outdoor equipment cabinets (dimensions: 2.614m high x 0.7m wide x 0.7m deep) at ground level. The outdoor units will be installed on a concrete slab of dimensions 2.4m x 1m and will be metallic grey in colour and*
- *The installation of associated feeder cables that will run underground from the equipment cabinets, and then internally within the monopole to the antennas.*

It is noted that the applicant, as part of the Information Request response, amended the proposal to:

- include the co-location of Optus panel antennae at an elevation of approximately 27.7m above the top of the foundation; and
- move the facility approximately 6m to the east.

Refer to proposal plan extracts below for details.

Position within transmission network

The proposal is a transmission "mini-HUB" site. The submitted Planning Report provides the following:

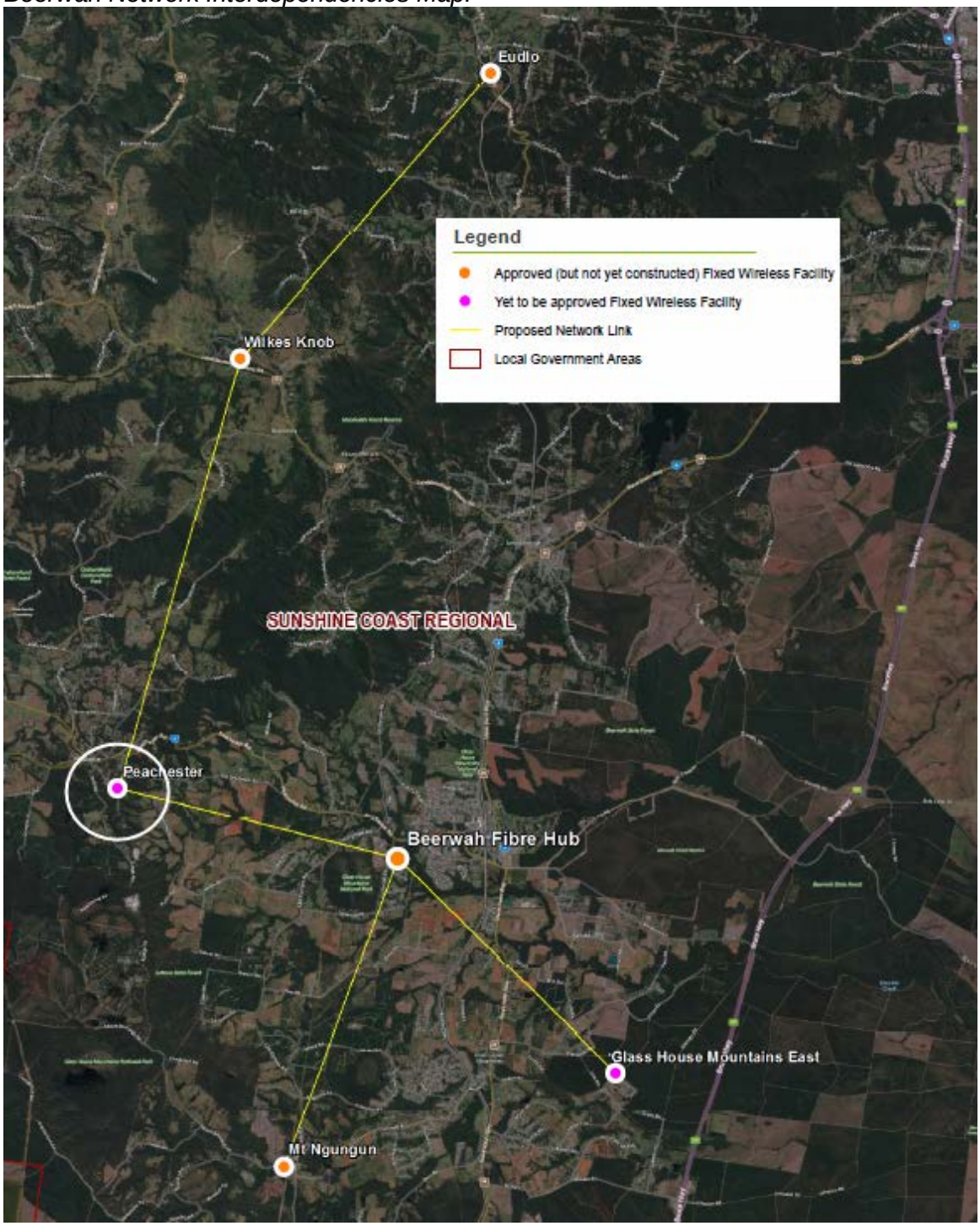
> *The proposal for Peachester is a transmission "mini-HUB" site within the fixed wireless network design – it is intended to support downstream services transmitting from the approved fixed wireless facilities at Eudlo and Wilkes Knob, as well as data transmitting from the as-yet to be proposed facility anticipated at Mount Mellum. It is designed to transmit data back to the approved fibre HUB facility at Beerwah.*
>
> *The proposal has been designed to provide a direct service to the local community, comprising more than 660 properties, and act as a critical transmission link to a more than 1,000 other properties across the Sunshine Coast hinterland. In total, almost 1,700 properties will be reliant on receiving an NBN service either directly or indirectly via the proposal at Peachester.*

The applicant's response to submissions dated 21 March 2018 additionally provides that:

> *This makes the proposal a Peachester a significant piece of network infrastructure with not just local but regional service considerations.*

The applicant has provided the below figure illustrating the position of the proposed Peachester facility within the transmission network.

Beerwah Network Interdependencies Map:



Absolute line of sight between facilities

The submitted Planning Report provides that:

- *the transmission network requires absolute line of sight from facility to facility to enable the user's data to reach the fibre HUB and thereby connect to the broader NBN network; and*
- *The location enables the height of the proposed facility to be restricted to 40m whilst still achieving coverage to all the targeted localities and obtaining line of sight to other planned sites in the NBN wireless network.*

Access

The submitted Planning Report provides that:

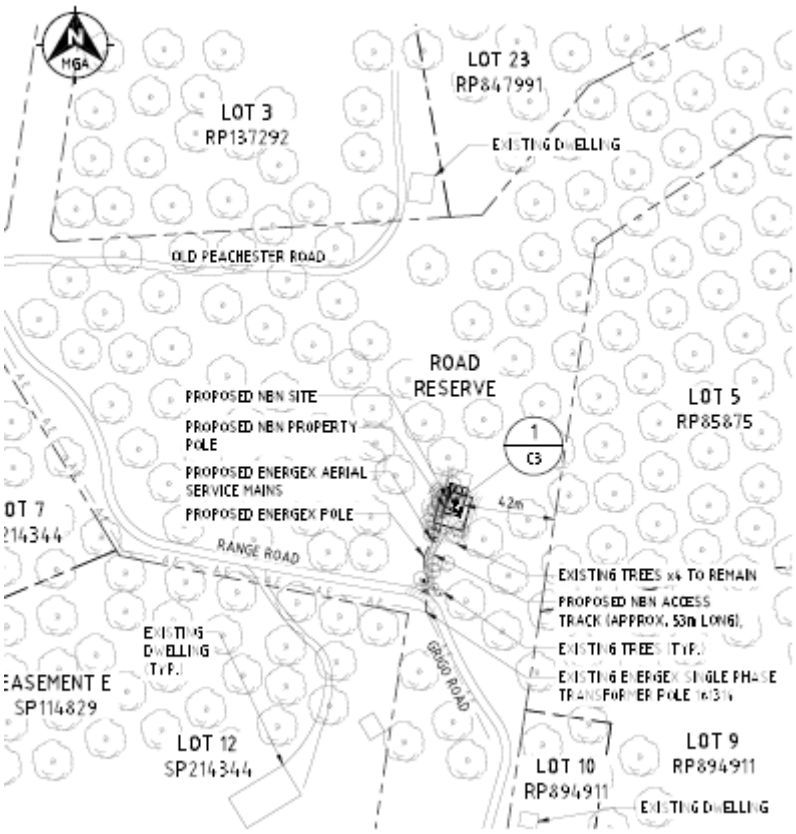
> *Access to the proposed facility will be provided via a new access track off Range Road. The facility and all ancillary components will be constructed within the road reserve.*
>
> *Once operational, the facility will function on a continuously unstaffed basis and will typically only require maintenance works three (3) times a year.*

Noise

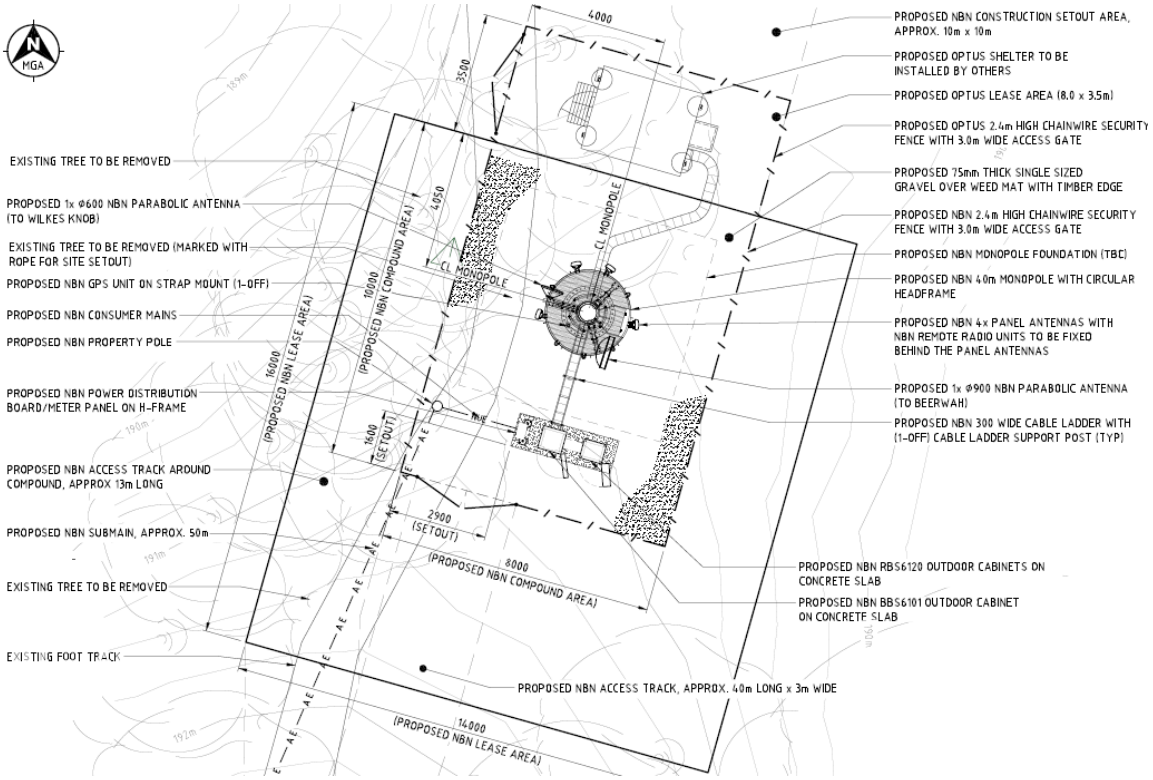
The submitted Planning Report provides that *there will be some low level noise from the ongoing operation of air conditioning equipment associated with the equipment shelter, once installed. Noise emanating from the air conditioning equipment is at a comparable level to a domestic air conditioning installation, and will generally accord with the background noise levels prescribed by Australian Standard AS1055.*

Extracts of the submitted proposal plans (as amended in response to Information Request) are provided below.

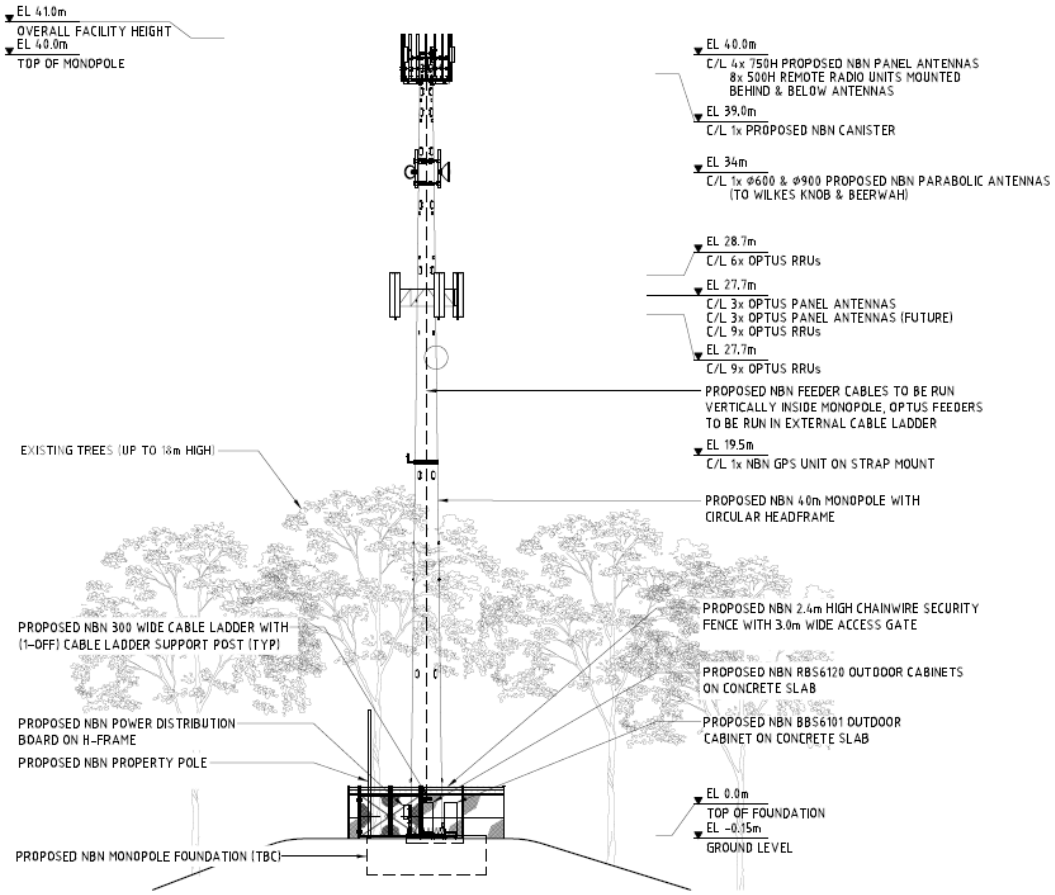
Site plan:



Site Setout Plan:



Elevation:



Coverage Area

In the Information Request response dated 22 November 2017, the applicant provided the following information and image demonstrating the indicative coverage of the proposed facility:

> *The fixed wireless proposal at Peachester is designed to deliver a fast and reliable service across the hinterland village of Peachester, the rural surrounds of Peachester, as well as parts of rural Beerwah. The facility is designed to service approximately 660 properties both in the village and the surrounding rural development, reaching into rural Beerwah.*
>
> *The service area extends about 3.5km north past Elsa Ct, 4km west past Butlers Lane, more than 4km southeast past Old Gympie Rd, and 3km east to Peachester Rd. it is a relatively broad coverage area encompassing a large number of end users, and NBN is proposing a non-standard 4-sector design to ensure reliability of service across this number of properties.*

Intended Peachester fixed wireless service. The applicant advises that this image is indicative only and subject to change:

Minimum Service Standard

In the Information Request response dated 22 November 2017, the applicant provided the following in relation to the current and anticipated service standard:

> *In summary, NBN noted in the Development Application that all but one of the Sunshine Coast's 12 larger hinterland townships (Eumundi, Beerwah, Glass House Mountains, Landsborough, Maleny, Mapleton, Montville, Mooloolah, Nambour, Palmwoods, Woombye and Yandina) enjoy the highest rating for both ADSL availability and quality ("A rating") on the National Map, and have a median ADSL speed of 22.13Mbps.*
>
> *In poor contrast, across the 12 smaller communities where NBN is presently proposing a fixed wireless service, less than half of the exchanges servicing these communities offer "A" rating for ADSL availability, and one third of all exchanges servicing these communities provides either "D" or "E" rating broadband ADSL availability - the two lowest ratings in the country. The contrast in broadband quality is even more stark: 80% of all properties across the intended fixed wireless communities experience either an ""E" or a "D" rating for broadband ADSL quality. Almost half of all properties across these communities experience the lowest possible rated broadband ADSL quality - an "E" rating. These communities had a median ADSL speed of just 6.27Mbps, significantly slower than the larger neighbouring townships.*
>
> *NBN's Development Application also observed that digital divide is evident in Peachester and rural Beerwah, with the National Map demonstrating that most Telstra exchanges servicing this community offering "D" or "E" quality ADLS broadband, and with median speeds ranging from 4.11Mbps to 16.41Mbps. The village of Peachester itself receives significantly better service than the rural surrounds (accessing "B" rated broadband ADSL quality), but this service still substantially slower than median broadband ADSL speeds experienced in the major hinterland towns across the Sunshine Coast.*

In terms of proposed minimum service standard, in the Information Request response dated 22 November 2017, the applicant provided the following:

NBN is building a network that commits to delivering access to peak wholesale download data rates of at least 25 megabits per second (Mbps) to all premises.

Radiofrequency (RF) electromagnetic energy (EME) transmitted by the proposed fixed wireless facility (FWF)

The Environmental EME Report dated 2 February 2018 (original report was updated to include the co-location of Optus) provides that:

> *The maximum EME level calculated for the proposed systems at this site is 1.24% of the public exposure limit.*

As discussed in the Consultation section below, Council engaged an external radiofrequency electromagnetic energy (RF EME) expert to review the subject application. The updated peer review (dated April 2018) verified the above maximum EME level calculated for the proposal.

NATIONAL BROADBAND NETWORK BACKGROUND:

The National Broadband Network

The submitted Planning Report provides the following information in relation to the National Broadband Network (NBN).

- *NBN is responsible for the design, build and operation of Australia's new fast, wholesale, open access broadband network.*
- *The NBN is an upgrade to Australia's existing telecommunications network. It 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, in keeping with the Government's Statement of Expectation that:*
  "…NBN should roll out a multi-technology mix network and build the network in a cost effective way using the technology best matched to each area of Australia.…completing the network and ensuring that all Australians have access to very fast broadband as soon as possible, at affordable prices, and at least cost to taxpayers."
- *Across the Sunshine Coast, 95,000 properties already have access to NBN fixed line services, more than 7,000 properties can access NBN fixed wireless services, while more remote residents are able to access the NBN Sky Muster.*
- *NBN continues to rollout fixed line and fixed wireless services across the Sunshine Coast Region, and this proposed facility forms part of that broader rollout.*
- *To support the Fixed Wireless component of this network, NBN requires a fixed wireless transmission site to provide fixed wireless internet coverage to the hinterland village of Peachester and its rural surrounds, as well as parts of rural Beerwah.*

Fixed Wireless Service

The submitted Planning Report provides the following information in relation to the fixed wireless service.

> *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. 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 is pointed directly towards the fixed wireless facility.*
>
> *The Fixed Wireless service is designed to vastly and equitably improve access to high quality and reliable broadband, and offers wholesale download speeds of up to 50Mbps download and up to 20Mbps upload. This is significantly faster than the service most rural and rural residential communities currently experience. Importantly, unlike ADSL services, those speeds are accessible across the community and not just for properties in close proximity to the infrastructure.*
>
> *Further, the NBN Fixed Wireless network has been designed to service a known number of simultaneous subscribers to any one facility, which ensures that the*

wholesale service will be stable and reliable, and mitigates the kind of fluctuations in speed experienced as a result of congestion on both ADSL services and mobile wireless. People's usage of the network will still vary, but the set number of serviced premises in each area means that the bandwidth per household is designed to be more consistent, even in peak times of use.

Transmission interdependencies

In essence, NBN fixed wireless customers access the NBN fibre via one or more radio links.

These radio links are known as the "transmission network". They are critical to the accessibility of the fixed wireless service, and form a crucial part of the network design.

Each fixed wireless facility is connected to another to form a chain of facilities that link back to the NBN fibre network. Although fixed wireless facilities are submitted to Council as standalone developments from a planning perspective, they are highly interdependent.

The transmission network comprises:

- *"fibre HUB" facilities (facilities connected to the fibre network and representing the critical anchor for fixed wireless service delivery);*
- *"mini-HUB facilities" (facilities in the middle of a transmission chain that are not connected to fibre but nevertheless have downstream dependent facilities relying on transmission via the mini-HUB to reach the fibre HUB); and*
- *"end site" facilities (those fixed wireless facilities at the end of the transmission chain).*

Fibre-HUB and mini-HUB facilities therefore perform two functions: they deliver a local fixed wireless service to the immediately surrounding community, and they act as a critical transmission link relaying data from neighbouring downstream dependent facilities.

The transmission network requires absolute line of sight from facility to facility to enable the user's data to reach the fibre HUB and thereby connect to the broader NBN network. Communities relying on the fixed wireless service will remain unconnected without the transmission network relaying their data to the broader NBN network. The loss of a fixed wireless facility can have consequences not only for the immediate community, but also downstream communities whose data is intended to be routed via that facility and may have no other means of reaching the NBN fibre network.

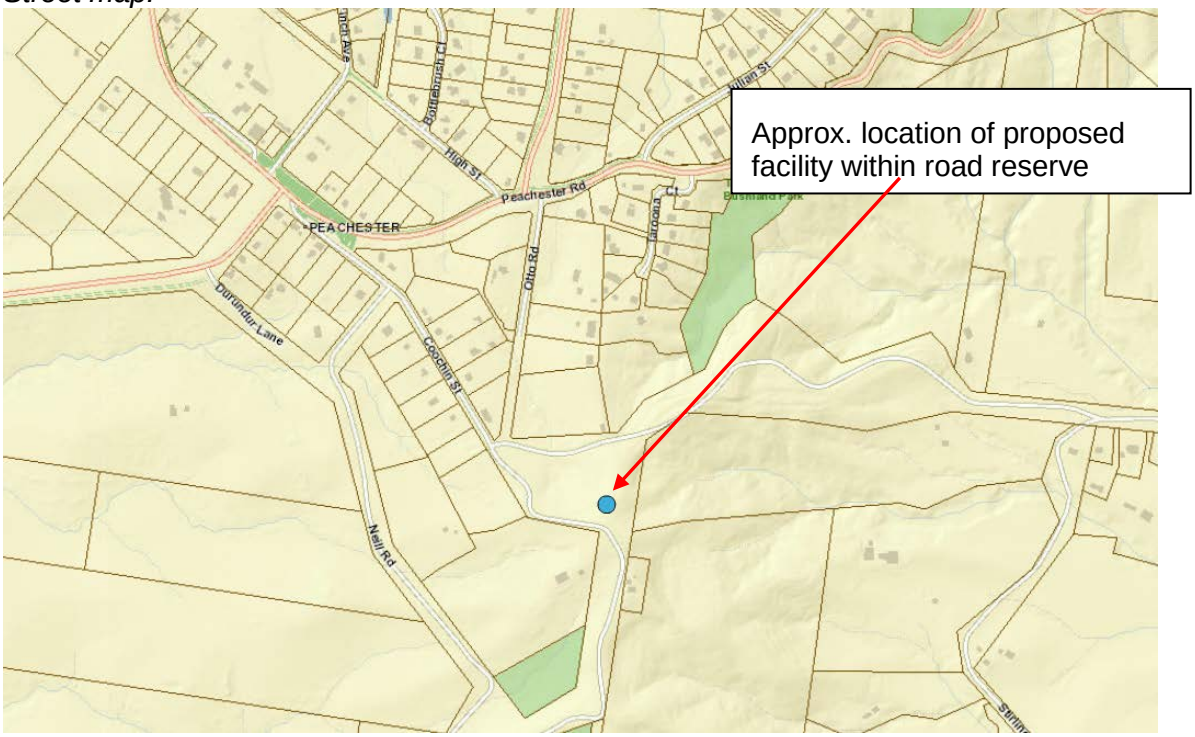
SITE DETAILS:

Site Features and Location

SITE AND LOCALITY DESCRIPTION	
Land Area:	NA – the site is located within road reserve
Existing Use of Land:	Road reserve – the proposed facility site is located north of the formed road pavement, within a vegetated area
Road Frontage:	NA
Significant Site Features:	The location of the facility is within a vegetated section of road reserve.
Topography:	The facility is located on the northern side of a ridge that peaks at an elevation of 197m AHD.
Surrounding Land Uses:	• North: Peachester rural residential uses approx. 120m north of the proposed facility • South: vegetated rural lots • East: vegetated rural lots/agricultural uses • West: vegetated rural lots, with agricultural uses on western side of Neill Road.
Closest sensitive land use	• Dwelling house located approx.: ➢ 135m north of the proposed facility ➢ 155m south of the facility (shed located 125m south) ➢ 152m south west of the facility ➢ 217m west of the facility • Approx. 13 other dwelling houses within a 400m radius from the proposed facility • Peachester State School approx. 900m northwest of the facility
Scenic Route	• Peachester Road approx. 600m north of the proposed facility.

The location of the subject site in relation to its surrounds is shown below:

Street map:



Air Photo showing subject site and surrounding land uses:

Extract from submitted Information Request response showing location of proposed facility:

Development History of Site

There is no history of development approvals over the site.

ASSESSMENT:

Framework for Assessment

Categorising Instruments for Statutory Assessment

For the *Planning Act 2016*, the following categorising instruments may contain assessment benchmarks applicable to development applications:

- the *Planning Regulation 2017*
- the Planning Scheme for the local government area
- any temporary local planning instrument
- any variation approval

Of these, the planning instruments relevant to this application are discussed in this report.

Assessment Benchmarks Related to the *Planning Regulation 2017*

The *Planning Regulation 2017* (the Regulation) prescribes assessment benchmarks that the application must be carried out against, which are additional or alternative to the assessment benchmarks contained in Council's Planning Scheme.

These assessment benchmarks are prescribed as being contained in:

- the SEQ Regional Plan and Part E of the State Planning Policy, to the extent they are not appropriately integrated into the Planning Scheme and
- Schedule 10 of the Regulation.

PLANNING REGULATION 2017 DETAILS	
Applicable Assessment Benchmarks:	State Planning Policy Section 30(2)(a)(ii) of the *Planning Regulation 2017* requires that the impact assessment must be carried out against the assessment benchmarks stated in *the State Planning Policy, part E, to the extent part E is not identified in the planning scheme as being appropriately integrated in the planning scheme.* There are no assessment benchmarks applicable to the proposed Telecommunications facility that have not been appropriately integrated into the planning scheme. It is noted that a new State interest – infrastructure integration, has been included within the SPP. The State interest nominates that *the benefits of past and ongoing investment in infrastructure and facilities are maximised through integrated land use planning.* In relation to a proposal for a telecommunications facility, it is considered that this state interest has been appropriately integrated in the planning scheme. Specifically, the Strategic framework of the planning scheme includes Strategic outcomes (Theme 4) and specific outcomes in relation to

	Telecommunications infrastructure – refer to Strategic framework section below for details. <u>Regional Plan</u> Section 30(2)(a)(i) of the *Planning Regulation 2017* requires that the impact assessment must be carried out against the assessment benchmarks stated in *the regional plan for a region.* There are no benchmarks applicable to the proposed development.
SEQ Regional Plan Designation:	Regional Landscape and Rural Production Area
Koala Habitat Designation:	Nil.

Assessment Benchmarks Related to the Planning Scheme

The following sections relate to the provisions of the Planning Scheme.

PLANNING SCHEME DETAILS	
Planning Scheme:	Sunshine Coast Planning Scheme (3 July 2017)
Strategic Framework Land Use Category:	Rural Enterprise and Landscape Area
Local Plan Area:	NA
Zone:	Site is within road reserve – unzoned land. In accordance with Section 1.3.4 Zones for roads, waterways and reclaimed land of the planning scheme, that part of the road reserve the subject of the application is within the Rural zone.
Consistent/Inconsistent Use:	Potentially consistent
Applicable Assessment Benchmarks:	• Strategic framework • Rural zone code • Biodiversity, waterways and Wetlands overlay code • Height of buildings and structures overlay code • Landslide hazard and steep land overlay code • Scenic amenity code • Telecommunications facility code • Prescribed development codes

Strategic Framework

The Strategic Framework is an Assessment Benchmark for Impact Assessable applications and considers the following matters:

- Settlement Pattern
- Economic Development
- Transport
- Infrastructure and Services
- Natural Environment
- Community Identity, Character and Social Inclusion

- Natural Resources
- Natural Hazards

The application has been assessed against each of the matters above and found to be generally consistent with each matter. Of particular relevance to the subject application is Theme 4 – Infrastructure and services and Theme 6 – Community identity, character and social inclusion, as discussed below.

Theme 4 – Infrastructure and Services
The following strategic outcomes for the Infrastructure and services theme are applicable to the development:

(a) In 2031, coordinated, timely and efficient infrastructure and services are provided to communities and places on the Sunshine Coast to meet the long-term needs of the community, support growth, maintain a quality lifestyle and facilitate regional economic development.

(b) Infrastructure and services are designed to maximise the capacity and flexibility of existing and proposed networks, ensure the efficient use of natural resources and avoid or minimise adverse environmental and community impacts.

(h) A high speed digital telecommunications network is in place that supports technology based enterprise on the Sunshine Coast and a broader local economy within a global business and communications environment.

The following elements and specific outcomes for the infrastructure and services theme are particularly applicable to the proposal:

Element 6 – Telecommunications infrastructure - Specific outcomes

(a) The Sunshine Coast Region is serviced by telecommunications infrastructure that meets the needs of the community and supports economic development.

(b) The provision of high speed internet and telecommunications infrastructure is facilitated. Where technically feasible, development provides:-

(i) open access broadband telecommunications infrastructure including optic fibre to every premises; and
(ii) broadband wireless coverage to every premises.

(c) Telecommunications infrastructure is:-

(i) located and designed to ensure its safe deployment and operation;
(ii) integrated in a sustainable and attractive manner which does not unduly impact on the amenity and landscape values of the area; and
(iii) co-located wherever possible.

(d) Connection to telecommunications infrastructure is provided in accordance with the requirements of the relevant telecommunications service entity.

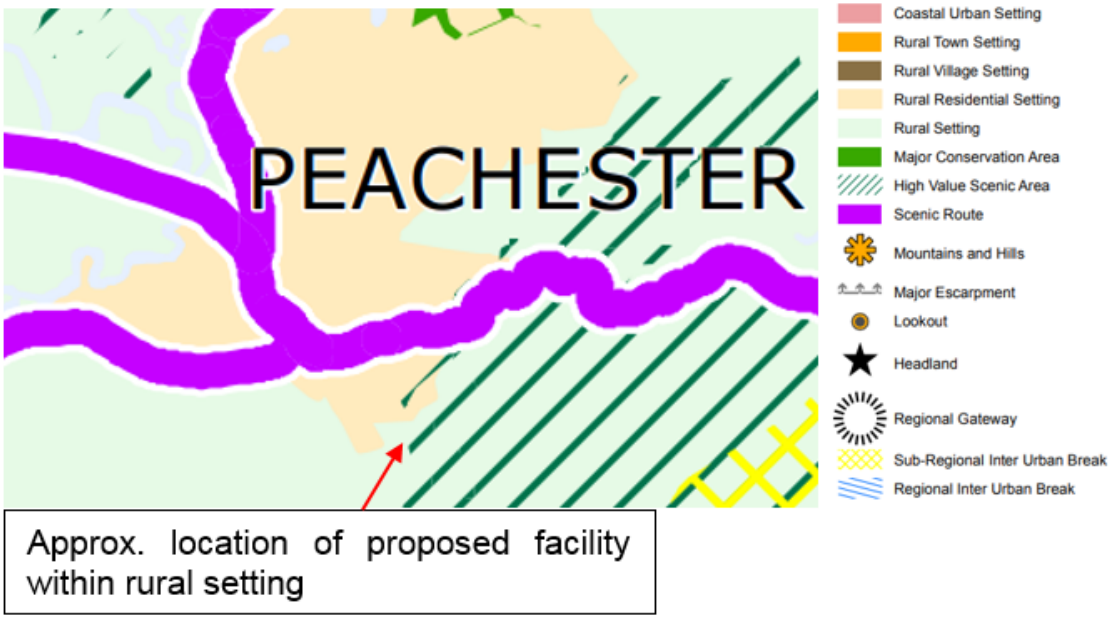
The proposed Telecommunications facility is generally consistent with the above strategic framework theme and element in that:

- The proposal is part of the national broadband network rollout and will provide a fixed wireless across the hinterland village of Peachester and its rural surrounds, as well as parts of rural Beerwah. The facility is designed to directly provide Fixed Wireless internet services to more than 660 premises in the Peachester area, in addition to serving as a key communications link for other NBN Fixed Wireless facilities in the Sunshine Coast region;
- the development can be conditioned to comply with national safety standards as required in the Telecommunications code to ensure that the telecommunications facility does not cause human exposure to electromagnetic radiation beyond accepted precautionary limits (refer to Telecommunications facility code assessment below);
- the proposal has been located such that the facility will not *unduly impact on the amenity and landscape values of the area* (refer to Height of buildings and structures overlay code and Telecommunications facility code assessment below); and
- the applicant has confirmed that there are no co-location opportunities. Any approval should include a condition requiring that the facility is designed to support co-masting/co-siting with other carriers (noting the application includes co-location of Optus facilities).

Theme 6 – Community identity, character and social inclusion

The site is located on land included within a *rural setting*, adjacent to land included within a *high value scenic area* on Strategic Framework Map SFM 6.

Strategic Framework Map SFM 6 (Community identity, character and social inclusion elements)



The following strategic outcomes for the Community identity, character and social inclusion theme are applicable to the development:

(a) The Sunshine Coast remains distinct from and separate to other parts of the South East Queensland region with large areas of natural and rural landscape providing enduring regional and sub-regional inter-urban breaks between urban and rural residential areas.

(b) The prominent landscape features which contribute to the diversity and richness of the Sunshine Coast landscape, including beaches, headlands, high dune systems, creeks and rivers, islands, mountains, ridgelines, foothills and escarpments remain intact and undiminished. In 2031 these features are clearly identifiable in the landscape and retain a high level of visual, scenic and cultural value.

(c) The Sunshine Coast continues to be renowned for the many important views and vistas which contribute to the identity and attractiveness of the region. Local views of importance to residents are recognised and respected.

The following elements and specific outcomes for the Community identity, character and social inclusion theme are particularly applicable to the proposal:

Element 1 – Landscape elements and features - Specific outcomes

(a) The landscape elements identified conceptually on Strategic Framework Map SFM 6 (Community identity, character and social inclusion elements) which include regional and sub-regional inter-urban breaks, high value scenic areas, regional gateways and scenic routes are protected and enhanced.

(d) Scenic routes are protected and enhanced as major transport routes providing a high level of scenic and visual amenity to travellers.

(e) The prominent landscape features identified in Table 3.8.2.1 (Regionally significant landscape features) and important views to these features are protected from intrusion from buildings and other aspects of urban development.

(g) Other views and vistas, including those identified in local plans or which are important in a local context are also protected, particularly from development which exceeds specified building heights.

The proposed Telecommunications facility is generally consistent with the above strategic framework theme and element as:

- the proposal is unlikely to have a significant impact on the high value scenic area to the north and east;

- proposal is unlikely to be highly visible from Peachester Road scenic route - any views are likely to be distant and occasional glimpses though the vegetation that lines Peachester Road; and

- the Peachester escarpment is a Regionally significant landscape feature identified in Table 3.8.2.1. Whilst glimpses of the proposed facility may be visible above the tree line along the escarpment, given the nature of the proposal (a monopole), it is considered that the facility will not be visually obtrusive. As detailed in the Telecommunications facilities code assessment below, it is recommended that any approval include a condition in relation to the colour and finish of the facility to reduce its visual recognition in the landscape.

Views of the escarpment from Old Peachester Road and Stirling Road to the east of the site are illustrated in the photomontages prepared by Council officers below.

View towards proposal from Stirling Road. View is from a point approximately 850m to the east of the proposal

View towards proposal from Old Peachester Road. View is from a point approximately 1.4km to the east of the proposal

Refer to visual amenity assessments undertaken in the Planning Scheme Codes section below for further details.

Planning Scheme Codes

The application has been assessed against each of the applicable codes and found to be compliant with, or can be conditioned to comply with, each. The pertinent issues arising out of assessment against the codes are discussed below:

Height of Buildings and Structures Overlay Code

The proposed Telecommunications facility will have an overall height of 41m from the top of the foundation and will exceed the height limit of 8.5 metres for the site as specified in the Height of Buildings and Structures Overlay.

In accordance with Table 5.10.1 Overlays, of the Height of buildings and structures overlay code, a proposal for a Telecommunications facility within the Rural zone is exempt from inclusion as *development subject to an overlay* and accordingly the Height of buildings and structures overlay code is not specifically triggered as an assessment benchmark for the proposed development. Notwithstanding, a proposal for a Telecommunications facility within the Rural zone is identified in Table 5.5.19 of the planning scheme as Impact Assessable development and the assessment benchmark is the Planning scheme, which includes all codes.

In this instance, the Height of buildings and structures overlay code is considered to be a relevant assessment criteria and an assessment against this code has been undertaken below.

Purpose and overall outcomes

(1) The purpose of the Height of buildings and structures overlay code is to protect the distinctive character and amenity of the Sunshine Coast as a place with a predominantly low to medium-rise built form.

(2) The purpose of the Height of buildings and structures overlay code will be achieved through the following overall outcomes:-

(a) development contributes to the retention of the preferred built form character for the Sunshine Coast, and the local plan area in which it occurs;

(b) the height of buildings and structures is consistent with the reasonable expectations of the local community;

…

Performance outcome PO1 - The height of a building or structure does not exceed the maximum height specified on a Height of Buildings and Structures Overlay Map, except where:-

(a) for one of the following:-

…

(iv) a structure for a telecommunications facility in the:-
(A) Rural zone;
(B) Principal centre zone;
(C) Major centre zone;
(D) District centre zone;
(E) Specialised centre zone;
(F) Low impact industry zone;

(G) Medium impact industry zone; or
(H) High impact industry zone
…
and

(b) not adversely impacting upon the character of the local area or resulting in a significant loss of amenity for surrounding development.

Comment: The submitted Planning report provides the following in relation to the height of the proposed facility:

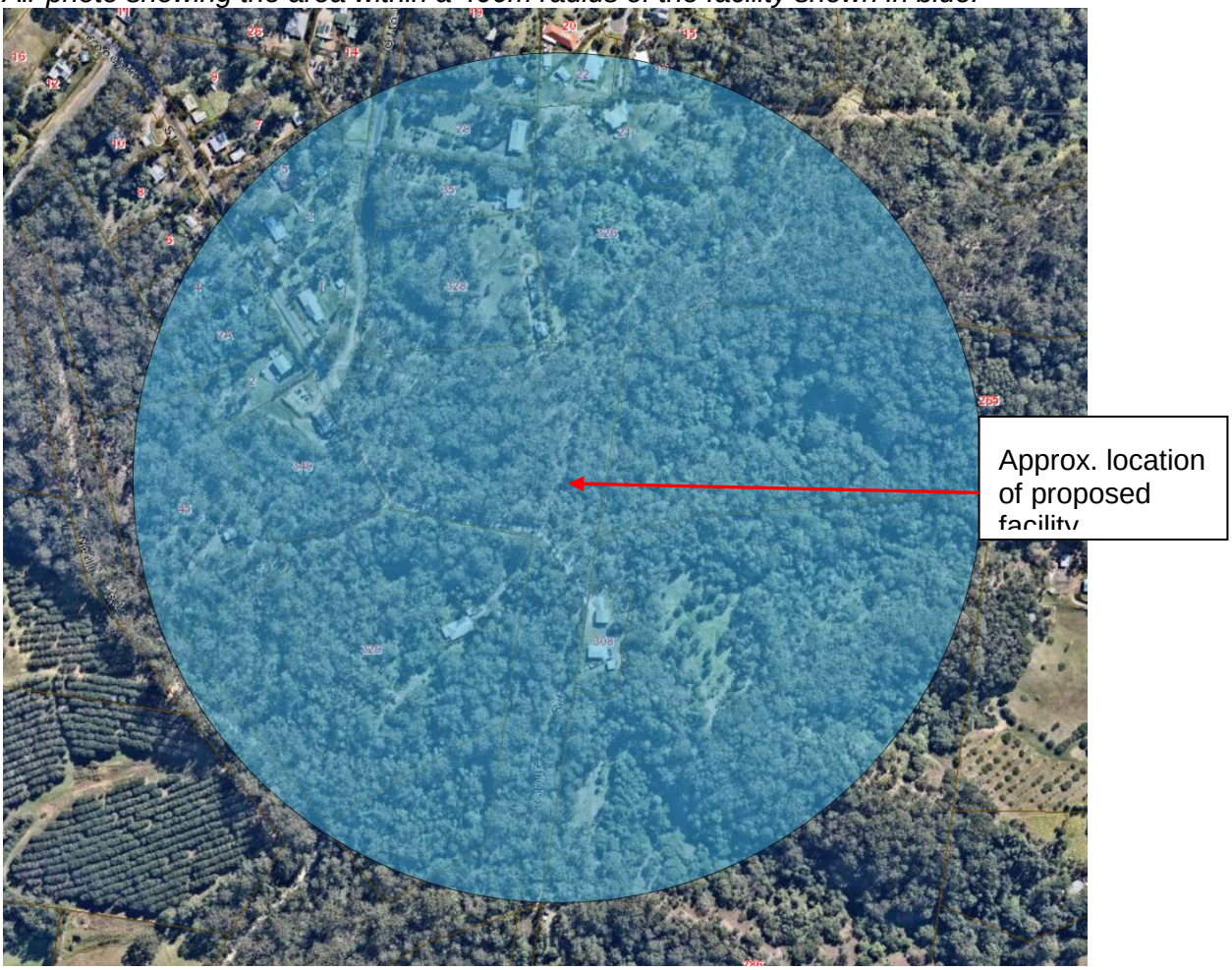
> *Due to the nature of the use, the proposed facility will exceed 8.5 m in height by 31.5 m. 40 m is the minimum height required in order to provide reliable service to the hinterland village of Peachester and its rural surrounds, as well as parts of rural Beerwah and also achieve line of sight to other fixed wireless facilities in the wider Sunshine Coast Region.*
>
> *Notwithstanding this, the proposed facility has been sited and designed so to minimise visual impact on the existing character of the surrounding area.*

The proposal complies with PO1 in that the Telecommunications facility is proposed to be located within the Rural zone and is unlikely to have a significant adverse impact on the character of the local area or result in a significant loss of amenity for surrounding development. This is largely due to the location of the proposed facility.

The facility has been sited such that it is not highly visible from neighbouring properties and Range Road and, although visible from Peachester Road and the Peachester township, will not result in a *significant loss of amenity*, as detailed below:

View from the closest residences – There are 17 dwellings within a 400m radius of the proposed facility, as shown in the air photo below.

Air photo showing the area within a 400m radius of the facility shown in blue:



The closest residences on adjoining lots are located as follows (as shown in the air photo below):

- 135m north of the proposed facility;
- 155m south of the facility (shed located 125m south);
- 152m south west of the facility; and
- 217m west of the facility.

Air photo showing approx. location of the facility and closest residential uses

It is acknowledged that the facility will be visible from these residences. However, existing vegetation and topography serve to minimise the visual amenity impacts of the proposed tower. Photomontages provided by the applicant to illustrate the view of the facility from Range Road, south of the facility are provided below.

Air photo showing photomontage locations:

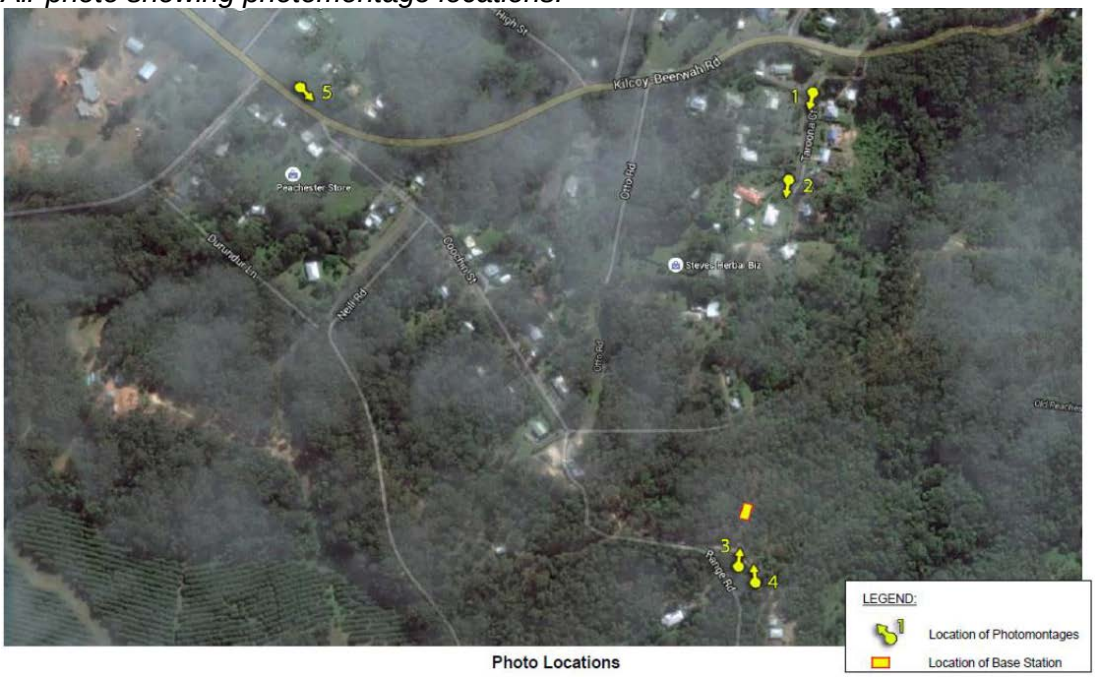


Photo Locations

Applicant's photomontage number 3 - separation distance: 55m approx.:

Applicant's photomontage number 4 - separation distance: 90m approx.:

As can be seen in the above air photo and photomontages, vegetation within the road reserve will provide screening to the proposed facility when viewed from the 2 residences approximately 150-155m south of the facility and from Range Road in proximity to the facility.

It is noted that approximately 24 native trees and shrubs will need to be cleared to allow for maintenance access tracks, compounds and construction areas associated with the proposal. It is recommended that any approval of the proposed development include a requirement for offset planting at a rate of 1.5:1 (36 replacement trees) within the adjacent road reserve around the compound. The replacements should consist of a mixture of the species to be removed and will allow for the existing vegetation screening to be maintained upon reaching maturity. Refer to below Biodiversity, waterways and wetlands overlay code assessment for further details.

Vegetation will also screen the facility when viewed from the dwelling 135m to the north. The existing ground level at the site of the proposed facility is approximately 12m higher than that at the closest dwelling to the north. As such, the views will be looking up at the facility, through over 100m of vegetation within the road reserve.

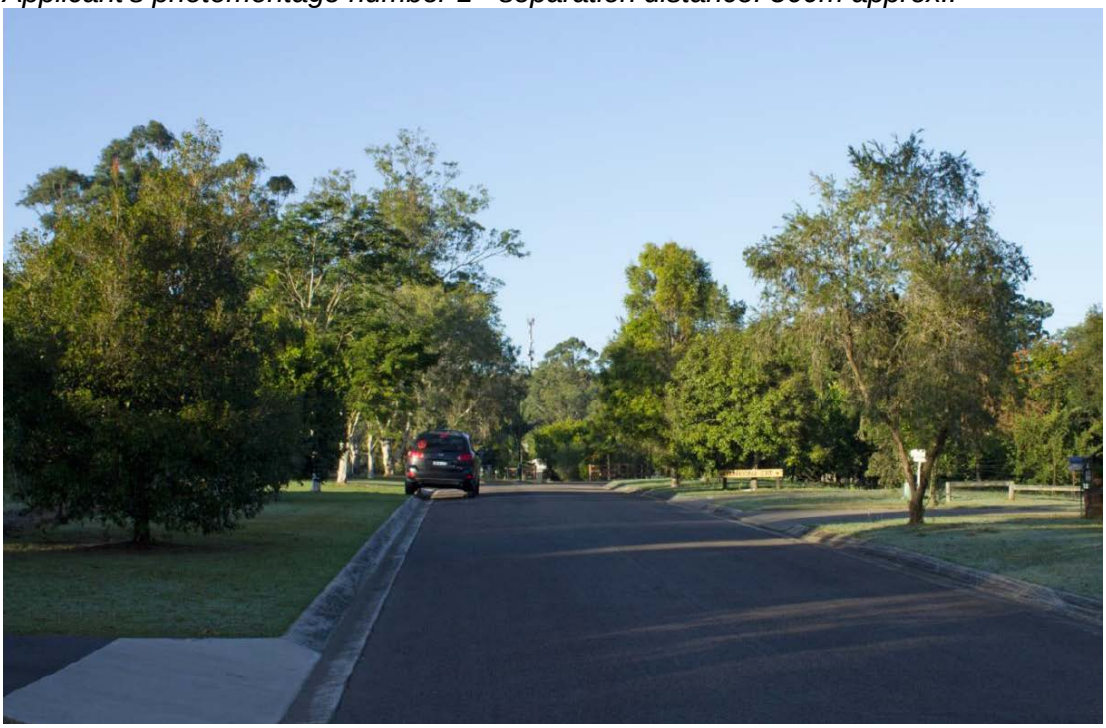
Similarly, the view of the facility from the closest dwelling to the west will be looking up through almost 200m of vegetation within the road reserve. The existing ground level at the site of the proposed facility is approximately 18m higher than that at the closest dwelling to the west.

The above assessment demonstrates that the proposal has been sited to minimise any adverse amenity impacts on surrounding residential uses and is unlikely to result in a significant loss of amenity for the adjoining residential properties.

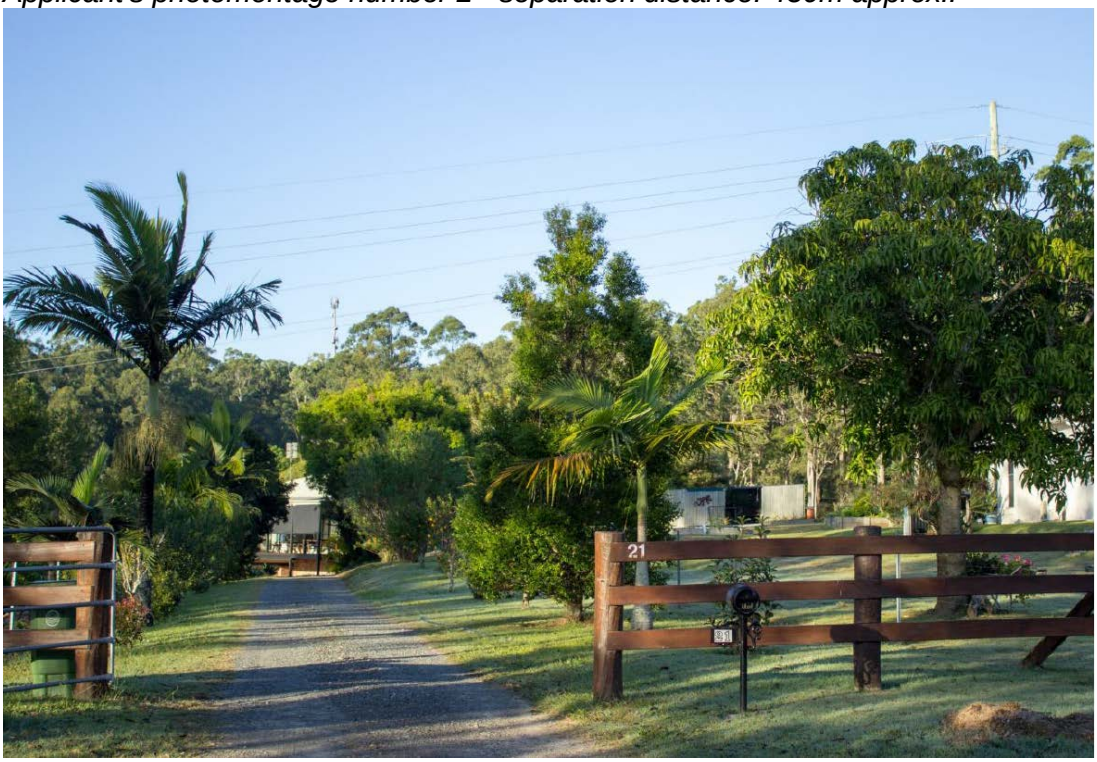
It is noted that submissions have been received from the residents of the 4 closest adjoining dwellings. Adverse impact on amenity was raised in the submissions and is addressed in the submissions section below. In summary, the above assessment finds that, although the tower will be visible through the vegetation from these properties, the facility has been sited to minimise the visual impacts. PO1 provides for the development of Telecommunications facilities within the Rural zone, where not resulting in a significant loss of amenity.

Views from Peachester rural residential area – The facility will be visible above the tree line from surrounding residential areas. Photomontages provided by the applicant to illustrate the view of the facility from Taroona Court to the north are provided below.

Applicant's photomontage number 1 - separation distance: 560m approx.:



Applicant's photomontage number 2 - separation distance: 430m approx.:



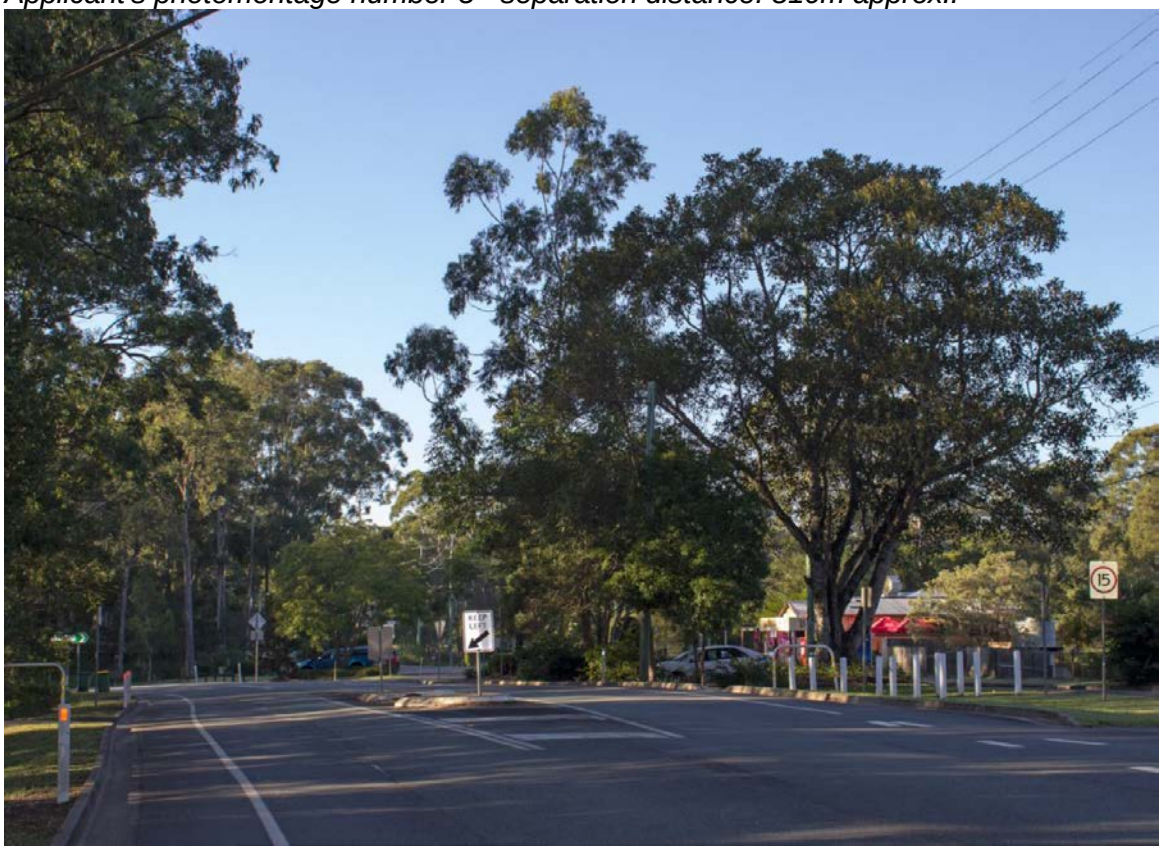
Whilst it is acknowledged that the facility will be visible, the views will be middle ground views (from 260m - 550m), with the lower half of the facility screened by vegetation. As such, the facility is unlikely to result in a significant loss of amenity for surrounding development.

Again, it is noted that submissions have been received from the residents of the rural residential area north of the proposal. Adverse impact on amenity was raised in the submissions and is addressed in the submissions section below. In summary, the above assessment finds that, although the tower will be visible above the tree line from these properties, the facility has been sited to minimise the visual impacts and is not considered to result in a significant loss of amenity for residents within this rural residential area.

Views from Peachester Road – Peachester Road is identified as a scenic route. As outlined in the Strategic framework section above, the facility is unlikely to be visible from Peachester Road. Any views are likely to be occasional glimpses though the vegetation that lines Peachester Road.

Views from Peachester township - The applicant has provided a photomontage showing the view of the tower from the Peachester main street – refer below. The photo montage shows that occasional glimpses of the facility will be available from town, however, views are obstructed by vegetation.

Applicant's photomontage number 5 - separation distance: 810m approx.:



Having regard to the above assessment, it is considered that the proposal is unlikely to have a significant adverse impact on the character of the local area or result in a significant loss of amenity for surrounding development. Accordingly, the proposal complies with PO1 and the Height of buildings and structures overlay code.

Other Overlay Codes

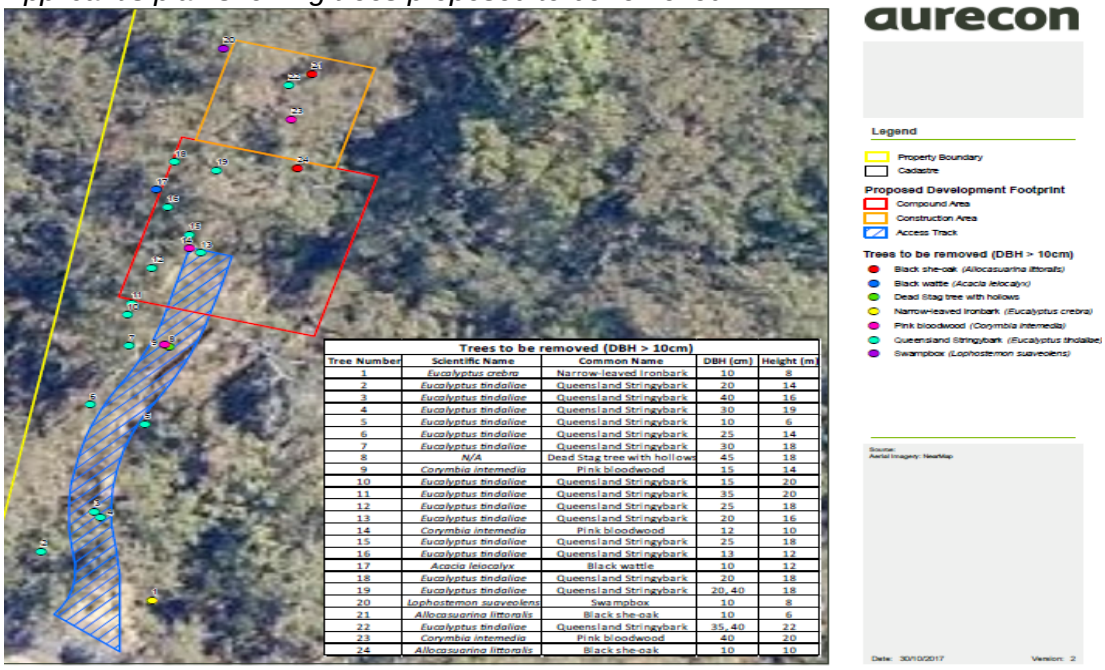
- Biodiversity, Waterways and Wetlands overlay code – Council's Environment Officer's assessment is provided below.

  The application is for a telecommunications tower located within a vegetated road reserve. The vegetation consists of Least Concern regional ecosystem 12.9-10.14 Eucalyptus pilularis tall open forest on sedimentary rock.

  Image illustrating approximate location of proposed facility within the vegetated road reserve:

  The applicant indicates that to facilitate the infrastructure, approximately 24 native trees and shrubs will need to be cleared to allow for maintenance access tracks, compounds and construction areas (refer to tree clearing survey below).

Applicant's plan showing trees proposed to be removed:



Trees to be removed (DBH > 10cm)

Tree Number	Scientific Name	Common Name	DBH (cm)	Height (m)
1	*Eucalyptus crebra*	Narrow-leaved Ironbark	10	8
2	*Eucalyptus tindaliae*	Queensland Stringybark	20	14
3	*Eucalyptus tindaliae*	Queensland Stringybark	40	16
4	*Eucalyptus tindaliae*	Queensland Stringybark	30	19
5	*Eucalyptus tindaliae*	Queensland Stringybark	10	6
6	*Eucalyptus tindaliae*	Queensland Stringybark	25	14
7	*Eucalyptus tindaliae*	Queensland Stringybark	30	18
8	*N/A*	Dead Stag tree with hollows	45	18
9	*Corymbia intermedia*	Pink bloodwood	15	14
10	*Eucalyptus tindaliae*	Queensland Stringybark	15	20
11	*Eucalyptus tindaliae*	Queensland Stringybark	35	20
12	*Eucalyptus tindaliae*	Queensland Stringybark	25	18
13	*Eucalyptus tindaliae*	Queensland Stringybark	20	16
14	*Corymbia intermedia*	Pink bloodwood	12	10
15	*Eucalyptus tindaliae*	Queensland Stringybark	25	18
16	*Eucalyptus tindaliae*	Queensland Stringybark	13	12
17	*Acacia leiocalyx*	Black wattle	10	12
18	*Eucalyptus tindaliae*	Queensland Stringybark	20	18
19	*Eucalyptus tindaliae*	Queensland Stringybark	20, 40	18
20	*Lophostemon suaveolens*	Swampbox	10	8
21	*Allocasuarina littoralis*	Black she-oak	10	6
22	*Eucalyptus tindaliae*	Queensland Stringybark	35, 40	22
23	*Corymbia intermedia*	Pink bloodwood	40	20
24	*Allocasuarina littoralis*	Black she-oak	10	10

NBN Co Tree Survey Plot - Peachester, Road Reserve (Near Range Road), Peachester QLD 4519

Figure 1: Trees to be removed (DBH > 10cm)

As the applicant has not identified a suitable offset for the vegetation clearing as per the Biodiversity, waterways and wetlands overlay code, it is recommended that any approval include suitable offset conditions (with planting required to be completed prior to commencement of use). As part of the offset, a biodiversity offset will be required due to a dead stag tree with hollows that is proposed to be removed. A mixture of nesting boxes for bats, mammals and birds will be required to be provided into the surrounding area.

A landscape buffer to the compound will be required to screen the base of the infrastructure from any potential sight lines from Range Road.

The Vegetation management code provides guidance on biodiversity offsets with regard to offset ratio for vegetation replacement. An offset ratio of 1.5:1 is recommended in this instance. As such 36 replacement trees are required to be offset within the adjacent road reserve around the compound. The species are to consist of a mixture of the species to be removed.

Any approval should also include standard fauna management requirements for spotter catchers during all tree clearing.

The proposal is capable of meeting the requirements of the Biodiversity, Waterways and Wetlands Overlay Code subject to the imposition of the abovementioned conditions on any approval.

- Scenic Amenity Overlay Code - The site is not affected by the scenic amenity overlay (land is not within an inter-urban break or adjacent to a scenic route). However, the application requires Impact Assessment and the code is considered to be relevant assessment criteria given the height of the facility and the proximity of scenic routes to the site. The following Performance Outcome is applicable to the proposal.

Performance Outcome PO6 – Significant Views and Vistas - *Assessable development requiring impact assessment, or other development that exceeds the maximum height specified on a Height of Buildings and Structures Overlay Map, does not adversely impact upon significant views.*

Acceptable Outcome AO6 - Development maintains or enhances the significant views identified in Table 8.2.12.3.2 (Significant views).

Comment: - The proposal is unlikely to impact on any significant views (as listed in the Table 8.2.12.3.2 of the Scenic amenity code) and therefore complies with AO6. Of note is the views of the Glass House Mountains from the Blackall Range escarpment. The site is over 7km from the Blackall Range escarpment and the facility will not be discernible within the significant views south towards the Glass House Mountains.

It is noted that glimpses of the proposal may be visible from Peachester Road, a scenic route. The Scenic amenity overlay code addresses impacts from properties adjoining scenic routes. The site is not adjacent to a scenic route, with views from a scenic route generally addressed in the Telecommunications facility code – refer to assessment below.

- Landslide Hazard and Steep Land Overlay Code – Council's Development Engineer has provided the following comment:

  Comment: Access is proposed from an existing unsealed driveway. Landslide hazard and steep land overlay code requires driveways to dwelling houses to be sealed where >20% grade. The proposed access driveway will be >20%, however it is not required to be sealed as it will be used for maintenance purposes infrequently by a 4wd. The standard of all-weather access required for the construction of the monopole will be of an acceptable standard for the maintenance access and the existing shed on Lot 17.

  The development complies with the Performance Outcomes of the Landslide hazard and steep land overlay code as it will be undertaken in accordance with best practice geotechnical principles and safe and efficient access is available to the site.

Rural Zone Code

The Telecommunications facility is proposed to be located within road reserve. In accordance with the provisions Section 1.3.4(b) Zones for roads, waterways and reclaimed land of the planning scheme, that part of the road reserve the subject of the application is within the Rural zone. A proposal for a Telecommunications facility is listed as a potentially consistent use within the Rural zone. A use listed as a potentially consistent use is *to occur in the Rural zone only where further assessment has determined that the use is appropriate in the zone having regard to such matters as its location, nature, scale and intensity*.

The purpose of the Rural Zone Code is to provide for a wide range of rural activities and a limited range of non-rural activities which complement, value add or provide a service to rural areas. Activities in rural areas maintain and enhance the character, visual amenity and rural production capability of the area.

The proposal accords with the following Overall Outcomes of the Rural Zone Code:

- Overall Outcome 2(e) - *other non-rural activities that are compatible with a rural setting and support rural enterprise or tourism are also encouraged where they do not compromise the use of the land for rural activities* – the proposal is located within road reserve and would not compromise the use of adjoining rural land for rural activities.

- Overall Outcome 2(f) - *non-rural activities are located, designed and operated to minimise conflicts with existing and future rural activities on surrounding rural lands and avoid significant effects on rural amenity including through adverse noise or traffic generation* – the proposal would not impact adversely on the rural amenity of the surrounding area as noise and traffic generation would be minimal. Further, the proposal has been sited to minimise / avoid significant visual amenity impacts - refer to Height of buildings and structures overlay code assessment above and Telecommunications Facility Code assessment below for a detailed assessment;

- Overall Outcome 2(n) - *development maintains and enhances the significant scenic and landscape values of the area* – The proposal is unlikely to have any impact of significance on the *significant scenic and landscape values of the area,* refer to Strategic Framework, Height of buildings and structures overlay code above and Telecommunications Facility Code section below for a detailed assessment;

- Overall Outcome 2(s) - *development provides for infrastructure and services that are commensurate with the nature and scale of development that is expected to occur in the area* - Appropriate infrastructure and services can be provided to the proposed Telecommunications facility.

Having regard to the above assessment, it is considered that the proposal has been appropriately located within the zone and complies with the Rural zone code.

Telecommunications Facility Code

The purpose of the Telecommunications Facility Code is to *ensure telecommunication facilities are developed in a manner which protects public health, the environment and the amenity of surrounding premises*. The overall, performance and acceptable outcomes of the code, and an assessment against each outcome, are provided below.

It is important to note that where a proposal meets the acceptable outcome, then the related performance outcome is deemed to have been met. In the case where a proposal does not meet the acceptable outcome, then the proposal is assessed against the related performance outcome, or alternatively, the purpose and overall outcomes of the code. A proposal's non-compliance with an acceptable outcome does not result in it automatically being in conflict with the code. A proposal is only in conflict with a code where the purpose of the code has not been met, or in other words, where the overall outcomes have not been achieved.

Proximity to Sensitive Land Uses

Overall Outcome 2(a) – a telecommunications facility does not adversely affect the amenity of surrounding premises.

Performance outcome PO1 – The telecommunications facility is located so as to minimise any adverse impacts upon the amenity of nearby residential, community and other sensitive land uses.

Acceptable Outcome AO1 – The telecommunications facility is located at least:-
(a) 400 metres from any residential use;
(b) 500 metres from any child care centre, educational establishment or park;
(c) 20 metres from any public pathway; and
(d) 1 kilometre from any other existing or approved telecommunications facility

Comment: The proposal accords with AO1(b)-(d) above (Peachester State School is located approximately 900m northwest of the facility), however the facility is not located 400m from an adjoining residential use.

Land within an approximate 400m radius from the proposed facility is shown in the Height of buildings and structures overlay code assessment above. There are 17 dwellings (on adjoining lots) located within a 400m radius of the facility, with the closest dwelling located 135m north of the facility.

Given that the proposal does not accord with AO1, an assessment against the corresponding Performance outcome PO1 is required.

As detailed above, a proposal for a Telecommunications facility is a potentially consistent use within the Rural Zone and it is considered that the proposed facility has been *located so as to minimise any adverse impacts upon the amenity of nearby residential uses* (as required in PO1). The vegetation between the facility and the 4 closest adjoining residences, together with the topography serve to reduce the visibility of the facility from these residences *so as to minimise any adverse impacts*. Refer to the Height of buildings and structures overlay code assessment for further details in relation to the amenity of nearby residences.

In support of the location of the proposed facility, the applicant has provided the following (in correspondence dated 21 March 2018 - applicant's response to submissions):

- *prior to commencing informal community consultation, NBN considered no fewer than 20 alternative locations, including 14 locations investigated before applying to DNRM for the road closure.*

- *NBN highlights that of these 14 alternative properties, only 101 Bald Knob Rd expressed any interest in a proposal, and that community activists have threatened local landowners across Peachester with future litigation should they enter into a lease with NBN.*

- *NBN did not proceed with proposals at 101 Bald Knob Rd because we could not reach agreement regarding tenure at that property, and further, the two locations considered within this property did not have greater planning merit than the DNRM road reserve.*

- *In addition to the locations considered prior to commencing informal public notification, NBN investigated a further six alternative sites recommended by a resident of Peachester. The six resident nominated locations included:*
  • Alternative 1 – Old Peachester Road Reserve
  • Alternative 2 – Telstra Exchange, 13 Cross Street, Peachester
  • Alternative 3 – Corner of Peachester and Bald Knob Road

- *Alternative 4 – Road Reserve, Peachester Road*
- *Alternative 5 – Road Reserve, Peachester Road*
- *Alternative 6 - Corner of Caswells Lane and Peachester Road*

- *Of the alternate sites, three were unfortunately discounted on account that they were located closer to houses (other people's houses), and required significantly larger structures (lattice towers) because they were at lower ground elevations.*

- *NBN notes that the three remaining alternatives suffered from drops in ground elevation, resulting in a loss of service to more than a third of the community.*

- *there are no accessible alternative sites that represent a better technical and planning outcome for the community.*

Visual Amenity and Landscape Character

Overall Outcome 2(b) – a telecommunications facility is integrated with its natural, rural or townscape setting and does not detract from the visual amenity of scenic routes.

Performance Outcome 2 – The telecommunications facility is integrated with its natural, rural or townscape setting and is not visually dominant or obtrusive.

(In partial fulfilment of Performance Outcome PO2)
Acceptable Outcome 2.1 – The telecommunications facility:-
(a) is of a similar height to surrounding structures or vegetation;
(b) has a colour and finish that reduces visual recognition in the landscape; and
(c) is unobtrusive when viewed from any scenic route identified on a Scenic Amenity Overlay Map.

Comment: There are no structures within proximity to the proposed facility and the monopole structure will protrude approximately 23m above the surrounding vegetation (which is approximately 18m high – as shown on the proposal plans). The applicant's Planning Report provides the following:

> *In order to achieve coverage to dwellings and businesses in the area, NBN antennas are required to protrude above the surrounding vegetation. The height of the monopole is governed by the surrounding landform, and the most effective solution in obtaining line of sight to the future household antennas and connection to other facilities within the network.*

Given the that the proposal will protrude above existing vegetation, the proposal cannot accord with AO2.1(a) above. Notwithstanding, it is considered that proposal complies with PO2 in that it is unlikely to be visually dominant or obtrusive from the surrounding area or any scenic route.

As detailed in the Height of buildings and structures overlay code assessment above, the proposal will be visible in the landscape (above the tree line) when viewed from the rural residential area to the north of the site and Old Peachester Road/Stirling Road to the east. However, it is considered that the facility is unlikely to be visually obtrusive due to the separation distances, as demonstrated in the Council images and applicant's photomontages included in the Height of buildings and structures overlay code assessment above. As such, it is considered that the proposal accords with PO2.

It is noted that the visibility of the structure from Peachester Road is minimised from screening provided by existing vegetation lining this road. The amenity of the nearby dwellings is addressed in PO1 above.

It is recommended that any approval include a condition in relation to the colour and finish of the facility to reduce its visual recognition in the landscape (as required in AO2.1(b)).

Acceptable Outcome 2.2 - Any building associated with the telecommunications facility is setback from any street front boundary a distance at least equal to the front setback required for the adjoining use.

Comment: The facility is located with road reserve. Notwithstanding, the proposal provides a minimum setback to an adjoining property boundary of 42m and complies with AO4.1.

Acceptable Outcome 2.3 - A 3 metre wide landscape strip is provided between any building associated with the telecommunications facility and any street front boundary or adjoining use.

Comment: The facility is located with road reserve. Council's ecologist has recommended that a 3m wide landscape strip be provide to the southern, eastern and northern aspects of the compound in accordance with AO2.3 above.

Health & Safety

Overall Outcome 2(c) – a telecommunications facility does not adversely impact upon community wellbeing.

Performance Outcome PO3 – The telecommunications facility does not cause human exposure to electromagnetic radiation beyond accepted precautionary limits.

Acceptable Outcome AO3 - The telecommunications facility is designed and operated to restrict human exposure to electromagnetic radiation in accordance with the:-

(a) Radio Communications (Electromagnetic Radiation – Human Exposure) Standard 2003; and

(b) Radio Protection Standard for Maximum Exposure Levels to Radiofrequency Fields.

Comment:

Radiofrequency electromagnetic radiation/energy (Source: Australian Radiation Protection and Nuclear Safety Agency - ARPANSA).

ARPANSA explains radio frequency electromagnetic energy or radiation on its website, as reproduced below.

> *Radiofrequency (RF) electromagnetic radiation (EMR) or electromagnetic energy (EME) is the transfer of energy by radio waves. RF EMR lies in the frequency range between 3 kilohertz (kHz) to 300 gigahertz (GHz). RF EMR is non-ionising radiation, meaning that it has insufficient energy to break chemical bonds or remove electrons (ionisation).*
>
> *RF EMR is produced by both natural and artificial sources. Natural sources like the sun, the earth and the ionosphere all emit low-level RF fields. Artificial sources of RF EMR are mainly produced by telecommunications installations and equipment.*

> *Radio and television broadcasting, mobile phones, pagers, cordless phones, police and fire department radios, point-to-point links and satellite communications all produce RF EMR. Other sources of RF fields include microwave ovens, radar, industrial heaters and sealers, and various medical applications.*
>
> *Fixed wireless NBN facilities use low-level radiofrequency (RF) electromagnetic energy (EME) to communicate between NBN base stations and small rooftop installations on residences and business premises.*

RF EMR exposure – NBN base stations and mobile phones (Source: ARPANSA)

ARPANSA's fact sheet *National Broadband Network fixed wireless base stations and health* makes the following statement about health:

> *Health authorities around the world, including ARPANSA and the World Health Organization, have examined the scientific evidence regarding possible health effects from the RF EME emitted by NBN base stations. Current research indicates that there are no established health effects from the low exposure to the RF EME from NBN base station antennas.*

ARPANSA's fact sheet *Mobile phones and health* goes on to make the following statement:

> *A large number of studies have been performed to investigate whether mobile phones pose a potential health risk. It is the assessment of ARPANSA and other national and international health authorities, including the World Health Organization (WHO), that there is no established scientific evidence that the use of mobile phones causes any health effects. However the possibility of harm cannot be completely ruled out.*
>
> *Although subtle biological effects caused by RF EME emitted from mobile phones have been reported in some scientific studies, there is no established evidence that these effects lead to adverse health outcomes. The epidemiological (population studies) evidence does not give clear or consistent results indicating mobile phone use causes disease in people. Some studies have shown an association between heavy mobile and cordless phone use and brain cancer. Based largely on this limited evidence the International Agency for Research on Cancer has classified RF fields as possibly carcinogenic to humans. More rigorous long-term studies are being coordinated by WHO and Australia is taking part in this research program.*

Although the above statement about mobile phones and health is not directly relevant to NBN facilities, it has been included here because submissions on a number of the current applications before Council have raised concerns about the International Agency for Research on Cancer classifying RF fields as being possibly carcinogenic to humans. According to the above statement, this classification has been based on studies involving heavy mobile and cordless phone use and not on studies involving RF EME emissions from telecommunications installations.

Regulation of RF EMR/EME

The regulation of EME including minimising the risk of exposure to unsafe EME levels is the responsibility of both the Australian Radiation Protection and Nuclear Safety Agency

(ARPANSA, an agency of the Commonwealth Department of Health) and the Australian Communications and Media Authority (ACMA). ACMA and ARPANSA consult closely under a formal memorandum of understanding for collaboration and information sharing. This ensures that a coordinated approach is taken to the development and implementation of EME arrangements by both agencies.

ARPANSA establishes the limits at which public and occupational exposure to electromagnetic fields is considered safe. These limits are set out in the *Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields - 3 kHz to 300 GHz (2002)* (the ARPANSA Standard or RPS3). ARPANSA regularly reviews the limits in this standard and publishes information for the public regarding EME exposure from many different sources. Acceptable Outcome AO3 of the Telecommunications Facilities Code refers to this standard.

ACMA regulates EME from fixed radiocommunications transmitters such as mobile base stations (including NBN fixed wireless base stations) by imposing licence conditions through the *Radiocommunications Licence Conditions (Apparatus Licence) Determination 2015* (Apparatus LCD). Under these conditions, licensees such as mobile network operators must ensure that EME exposure from a transmitter does not exceed the levels set in the ARPANSA Standard at any location accessible by the general public. (Source: ACMA)

NBN has confirmed that within 6 months of a Telecommunications facility becoming operational, compliance is undertaken to ensure that EME output complies with the ARPANSA Standard. A site compliance certificate confirming that the site complies with the standard and signed by a National Association Testing Authorities (NATA) accredited laboratory is then published on the Radio Frequency National Site Archive.

The ARPANSA Standard compared with international standards

Council's external RF EME expert has provided advice on how the ARPANSA standard compares with international standards, as reproduced below.

> *The whole-body exposure limits specified in the ARPANSA Standard are the same as those specified in the International Commission on Non-Ionizing Radiation Protection (ICNIRP) exposure guidelines – Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300 GHz).*
>
> *ICNIRP is an independent scientific organisation in formal relations with WHO and the International Labour Office. ICNIRP's aims are to provide guidance and advice on the health hazards of non-ionising radiation exposure. ICNIRP was established to advance non-ionising radiation protection for the benefit of people and the environment. It develops international guidelines on limits of exposure to non-ionising radiations which are independent and science based; provides science based guidance and recommendations on protection from non-ionising radiation exposure; establishes principles of non-ionising radiation protection for formulating international and national protection programs.*

Currency of the 2002 ARPANSA Standard

In the preamble to the Report by the ARPANSA Radiofrequency Expert Panel, on Review of Radiofrequency Health Effects Research – Scientific Literature 2000-2012, ARPANSA makes the following statements:

> *Since the year 2000, research in the area of RF and health has grown rapidly and several major research programs and reviews have been undertaken internationally. Since the cut-off date of the examination of scientific literature for RPS3, ARPANSA has identified more than 1300 publications relevant to the understanding of possible health effects of RF electromagnetic fields. These include the review by the International Agency for Research on Cancer (IARC) in 2011 (Baan et al., 2011) that resulted in the classification of RF fields as possibly carcinogenic but which did not assess the magnitude of any risk to health, and the 13-country INTERPHONE epidemiological study in 2010 (INTERPHONE Study Group, 2010). In addition, several countries, or groups of countries, have undertaken one or more comprehensive reviews of the subject, such as the recent review conducted by the Health Protection Agency in the UK in 2012 (HPA, 2012).*
>
> *In July 2012 ARPANSA established a Radiofrequency Expert Panel with the task of making an assessment of the scientific literature to determine whether there are any significant changes to the science underpinning the 2002 Standard and to advise whether it continues to provide adequate protection. The Expert Panel conducting the review comprised three Australian academics who are experts in the areas of biophysics, experimental research and epidemiology as well as ARPANSA scientific staff. Members of the Expert Panel independently examined the major reviews and key individual papers in their area of expertise and identified issues that have arisen in the research since the publication of RPS3.*
>
> *In their findings in this Report, the Expert Panel notes that since the preparation of RPS3 there have been significant advances in the science. Based on the assessment of the scientific evidence from January 2000 till August 2012, the Expert Panel find that the underlying basis of the ARPANSA RF exposure Standard remains sound and that the exposure limits in the Standard continue to provide a high degree of protection against the known health effects of RF electromagnetic fields.*

Compliance with the ARPANSA Standard

For typical 30-40 m high NBN base stations, the highest EME exposure levels at ground level in the surrounding area are typically thousands of times below the limits of the ARPANSA Standard. (Source: ARPANSA)

In the case of the subject proposal the maximum calculated EME level at 1.5m above the ground is 1.24% of the limit specified in the ARPANSA Standard (as per the report dated 2 February 2018, as updated to include co-location of Optus facility). This maximum calculated EME level is at a location 168m from the proposed telecommunications facility (near Junction of Old Peachester Rd). At the dwellings located closest to the proposed facility on Old Peachester Road and Range Road and the Peachester State School, the calculated EME levels are even lower and range between 0.0058% and 0.049% of the limit specified in the ARPANSA Standard. (Source: EME report prepared by applicant).

Development Services engaged an external expert to undertake a peer review of the applicant's EME report. Council's external expert has confirmed that the calculated levels in the applicant's updated EME report (dated 2 February 2018) comply with the exposure limits specified in the current ARPANSA Standard, and that the applicant's calculations have been undertaken in accordance with the ARPANSA Technical Report – *Radio*

Frequency EME Exposure Levels – Prediction Methodologies. Furthermore, Council's external expert has separately calculated the RF EME levels using the ARPANSA prediction methodologies and his calculations are the same as the applicant's. The proposal therefore meets AO3 of the Telecommunications Facilities Code and is deemed to comply with the corresponding Performance Outcome PO3 relating to health and safety.

Any approval should include a condition requiring the Telecommunications facility to comply with the licence conditions imposed by the Australian Communications and Media Authority relating to the limitation of radiofrequency electromagnetic energy emissions in accordance with the ARPANSA Standard.

Performance Outcome PO4 – The telecommunications facility is secure and potential impacts from vandalism are minimised.

Acceptable Outcome AO4.1 – Security fencing is provided to prevent unauthorised entry to the telecommunications facility.

Acceptable Outcome AO4.2 – Safety and warning signage is displayed where necessary.

Comment: Security fencing is proposed and any approval should include a condition requiring such to be provided.

Co-location

Overall Outcome 2(d) – a telecommunications facility is located with compatible uses and facilities.

Performance Outcome PO5 – The telecommunications facility is designed to facilitate co-location with other telecommunications facilities.

Acceptable Outcome AO5 – The structural elements of the telecommunications facility are designed to support co-masting or co-siting with other carriers.

Comment: The applicant advises that:

> *It is a requirement under the Telecommunications Act that all telecommunication providers make their facilities available for the purposes of colocation. NBN has established and put in place a number of framework agreements with third parties as well as mobile network operators which outlines the process and procedures in relation to co-location on NBN network infrastructure sites.*

Any approval should include a condition requiring such. It is noted that the current proposal involves the co-location of Optus telecommunications equipment on the proposed tower.

Other Development Codes

- Nuisance Code – it's not expected that the facility will have acoustic, air quality or lighting impacts on sensitive development, other than minor noise impacts from cooling equipment. Conditions have been proposed to require noise impacts to be certified to meet Nuisance Code requirements.

- Transport and Parking Code – Council's Development Engineer has recommended conditions relating to access and stormwater should the application be approved.

- Waste Management Code – It's expected that there will be no facilities required with respect to waste management.

- Landslide Hazard and Steep Land Overlay Code – Council's Development Engineer advises that the code requires driveways to dwelling houses to be sealed where >20% grade. The proposed access driveway will be >20%, however it is not required to be sealed as it will be used for maintenance purposes infrequently by a 4wd. The standard of all-weather access required for the construction of the monopole will be of an acceptable standard for the maintenance access.

  The development complies with the Performance Outcomes of the Landslide hazard and steep land overlay code as it will be undertaken in accordance with best practice geotechnical principles and safe and efficient access is available to the site.

- Stormwater Management Code - Complies with the Acceptable Outcomes of the Stormwater management code.

Infrastructure Charges

There is no infrastructure charge applicable to the development. The proposed development has a nil charge rate in both Council's infrastructure charges resolution and the Planning Regulation.

Assessment Benchmarks Related to a Variation Approval

Not applicable.

Assessment Benchmarks Related to a Temporary Local Planning Instrument

Not applicable.

CONSULTATION:

Referral Agencies

The application did not require referral to any Referral Agencies.

Other External Referrals

The application did not require any other external referrals.

Peer Review

As mentioned previously, Council engaged an external radiofrequency electromagnetic energy (RF EME) expert to review the subject application (as well as 14 other current NBN applications). A response was received by report dated January 2018. Council's specific questions and the expert's responses are detailed below.

Question 1: Do the calculated EME levels meet the current ARPANSA Radio Protection Standard?

> **Response**: *The calculated levels in the supplied environmental EME report (Appendix A) meet the requirements of the exposure limits specified in the current ARPANSA radiation protection standard (RPS3) - Radiation Protection Standard - Maximum Exposure Levels to Radiofrequency Fields - 3 kHz to 300 GHz (Table 1).*

Question 2: Have the EME levels been calculated in accordance with the ARPANSA Technical Report "*Radio Frequency EME Exposure Levels – Prediction Methodologies*"?

> **Response**: *The RF EME levels have been calculated in accordance with the ARPANSA Technical Report, Radio Frequency EME Exposure Levels – Prediction Methodologies. This has been verified by separately calculating the RF EME levels using the ARPANSA prediction methodologies (Appendix A). See Appendix E for reported results of the verification. In this case there are small variations between the original report and the verification report. These variations are due to the ongoing refinement of the antenna patterns over time.*

Question 3: Do the calculated EME levels meet international standards? How does the Australian Standard compare with International Standards - i.e. is it more or less restrictive?

> **Response**: *The levels calculated in the supplied environmental EME report meet the limits set out in the International Commission on Non-Ionizing Radiation Protection (ICNIRP – See Appendix C) exposure guidelines – Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300 GHz).*
>
> *The whole-body exposure limits specified in RPS3 are the same as those specified in the ICNIRP exposure guidelines.*
>
> *The International Commission on Non-Ionizing Radiation Protection (ICNIRP) is an independent scientific organization whose aims are to provide guidance and advice on the health hazards of non-ionizing radiation exposure.*
>
> *ICNIRP was established to advance non-ionizing radiation protection for the benefit of people and the environment. It develops international guidelines on limits of exposure to non-ionizing radiations which are independent and science based; provides science based guidance and recommendations on protection from non-ionizing radiation exposure; establishes principles of non-ionizing radiation protection for formulating international and national protection programs.*
>
> *ICNIRP is a non-governmental organization in non-ionizing radiation in formal relations with the World Health Organization and the International Labour Office. It maintains a close liaison and working relationship with all international bodies engaged in the field of non-ionizing radiation protection, and interacts with radiation protection professionals worldwide through its close collaboration with the International Radiation Protection Association and its national societies.*

Work is conducted in four standing committees - on Epidemiology, Biology, Physics and Optical Radiation - and in conjunction with appropriate international and national health and research organizations as well as universities and other academic institutions.

Question 4: What monitoring is usually undertaken with telecommunications facilities, such as the ones proposed, to ensure that the EME levels continue to meet the standard and who is responsible to ensure that this monitoring occurs?

Response: *There is no specific legal requirement for physical monitoring (measurements) of these types of installations. However, operators of these facilities are required to ensure that the exposure limits specified in RPS3 are not exceeded and that they retain documentation verifying compliance to this requirement.*

This verification process can be completed using measurement or calculation methodologies contained within the Australian Standard (AS/NZS 2772.2) Radiofrequency fields Part 2: Principles and methods of measurement and computation - 3 kHz to 300 GHz. The predominant method used is calculations and in special circumstances measurements are used.

There is no requirement for ongoing monitoring as the calculations are completed using worst case scenario parameters ensuring the maximum possible levels are calculated. It is only necessary when a change that may cause the RF EME transmissions to vary is made, that a re-assessment will be completed. Which is current industry practice.

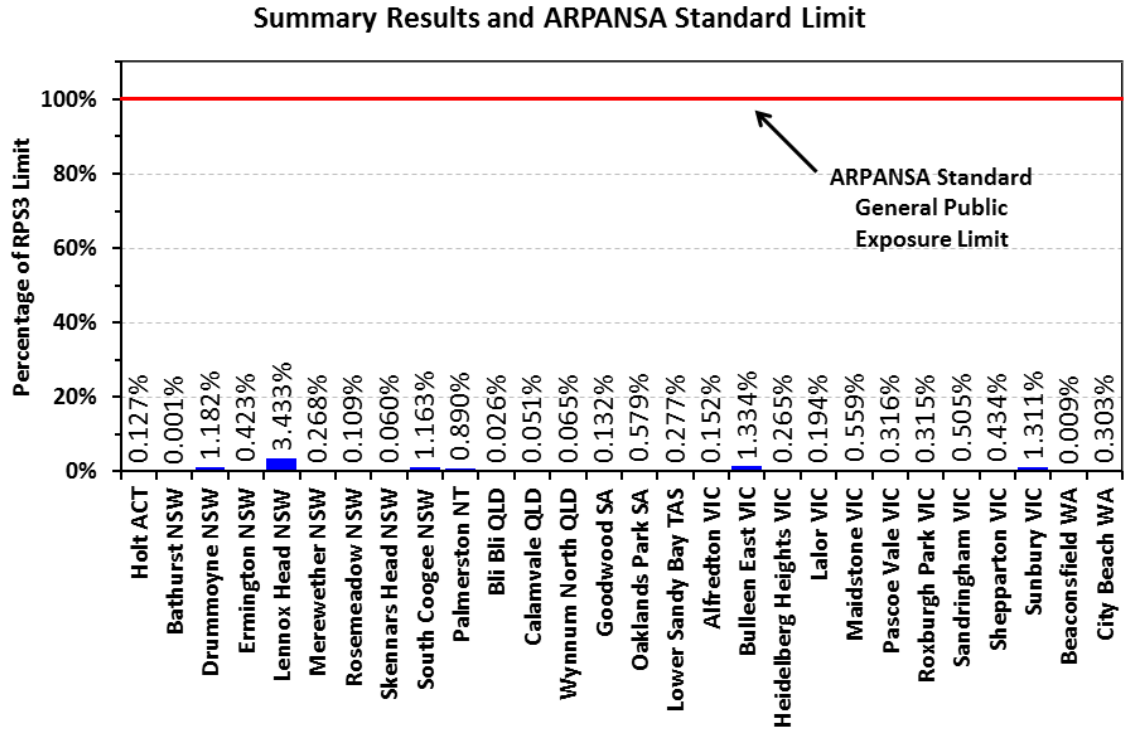
Whilst there has been no legal requirement for ongoing monitoring there have been some verification measurements completed. The purpose of these was to complete measurements for comparison with the exposure limits and the RF EME levels contained within the ARPANSA Environmental EME reports.

These verification measurements were originally coordinated by ARPANSA, completed by National Association Testing Authorities (NATA) accredited laboratories and funded by the Australian Mobile Telecommunications Association (AMTA). This resulted in a total of 28 facilities being measured from 2007 to 2013. A summary of these results are displayed in Figure 1 and a more detailed discussion of the results of these measurements can be found via the below link. The results demonstrated that the measured RF EME levels from the surveyed facilities were well within the respective RPS3 RF EME exposure limits.

https://www.arpansa.gov.au/research/surveys/mobile-phone-base-station-survey

Since 2013, the verification measurements have been coordinated and completed by a NATA accredited laboratory and are still funded by the AMTA. There have been 90 additional verification measurements completed since this change and the program is currently ongoing. The results of these measurements are available from AMTA upon request and will soon be made available on the AMTA webpage.

Figure 1. Summary Results of ARPANSA Base Station Survey 2007 – 2013



Question 5: The applicant proposes public interest grounds to support the siting of the proposed facility, based on the overall NBN service standard objectives and also the technical requirements for providing network coverage. In your opinion, has the applicant provided enough information to demonstrate that there is a need for a tower to be located in each area, and that co-location is not technically feasible?

> **Response:** *Whilst I am not a radio network planning expert, it is my opinion, that they have supplied sufficient information in the application, that there is a need (technically) for a fixed wireless facility to be installed in this area and that a co-location is not technically (RF EME) feasible.*

Public Notification

The application was publicly notified for 16 days between 24 January 2018 and 16 February 2018 in accordance with the requirements of the *Planning Act 2016*. A total of 275 submissions were received, of which 245 were determined to be 'properly made' in accordance with the *Planning Act 2016*.

The following table provides a description of the matters raised in submissions received about the application, together with a statement of how those matters were dealt with in reaching a decision:

ISSUES	***COMMENTS***
Conflict with planning scheme • The proposal is in conflict with the Purpose and Overall Outcomes of the Rural zone code.	The proposal has been assessed against all of the applicable assessment benchmarks including the provisions of the planning scheme, state planning policies, SEQ Regional Plan and

ISSUES	***COMMENTS***
• The application contravenes the provisions for built form to be integrated with rural character, respond sensitively to the landscape and maintain or enhance scenic and landscape value. • Failure to meet the acceptable outcomes outlined in the Telecommunications facility code. There are multiple properties within the 400m exclusion zone, and one 135m from the proposed site. The application highlights a 'cluster' at 690m. • The proposal contravenes the 8.5m height limit. Justification based on consistency with mature vegetation height is not acceptable. • The use will be at least 41m high (application proposes 40m) and an additional 5m can be added as a 'low impact installation' without further approvals which compounds the problem. • Tower and ancillary buildings may be subject to bushfire risk, which could result in the loss of communications. • Conflict with Biodiversity, waterways and wetlands overlay code – the overall outcomes of the code cannot be claimed to have been met without the applicant providing a Flora Survey (subject site contains high risk flora according to mapping). The applicant states that EIA or ecological linkages will not be adversely impacted, however, there is no evidence to demonstrate this. <u>Expectation of NBN that the Planning Scheme will bend to suit their proposal</u> • NBN should make an application which complies with the requirements of the planning scheme. • The application is a pro forma application which has been adapted, in part, to the current application. • The circumstances of this development on this site under the scheme have not been specifically considered in the detail that is ordinarily expected for a development of this size.	Schedule 10 of the *Planning Regulation 2017*. It is considered that the proposal complies with and is not in conflict with any of the applicable assessment benchmarks. In particular, it is considered that the proposal meets the overall and performance outcomes of the planning scheme codes that are directly relevant to the proposal, including the Height of Buildings and Structures Overlay Code, the Biodiversity, Waterways and Wetlands Overlay Code, the Rural Zone Code and the Telecommunications Facility Code, and is not in conflict with these codes. The subject site is affected by the Bushfire Hazard Overlay (high bushfire hazard area) but as the proposal does not involve a residential, business, industrial, community or sport and recreation use, where additional people would live, work, congregate or recreate on the site, the proposal is not required to be assessed against the Bushfire Hazard Overlay Code. Notwithstanding this, NBN has advised that the risk of fire damage to the facility is acknowledged and NBN will take responsibility for the repair or replacement of the facility should it be damaged.

ISSUES	***COMMENTS***
<u>State Planning Policy</u> • In its analysis of the development's compliance with the SPP, the applicant has made assertions that it complies, but are not substantiated by any objective evidence. Therefore, Council should not reasonably be satisfied that the information complies with the SPP. • Does not demonstrate a mandate to approve applications of this kind. • The subject site is classified as Regional Landscape and Rural Production Area, which protects the land from inappropriate development, particularly urban or rural residential development.	
<u>Inaccuracy of DA</u> • The location of the proposed facility is incorrectly listed as 101 Bald Knob Rd. • The increasing number of Telco's wishing to install on this tower is not reflected by NBN in the application in relation to section 8 Other Environmental Constraints and Opportunities, 8.1 Visual Impact. The application is therefore out-of-date because there will be more microwave equipment attached to the tower. NBN has identified third parties have been contracted. This will bring a much larger visual and EME impact to the Peachester community that has not been outlined and assessed accordingly. • A 2015 community consultation session regarding a proposed facility at Peachester for an application lodged in 2017 does not provide an adequate community consensus given the span of time. • The application should not be decided on the basis of the level of service currently offered to other hinterland areas of the Sunshine Coast. • ~20% of people (~130 residences) are likely to opt in to the highest level of service. Parts of the application state that the facility will serve 550 properties whereas other parts the number is 660. There is weight given to the 80% that may not benefit from the tower and the	It is noted that the proposal has been amended to include the co-location of Optus telecommunications equipment. It is considered that the addition of this equipment would not substantially change the expected visual impact of the proposal. The co-location of any other telecommunications providers on the tower, should it be approved and constructed, is not the subject of this application. Any future co-location proposals would be subject to the requirements of applicable legislation at the time. NBN has read the submissions and has provided the following comments in response to the issues raised regarding to need for the service. *One submission produced by P & E Law on behalf of a submitter has challenged the public interest of the proposal, suggesting that "not all parts of a region can, or should, be equally serviced". NBN respectfully disagrees with the assertion that vastly inequitable broadband access is not a matter of public interest, and we highlight the feedback received in support of the proposal, from Peachester residents desperate three years ago for adequate broadband service. NBN asserts that terms such as "equal" and "perfect" misrepresent the public interest discussion in the Application. These terms have not been tendered by NBN in*

ISSUES	***COMMENTS***
purported conflicts with the planning scheme. • It seems likely that a substantial number of users will elect a plan which does not significantly improve upon their current level of service.	*discussing what constitutes public interest.* *NBN has illustrated to Council that communities such as Peachester are significantly behind surrounding communities in access to reliable, quality broadband, and we find it remarkable that anyone in this day and age would dismiss the significance of this to personal, education, business and community opportunity.* *Further, the submission ignores the fact that the National Map graphically demonstrates a significant improvement to quality and access to broadband where fixed wireless facilities have been constructed across the Sunshine Coast, which has been illustrated to Council. The National Map provides meaningful data that illustrates the disadvantage experienced in the Peachester locality, and this goes straight to the question of the value and public interest of the service proposed by NBN.*
<u>Inadequate Justification for Site Selection</u> • The site was the only one for which a contract could be obtained. • Locations where a landowner rejected the possibility of having a tower were dismissed by NBN as potential locations. • The NBN towers line of sight has not been sufficiently calculated, which could impact service quality and availability of the service. <u>Development Application Misleading on Site Selection</u> • NBN have stated they were only able to secure this one subject site under a contract. However, a site near the corner of Candle Mountain Drive and Bald Knob Road has now been registered by NBN for another fixed wireless microwave tower in the future. As this site has been identified as	NBN has advised that 20 alternative sites have been investigated, with the subject site selected on the basis of planning and technical suitability. NBN has advised that it does not (and has never) had any plans to develop a fixed wireless facility at the corner of Candle Mountain Drive and Bald Knob Road. Although storms and wind could damage the proposed tower, NBN has advised that providing a fixed line service to the Peachester township and the rural surrounds is completely unfeasible.

ISSUES	***COMMENTS***
available, there is no need for this DA to proceed. • Confusion about which is Candidate A or C in Table 4.1. • Storms and wind could damage tower, leading to limited services.	
Impact on Land Value • Installation of the tower may decrease land values by ~15%.	The potential for impacts upon property values is not considered in the planning scheme, rather, the scheme seeks to minimise the adverse impacts of development on the existing and planned future character and amenity of an area. The proposed tower is situated amongst vegetation and is located at a higher elevation than all but one of the dwelling houses in the immediately surrounding area. It is considered that the effect of vegetation and topography will result in the proposal being visibly discernible in the landscape, but not visually dominant. It is therefore considered that the proposal is unlikely to result in a significant adverse impact on the amenity of the area.
Lease • The lease of this land by NBN will be for a total period of 20 years. A subdivision and provision of an access easement have been avoided by using a set of 2 x 10 year lease periods.	The application material does not include any information about lease periods.
Visual Amenity • No quantifiable visual impact has been presented in the DA. • The use will impact on local visual amenity especially as seen from local major roads. • Application does not adequately depict visual impacts. • The application does not contain sufficient information to appropriately assess visual impact.	The proposed tower is situated amongst vegetation and is located at a higher elevation than all but one of the dwelling houses in the immediately surrounding area. It is considered that the effect of vegetation and topography will result in the proposal being visibly discernible in the landscape, but not visually dominant.
Intangible Amenity	The proposal has been assessed against the relevant provisions of the planning

ISSUES	***COMMENTS***
• 'Amenity' cannot be reduced to being visual. Residents have intangible amenity concerns, which emerge from their subjective perception of Peachester. • These matters would be mitigated if the NBN's proposal was for a cable based system, rather than wireless. • Council should have regard to amenity impacts based upon the Court of Appeal's findings in *Broad v Brisbane City Council & the Baptist Union of Queensland* [1986] 2 Qd R 317	scheme, and it is considered that the proposed facility has been located so as to minimise any adverse impacts upon the amenity of nearby residential uses.
<u>HEALTH & SAFETY</u> <u>EME</u> • The EME report fails to include the microwave radiation from the connecting links and from the up to 200 individual household/business antennas. • The EME report is incomplete. • DA fails to consider the visual and EME impacts of a fully populated tower. • The EIS has not addressed the implications of contaminating neighbouring properties with electromagnetic radiation pursuant to sections 9, 10,11, 14 and 15 of the *Environmental Protection Act 1994* (Qld). • Approval of the application in its current state will effectively condone the installation of the facility and the release of EME affecting people. This would in effect amount to an assault and would cause bodily harm pursuant to the Queensland Criminal Code. <u>Scope of Sensitive Receivers</u> • The location of the NBN tower has not been assessed in a way that accounts for sensitive receivers (i.e. the young, elderly, disabled). e.g. There are ~40 properties inside the stipulated separation distance that	The applicant's Environmental Electromagnetic Energy (EME) report has calculated that the maximum EME level will be 1.24% of the limit specified in the Australian Radiation Protection and Nuclear Safety Agency's (ARPANSA) *Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields - 3 kHz to 300 GHz (2002)* (the ARPANSA standard). NBN has advised that the EME report does not include information regarding the rooftop antennas because they are considered LOW RF emitting equipment that have no impact on general public health and safety, in the same way that mobile phones are not considered to have an impact on general public health and safety. The output power of the rooftop antennas is less than 400 mW (milliwats), and as such, is classified LOW RF power with no general public implications. Council engaged an external radiofrequency electromagnetic energy (RF EME) expert to conduct a peer review of the applicant's Environmental EME report and the expert has confirmed that the calculated levels in the applicant's EME report comply with the exposure limits specified in the ARPANSA standard. Council's expert has also provided the following advice in relation to human health effects of RF EME.

ISSUES	***COMMENTS***
surrounds the Peachester primary school. • Resident diagnosed by medical authority as suffering from Electromagnetic Hypersensitive Syndrome and Chemical Sensitivity Syndrome. The NBN tower will pose a health risk. <u>Insurance Against Health Risks</u> • NBN and the property owner are unlikely to be able to insure against any potential health risks relating to the impacts of microwave radiation • Lloyds of London have advised that insurance is not available. • Inability to protect residents from long-term potential/known/agreed health risks. • Unanswered questions relating to potential health risks. • One submitter has stated they will be forced to move from their home as the radiation emissions will impact him significantly due to existing health complications. • The onus is on the applicant to assess and improve the safety and health impacts surrounding its activities. • High costs of internal and external shielding materials of homes immediately within the vicinity of the tower to protect from potential radiation. • The report states that emissions from NBN equipment within the frequency band <u>should not</u> cause interference. This does not say that it <u>will not</u> cause interference. • APRPANSA is saying is that there is scientific uncertainty about the relationship between electric, radiofrequency and magnetic fields and health effects. It is in these circumstances that the precautionary principle must be applied by Council. • In exercising its powers under the PAct, Council must advance the Act's purpose.	*The International Agency on Cancer Research (IARC) classified radiofrequency electromagnetic fields (RF EME) as possibly carcinogenic to humans (Category 2B). This classification is based on an increased risk for glioma, a malignant type of brain cancer, associated with wireless phone use. They also found that the evidence for other types of cancers, occupational and environmental exposures to be inadequate.* *The evidence was reviewed critically, and overall evaluated as being limited among users of wireless telephones for glioma and acoustic neuroma, and inadequate to draw conclusions for other types of cancers. The evidence from the occupational and environmental exposures mentioned above was similarly judged inadequate.* *The overall indication from the working chairman was: "the evidence, while still accumulating, is strong enough to support a conclusion and the 2B classification. The conclusion means that there could be some risk, and therefore we need to keep a close watch for a link between cell phones and cancer."* *To put this in perspective Cancer Council Australia released the following:* *"Australians should not be alarmed about findings released by the expert group classifying mobile phones as "possibly carcinogenic to humans".* *Cancer Council Scientific Advisor and international carcinogens expert, Professor Bernard Stewart, said the findings released by the International Agency for Research on Cancer (IARC), found a "possible link" between mobile phones and cancer, but not a proven one.* *"These findings show limited evidence linking mobile phones to glioma and acoustic neuroma and inadequate evidence to draw conclusions for any other types of cancer," Professor Stewart said.*

ISSUES	***COMMENTS***
• ARPANSA has removed themselves from saying this is safe, the health Minister isn't looking at this.	*According to Australian Institute of Health and Welfare data, brain cancer incidence has remained steady over a 25 year period to 2007, between 6.3 and 7.3 cases per 100,000 Australians.* *Chair of Cancer Council Australia's Occupation and Environmental Cancer Committee, Terry Slevin, said while IARC's classification was possible rather than proven risk.* *"However, these findings need to be put in context. While we need to continue researching the possible link between mobile phones and cancer, it is important to remind people there are many more established cancer risk factors that we can take action every day. Strong action on clear cancer risks like tobacco, alcohol, excessive UV exposure and obesity remain a priority."* *A significant study by Simon Chapman and colleagues published in 2016 using the Australian cancer registry found that overall, brain cancer incidence in Australia between 1982 and 2012 in all age groups except in those over 70 years compared to increasing modelled expected estimates, had remained stable. https://www.ncbi.nlm.nih.gov/pubmed/27156022*
<u>Impact on flora and fauna</u> • The proposal does not adequately cover the potential impacts on koalas, local flora and fauna. The applicant cannot claim to comply with the Vegetation management code until a proper assessment of the flora on the subject site is undertaken. • Relying on local vegetation of approximately 20m to 25m high to screen the 40m tower is not acceptable. • Disturbance to land to create a flat platform for the tower and access track will result in vegetation clearing.	The application indicates that to facilitate the infrastructure, approximately 24 native trees and shrubs will need to be cleared to allow for maintenance access tracks, compounds and construction areas. As the application has not identified a suitable offset for the vegetation clearing as per the Biodiversity, waterways and wetlands overlay code, any approval will include suitable offset conditions (with planting required to be completed prior to commencement of use). As part of the offset, a biodiversity offset will be required due to a dead stag tree with hollows that is proposed to be removed. A mixture of nesting boxes for bats, mammals and

ISSUES	***COMMENTS***
• DNRM approved NBN application in this location, therefore, the land was never considered for their use. • A lack of scientific certainty should not be used to measure harm to the environment as a result of the tower. • Evidence-based research suggests telecommunications facilities on rural land can disrupt rural production/harvest yield because bees and other insects relocate. Which in turn, affects farming.	birds will be required to be provided into the surrounding area. A landscape buffer to the compound will be required to screen the base of the infrastructure from any potential sight lines from Range Road. The Vegetation management code provides guidance on biodiversity offsets with regard to offset ratio for vegetation replacement. An offset ratio of 1.5:1 is recommended in this instance. As such 36 replacement trees are required to be offset within the adjacent road reserve around the compound. The species are to consist of a mixture of the species to be removed. Any approval will also include standard fauna management requirements for spotter catchers during all tree clearing. The proposal is capable of meeting the requirements of the Biodiversity, Waterways and Wetlands Overlay Code subject to the imposition of the abovementioned conditions on any approval. Council's radiofrequency electromagnetic energy (RF EME) expert has provided the following advice in relation to the potential impact of RF EME on fauna. *"There have been a number of studies into the health effects of RF EME on animals. These studies included bees, birds, bats, frogs, rats and insects. A review of these studies was published by Cucurachi et al. from The Netherlands in 2012.* *The review reported that there was inadequate information about the RF EME exposure, how it was assessed, the measurement procedures used and what biological parameters were being assessed. They also stated that no clear relationships could be found between the RF EME exposure level and effects studied in the animals because of the wide variety of exposure protocols being used.*

ISSUES	***COMMENTS***
	Their conclusion reaffirmed the statement by the author Beers (1998) "a long list of reports of positive results yielded by inadequate experiments may appear impressive in a review yet mean little. *Since that review, no clear and substantive scientific evidence has emerged that points to adverse health effects in animals from exposure to RF EME levels, in the general environment. The conclusions reached by Cucurachi et al. (2012) continue to apply."*
<u>Failure to propose the best and latest NBN network product/solution for Peachester</u> • Fibre to the Kerb has been modelled and may be more cost effective, using existing cable run infrastructure. • NBN's FTTC model is more suitable for hinterland. • Broadband could be delivered to all residents, not just those in the line of sight of a tower. • The land adjacent to this subject site is large enough to accommodate additional towers. E.g. Eagles Nest. The current DA (MCU17/2007) needs to consider further DA's for towers. • Insufficient public interest grounds to support approval of the subject application notwithstanding conflicts with the planning scheme. • NBN cannot provide an exact number of properties that will be serviced by the utility. • Most residents will be forced to install a satellite dish at great expense. • Little demand for the proposed service and opposition to it. There will be no public benefit if the service is not, or not significantly, taken up. • Arguments based upon 'disadvantage' and 'inequity' are not persuasive in the context of a development application of this kind. • Peachester residents have chosen to live in the area because they prefer the amenity, and are free from structures such as an NBN tower. They accept that they will live with compromised	NBN has read the submissions and has provided comments in response to the issues raised regarding the need for the service (see earlier part of table). With respect to the comments regarding fibre to the kerb, NBN has provided the following comments. *At no time has the community or rural surrounds of Peachester been slated to receive a fixed line service, and NBN has articulated this in writing, as well as the reasons for the network design, to the community at Peachester numerous times. NBN is not aware of Council having made any statements that contradict NBN's advice regarding network design, and does not believe this to have actually occurred.* *With regards to network design, due to Australia's size and particular geographic challenges the cost of providing fixed line services to all Australian premises is prohibitive. The cost of running fibre to every property in Australia is, and has always been considered cost-prohibitive. At no time has the design of the NBN™ provided for fibre to every regional property or township in the country.* *The costs of delivering a fixed line service to large communities comprising significant amounts of dense residential and commercial development is significantly less than this cost of delivering the same technology to smaller*

ISSUES	***COMMENTS***
services. An NBN tower could erode their amenity. • Only 1 site out of 15 expressed any interest in the proposal. This would indicate a community resistance to such a development in the area. <u>Site used for recreation</u> • The proposed site is already and has been used for years as a camping area, bike, walking, and horse riding track.	*villages and their rural surrounds. It is simply inaccurate to cite the costs of deploying fixed line in highly urbanised areas, and suggest that cost would apply to rural communities, where the number of connections is significantly fewer, and the amount of fibre required per premises is significantly greater.* *NBN highlights that at Peachester, the service area comprises not only the village but several kilometres of rural development in all directions, rendering a fixed line service completely unfeasible.* *The cost difference between fixed wireless and fibre-based fixed line services, for a rural village such as Peachester, typically runs from half a million dollars to in excess of one million dollars per community. At Peachester, the cost to upgrade to fixed line services is estimated to be in excess of one million dollars. These costs include the introduction of fibre over many kilometres (in the case of Peachester through difficult terrain), the low number of connection points per metre of fibre run, the costs of upgrading the copper network where required, and / or delivering fibre to the premises if the copper is in a degraded condition, as well as the costs of deploying nodes.* *That is why more than 2,500 fixed wireless facilities have been proposed across Australia to deliver high quality broadband to smaller and sparsely developed communities. (If you extrapolate these costs, the cost of converting fixed wireless services to fixed line services nationally runs into billions of dollars.)* The tower is proposed to be located within road reserve and only a small portion of the reserve will need to be closed to for the NBN lease area. The existence of the tower would not prevent use of the road reserve for public access including biking, walking and horse riding.

ISSUES	***COMMENTS***
<u>Historical Precedent</u> • Council rejected similar applications last year on scenic amenity grounds and non-compliance with the TC Code. • The applicant provides one reason in the report why the existing facility is not suitable, which is in relation to the separation distance. However, there was no explanation why a distance of 3.4km between towers, not from tower to service area, is too far when numerous other proposals lodged by the applicant are intended to service similar distances. • In *Telstra Corporation Ltd v Caloundra City Council & Anor* [2004] QPEC 085 at [76], the Court upheld Council's decision to refuse Telstra's application. It was said that "*perfect mobile reception is not a right conferred upon those who find themselves inside houses in certain parts of Caloundra"*. The provision of perfect internet service is not a conferred right either, especially in a rural setting where such sacrifices are made in order to maintain a certain lifestyle.	All applications are assessed on their merit. The maximum separation distance between towers within the fixed wireless network, and between a fixed wireless facility and receivers, is dependent upon a number of factors including topographical features and vegetation, and is not a universal metric that would apply in all locations. NBN contends that communities such as Peachester are significantly behind surrounding communities in access to reliable, quality broadband and the proposal seeks to remedy this. The provision of quality broadband to all residents is consistent with the strategic outcomes of the planning scheme - *A high speed digital telecommunications network is in place that supports technology based enterprise on the Sunshine Coast and a broader local economy within a global business and communications environment.*
<u>Failure to show total NBN proposal for region</u> • A region wide network of NBN proposals has failed to display the total picture at any information session or within this DA. • Up to 5 towers will be needed to service Peachester. • NBN would not be planning additional sites in the greater Peachester region if the site planned for Range Rd was able to provide the service standard coverage as stated in this document by NBN. • In the absence of a more detailed explanation, particular to the subject site and the existing Telstra facility, co-location should not be discounted.	The application clearly describes how the proposal fits in to the NBN wireless network: *The proposal for Peachester is a transmission "mini-HUB" site within the fixed wireless network design – it is intended to support downstream services transmitting from the approved fixed wireless facilities at Eudlo and Wilkes Knob, as well as data transmitting from the as-yet to be proposed facility anticipated at Mount Mellum. It is designed to transmit data back to the approved fibre HUB facility at Beerwah.* *The proposal has been designed to provide a direct service to the local community, comprising more than 660 properties, and act as a critical transmission link to a more than 1,000 other properties across the Sunshine Coast hinterland. In total, almost 1,700*

ISSUES	***COMMENTS***
	properties will be reliant on receiving an NBN service either directly or indirectly via the proposal at Peachester. Council is not aware of any additional NBN proposals in Peachester. NBN has advised that it has investigated all possible co-location opportunities, including the Telstra facility at Tower Lane, Beerwah. NBN has advised that as this facility is located too far away from the service area (5km to the east of the subject site) and at an elevation of 130m lower than the subject site, it represents an *"overwhelming technical failure".*

MCU17/2007 – PEACHESTER – SUPPORT – 1 PROPERLY MADE	
ISSUES	*COMMENTS*
<u>NEED</u> • This development has been delayed for too long. • The inclusion of Optus mobile phone facilities co-locating on this tower will improve the mobile reception. • Will provide reliable reception and services important to homes and businesses.	Noted.

CONCLUSION:

The proposed development sufficiently complies with the requirements of the Planning Scheme and does not raise any significant issues that cannot be addressed by reasonable and relevant conditions. The application is therefore recommended for approval.