

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven

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Applicant	Visionstream Pty Ltd
Property	Lot 103 DP865070, No.55 Beacon Road, Teven
Proposal	To erect a telecommunications (fixed wireless broadband) facility comprising a 30 metre high monopole tower with antennas, compound area, equipment and associated works
Effect of Planning Instrument	The land is zoned 1(b) – Rural (Secondary Agricultural Land) under the provisions of the Ballina LEP 1987.
Locality Plan	The subject land is depicted on the locality plan attached

Introduction

The application is for the erection of a telecommunications facility comprising a 30 metre high monopole tower with antennas, compound area, equipment and associated works. This application is reported to Council for determination given the issues raised in the public submissions. Plans of the proposed telecommunications facility are attached.

Reportable Political Donations

Details of known reportable political donations are as follows:

- Nil

Public Exhibition

All adjoining land owners and occupants were notified of the proposed development and three submissions were received. A copy of each submission is attached.

The following issues of concern were raised within the submissions.

1. Interpretation of the Table of Predicted Electromagnetic Emissions (EME). Does it mean that the maximum predicted EME level would be 0.029% of the Australian Standard for safe exposure to EMEs?

Comment: Yes, the applicant has calculated that the proposed EME levels are 0.029% of the maximum permitted by the Australian Standard.

2. Is Council able to satisfy itself that the process adopted by the applicant to calculate the predicted EME levels was conducted accurately?

Comment: The applicant states that EME exposure levels for this site have been calculated in accordance with the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) prediction methodology and report format. There is no evidence to suggest otherwise.

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven

3. As noted by the applicant, there are already three telecommunication towers in the vicinity of the proposed tower. Is Council informed of the cumulative effect of EME levels on surrounding areas from the operation of four towers?

Comment: Whilst the applicant has not provided the exact figure for the cumulative impact of the proposed tower and the three other towers, based on the evidence supplied there would have to be a significant number of towers of a similar impact to reach the maximum safe exposure limits.

4. The applicant has failed to adequately consider co-location. There are three other towers in the vicinity and options such as extending an existing tower in height must be considered.

Comment: The applicant supplied additional information in relation to this matter which demonstrates that the other three towers are not suitable for co-location. This is included as an attachment to this report. (Refer to letter from Visionstream dated 2 April 2014)

5. A number of concerns were raised with the proposal failing to comply with the NSW Telecommunications Facilities Guideline including Broadband 2010.

Comment: These matters are discussed in detail in the following report.

6. The report submitted with the application incorrectly identifies adjacent sites and makes incorrect statements in relation to what sites have existing telecommunication facilities.

Comment: This issue was raised with the applicant who acknowledged the incorrect statements and provided additional information to correct the errors in the report. The additional information supplied correctly identifies neighbouring properties and provides an adequate assessment of co-location feasibility.

7. What measures will be taken to reduce air conditioning noise levels?

Comment: The facility will have an air-conditioning unit installed (similar to a domestic air conditioning unit). With the unit being located approximately 70m to the neighbours house, it is likely that noise will not be a problem however to ensure offensive noise is not created a specific condition will be applied.

8. The report submitted with the proposal states that there will be no visual impact, however no site inspection was made from our property. The proposed site will impact greatly on our property.

Comment: The proposed facility will have a visual impact on surrounding properties due to the height of the structure and the prominence of the site. The applicant contends that the height of the tower is the minimum required to achieve reasonable coverage and the slim line monopole structure, instead of a lattice tower, will minimize its impact in the landscape. It is also proposed that the monopole will be galvanized steel with a non-reflective grey colour.

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven

9. Obstruction of views from 444 Teven Road

Comment: The subject dwelling at 444 Teven Road has almost 360 degree views of the surrounding area as stated in the submission. The addition of the proposed tower to the south west of the dwelling will impact on views in this direction.

10. The proposed new tower/pole is in direct line with our microwave and radio links back to our site at Tregeagle. Besides possible interference that could be caused to our equipment (which the Australian Communications and Media Authority (ACMA) strongly legislate) the proposed new tower/pole would also block not only our signals to Tregeagle, but also NSW Fire and Rescue and NSW Ambulance who co-locate on our existing tower.

Comment: This concern was forwarded to the applicant during the assessment of the application for comment. A response was forthcoming which is attached to this report. (Refer to letter from Visionstream dated 2 April 2014)

11. Visionstream dishes/antennas will be on the same horizontal plane as ours, causing a possible OH and S issue for our staff climbing our tower for maintenance or installation.

Comment: This concern was forwarded to the applicant during the assessment of the application for comment. A response was forthcoming which is attached to this report. (Refer to letter from Visionstream dated 2 April 2014)

Report

The proposed development has been assessed under the heads of consideration in Section 79 (C) of the Environmental Planning and Assessment Act 1979. The following matters are of particular relevance in Council's determination of the Application.

State Environmental Planning Policy (Infrastructure) 2007

Clause 115 permits any person to undertake a development for the purposes of telecommunication facilities on any land with consent.

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

NSW Telecommunications Facilities Guideline including Broadband 2010

When considering a development application for a telecommunications facility, Council is to consider the following Principles:

Principle One: A telecommunications facility is to be designed and sited to minimise visual impact.

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven

Specific Principle	Comment
(a) As far as practical, a telecommunications facility that is to be mounted on an existing building or structure should be integrated with the design and appearance of the building or structure.	N/A
(b) The visual impact of telecommunications facilities should be minimised, visual clutter is to be reduced particularly on tops of buildings, and their physical dimensions (including support mounts) should be sympathetic to the scale and height of the building to which it is to be attached, and sympathetic to adjacent buildings.	N/A
(c) Where telecommunications facilities protrude from a building or structure and are predominantly backgrounded against the sky, the facility and their support mounts should be either the same as the prevailing colour of the host building or structure, or a neutral colour such as grey should be used.	N/A
(d) Ancillary facilities associated with the telecommunications facility should be screened or housed, using the same colour as the prevailing background to reduce its visibility, including the use of existing vegetation where available, or new landscaping where possible and practical.	The associated equipment is proposed to be housed within two small sheds and is considered to comply with this principle.
(e) A telecommunications facility should be located and designed to respond appropriately to its rural landscape setting.	The facility has been located to provide maximum coverage for the network; the design is a monopole and not uncommon in a rural setting.
(f) A telecommunications facility located on, or adjacent to, a State or local heritage item or within a heritage conservation area, should be sited and designed with external colours, finishes and scale sympathetic to those of the heritage item or conservation area.	N/A
(g) A telecommunications facility should be located so as to minimise or avoid the obstruction of a significant view of a heritage item or place, a landmark, a streetscape, vista or a panorama, whether viewed from public or private land.	No heritage items existing in surrounding locality
(h) The relevant local government authority must be consulted where the pruning, lopping, or removal of any tree or other vegetation would contravene a Tree Preservation Order applying to the land or where a permit or development consent is required.	N/A
(i) A telecommunications facility that is no longer required is to be removed and the site restored, to a condition that is similar to its condition before the facility was constructed.	N/A
(j) The siting and design of telecommunications facilities should be in accordance with any relevant Industry Design Guides.	The applicant has provided the following justification regarding visual impacts: <i>"A slim line monopole structure has been selected instead of the bulkier</i>

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven

	<i>lattice tower design. The monopole will be galvanised steel and a non-reflective grey colour. The grey is expected to blend into the background of the site".</i>
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Principle Two: Telecommunications facilities should be co-located wherever practical.

Specific Principle	Comment
(a) Telecommunications lines are to be located, as far as practical, underground or within an existing underground conduit or duct.	N/A
(b) Overhead lines, antennas and ancillary telecommunications facilities should, where practical, be co-located or attached to existing structures such as buildings, public utility structures, poles, towers or other radio communications equipment to minimise the proliferation of telecommunication facilities and unnecessary clutter.	Attached to this report is the applicant's response to co-location.
(c) Towers may be extended for the purposes of co-location.	Attached to this report is the applicant's response to co-location.
(d) The extension of an existing tower must be considered as a practical co-location solution prior to building new towers.	Attached to this report is the applicant's response to co-location.
(e) If a facility is proposed not to be co-located the proponent must demonstrate that co-location is not practicable.	Attached to this report is the applicant's response to co-location.
(f) If the development is for a co-location purpose, then any new telecommunications facility must be designed, installed and operated so that the resultant cumulative levels of radio frequency emissions of the co-located telecommunications facilities are within the maximum human exposure levels set out in the Radiation Protection Standard.	N/A

Principle Three: Health standards for exposure to radio emissions will be met.

Specific Principle	Comment
(a) A telecommunications facility must be designed, installed and operated so that the maximum human exposure levels to radiofrequency emissions comply with Radiation Protection Standard.	N/A
(b) An EME Environmental Report shall be produced by the proponent of development to which the Mobile Phone Network Code applies in terms of design, siting of facilities and notifications. The Report is to be in the format required by the Australian Radiation Protection Nuclear Safety Agency. It is to show the predicted levels of electromagnetic energy surrounding the development comply with the safety limits imposed by the Australian Communications and Media Authority and the Electromagnetic Radiation Standard, and demonstrate	The applicant has provided the following in relation to this principle: <i>"EME exposure limits from this site have been calculated in accordance with the ARPANSA prediction methodology and report format. The report calculates existing and the cumulative predicted EMR from the proposed facility"</i> The report is attached for Council's

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven

compliance with the Mobile Phone Networks Code.	consideration.
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Principle Four: Minimise disturbance and risk, and maximise compliance

Specific Principle	Comment
(a) The siting and height of any telecommunications facility must comply with any relevant site and height requirements specified by the <i>Civil Aviation Regulations 1988</i> and the <i>Airports (Protection of Airspace) Regulations 1996</i> of the Commonwealth. It must not penetrate any obstacle limitation surface shown on any relevant Obstacle Limitation Surface Plan that has been prepared by the operator of an aerodrome or airport operating within 30 kilometres of the proposed development and reported to the Civil Aviation Safety Authority Australia.	The application has been referred to CASA and Ballina Airport, suitable conditions of consent have been provided.
(b) The telecommunications facility is not to cause adverse radio frequency interference with any airport, port or Commonwealth Defence navigational or communications equipment, including the Morundah Communication Facility, Riverina.	The applicant has provided the following response in relation to this principle: <i>"The facility is designed to create no electrical interference problems with other radio based systems and complies with the relevant Australian Standards"</i>
(c) The telecommunications facility and ancillary facilities are to be carried out in accordance with the applicable specifications (if any) of the manufacturers for the installation of such equipment.	Conditions of consent will address this principle.
(d) The telecommunications facility is not to affect the structural integrity of any building on which it is erected.	The proposed facility is not located on or near an existing structure.
(e) The telecommunications facility is to be erected wholly within the boundaries of a property where the landowner has agreed to the facility being located on the land.	The proposed facility is located entirely within one property.
(f) The carrying out of construction of the telecommunications facilities must be in accordance with all relevant regulations of the Blue Book – 'Managing Urban Stormwater: Soils and Construction' (Landcom 2004), or its replacement.	Conditions of consent will address this principle.
(g) Obstruction or risks to pedestrians or vehicles caused by the location of the facility, construction activity or materials used in construction are to be mitigated.	Conditions of consent will address this principle.
(h) Where practical, work is to be carried out during times that cause minimum disruption to adjoining properties and public access. Hours of work are to be restricted to between 7.00am and 5.00pm, Mondays to Saturdays, with no work on Sundays and public holidays.	Conditions of consent will address this principle.

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven

Specific Principle	Comment
(i) Traffic control measures are to be taken during construction in accordance with <i>Australian Standard AS1742.3-2002 Manual of uniform traffic control devices – Traffic control devices on roads.</i>	Conditions of consent will address this principle.
(j) Open trenching should be guarded in accordance with <i>Australian Standard Section 93.080 – Road Engineering AS1165 – 1982 – Traffic hazard warning lamps.</i>	Conditions of consent will address this principle.
(k) Disturbance to flora and fauna should be minimised and the land is to be restored to a condition that is similar to its condition before the work was carried out.	No flora or fauna will be impacted upon.
(l) The likelihood of impacting on threatened species and communities should be identified in consultation with relevant state or local government authorities and disturbance to identified species and communities avoided wherever possible.	No flora or fauna will be impacted upon.
(m) The likelihood of harming an Aboriginal Place and / or Aboriginal object should be identified. Approvals from the Department of Environment, Climate Change and Water (DECCW) must be obtained where impact is likely, or Aboriginal objects are found.	There are no aboriginal sites in the surrounding vicinity.
(n) Street furniture, paving or other existing facilities removed or damaged during construction should be reinstated (at the telecommunications carrier's expense) to at least the same condition as that which existed prior to the telecommunications facility being installed.	Conditions of consent will address this principle.

Ballina Local Environmental Plan 1987 (BLEP 1987)

The subject land upon which the tower is located is zoned 1 (b) Rural (Secondary Agricultural Land) under the provisions of BLEP 1987. Telecommunication facilities are permissible in the zone with consent.

The zone objectives are as follows:

The primary objective is to regulate the subdivision and use of land within this zone:

- (a) to encourage the productive use of the land and enable development ancillary to agricultural land uses, particularly dwelling-houses, rural workers' dwellings and rural industries, and*
- (b) to permit a range of uses which are compatible with the rural character of the land, particularly tourist oriented developments and recreation establishments and recreation facilities, and*

Comment: The proposal does not adversely impact on the productive use of the land and is therefore consistent with (a) above. Whilst the proposal is not necessarily compatible with the rural character of the land, the public benefit from

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven

the proposal is considered to outweigh this objective. Telecommunication facilities in rural locations are not uncommon.

The secondary objectives is to ensure that development within the zone:

- (a) maintains the rural character of the locality, and*
- (b) does not create unreasonable or uneconomic demands, or both, for the provision or extension of public amenities or services.*

Comment: Rural character is discussed above. Additionally the proposal is not considered to create unreasonable or uneconomic demands on public amenities and services and in fact assists in providing an essential public service to the surrounding community.

The exceptions to these objectives are:

- (a) development of land within the zone for public works and services, outside the parameters specified in the primary and secondary objectives, subject to the impact on agricultural resources being minimised, where practical,*
- (b) development of land for extractive resource purposes, and*
- (c) development of an industry which, by reason of the processes involved or the method of manufacture or the nature of the materials used or produced, requires isolation from other buildings.*

Comment: As discussed above, the proposal does not significantly impact on agricultural resources in the surrounding locality yet provides important infrastructure which will benefit the broader community.

Environmental Impacts and Suitability of the Site

Whilst the proposal is considered to create a visual impact on surrounding properties due to the height of the structure and the prominence of the site, the overall public benefit of the proposal is considered to outweigh these impacts.

The applicant states that:

"It is important to note that the proposed site at Teven has been designed as a Fixed Wireless Hub site. This means that it not only provides the service to the local community around Teven, but also provides an essential connection to adjoining downstream facilities, linking back into the network through North Wardell and Alstonville North. Without the proposed site at Teven other communities cannot link back into this network. From a technical perspective the proposed facility at Teven needs to have a clear line of sight to each adjoining facility and also a sufficient height to provide the NBN service to the local community."

Additional information was supplied by the applicant in relation to co-location and has been provided as an attachment to this report. It is considered that the information supplied adequately demonstrates that co-location is not a feasible option in this instance.

A 'Summary of Estimated RF EME levels' has been submitted by NBNCo Ltd dated 19/6/13 to address the potential impacts from EME from the proposed facility on nearby residential premises. The report concludes that EME from the proposed facility will be well below the maximum EME level allowed with an output of 0.029% of the ARPANSA public exposure limits anticipated.

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven

A condition could be applied to the consent requiring certification that the EME levels from the facility comply with the ARPANSA public exposure limits and be submitted to Council within three months of the commissioning of the facility.

Overall, whilst the proposal may create visual impacts on the surrounding properties, the site attributes are considered conducive to the development and approval of the proposal is considered to be within the broader public interest.

Conclusion

The application seeks consent for the erection of a telecommunications facility comprising a 30 metre high monopole tower with antennas, compound area, equipment and associated works.

A key issue in relation to the proposal is whether Council should require the applicant to co-locate on one of the other three towers in the surrounding vicinity. It is considered that the applicant has adequately explained why in the circumstances this is not feasible.

The proposal is permissible in the zone and does not impede on the future agricultural use of the land and adjoining lands. The application has been assessed having regard for Section 79C of the Environmental Planning and Assessment Act 1979 and could be supported by Council subject to conditions of consent.

Option One - That Council approves the development application in accordance with the above assessment subject to the attached conditions.

Option Two - That Council refuse the development application, if it is of the opinion that the proposed facility should be required to co-locate.

Option one is the recommended approach for the reasons outlined in this report.

RECOMMENDATION

That Development Application 2014/19 for the erection of a telecommunications facility comprising a 30 metre high monopole tower with antennas, compound area, equipment and associated works at 55 Beacon Road, Teven, be **APPROVED** subject to the planning, environmental and engineering conditions attached.

Attachment(s)

1. Locality Plan
2. Plans of Proposal
3. Submissions
4. Additional Information from Applicant 2 April 2014
5. Schedule of Conditions

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven.DOC

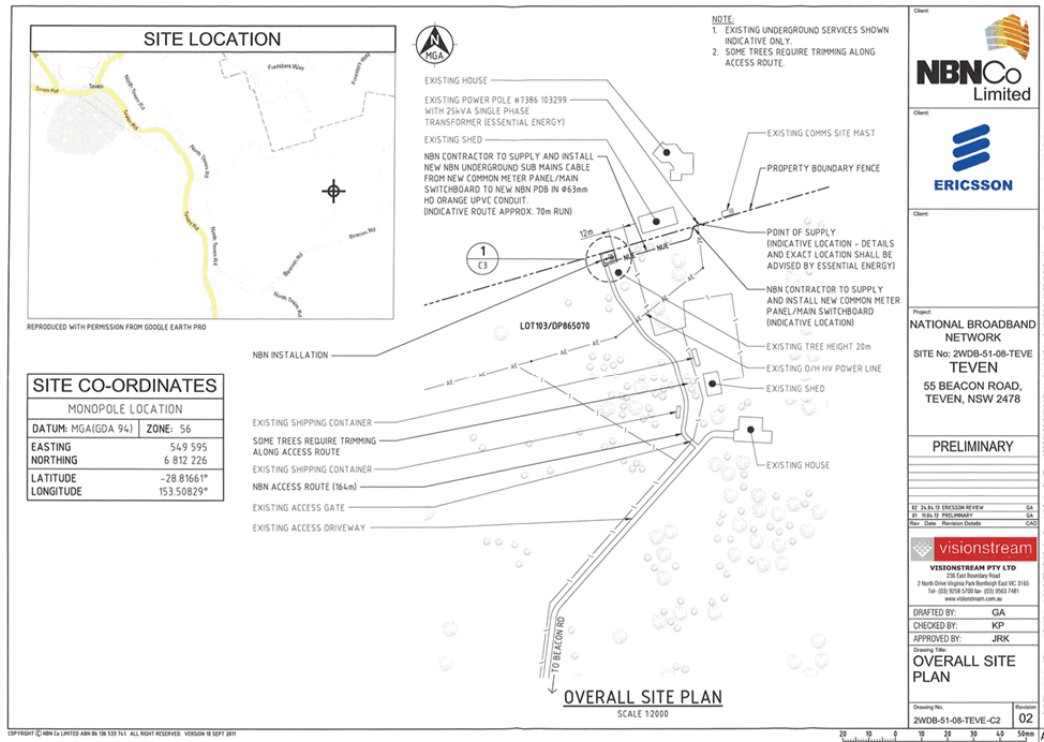
8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven.DOC

Locality Plan 55 Beacon Road, Teven
Proposed Telecommunications Facility



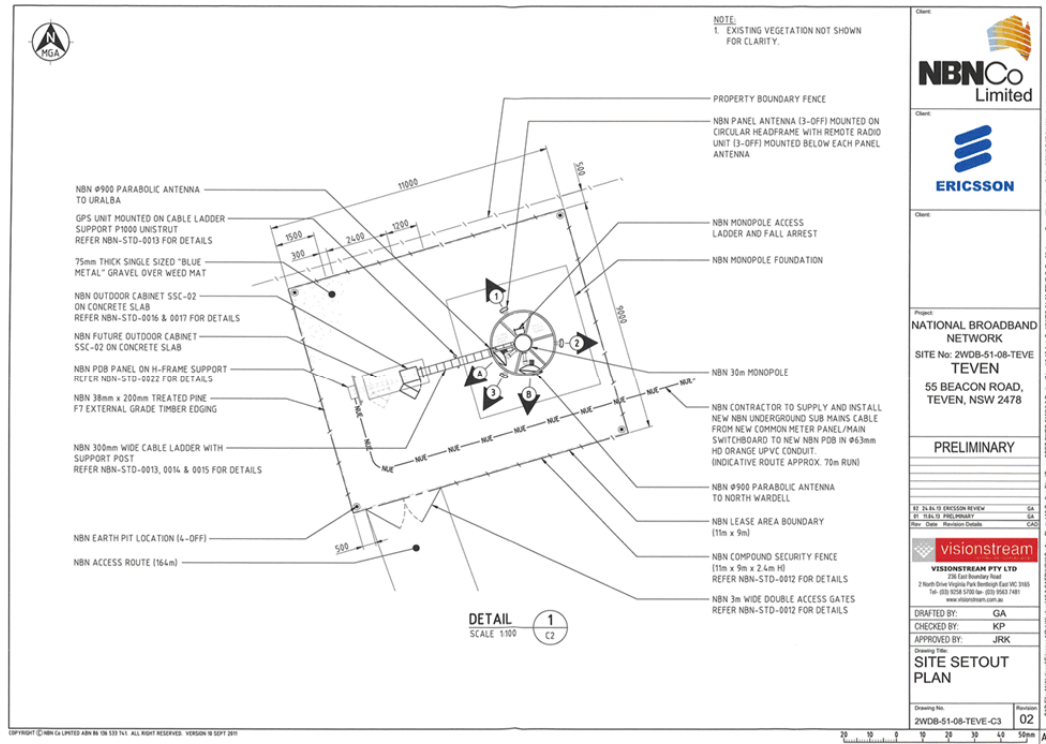
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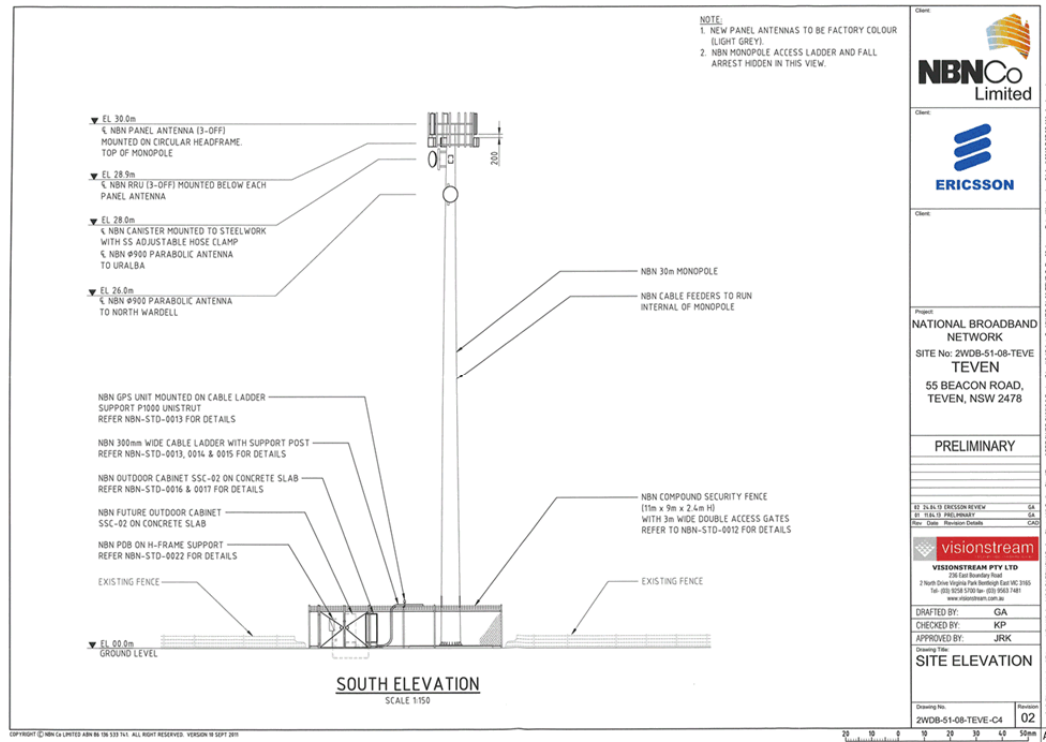
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Client: **NBN Co Limited**

Client: **ERICSSON**

Project: **NATIONAL BROADBAND NETWORK**
 SITE No: 2WDB-51-08-TEVE
TEVEN
 55 BEACON ROAD,
 TEVEN, NSW 2478

PRELIMINARY

BY: JH, CH, JACOBSON REVIEW: GA
 DATE: 15/08/14
 DRAWN: JACOBSON
 CHECKED: JACOBSON
 APPROVED: JACOBSON

visionstream

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DRAFTED BY: GA
 CHECKED BY: KP
 APPROVED BY: JRK

Drawing Title: **SITE ELEVATION**

Drawing No: 2WDB-51-08-TEVE-C4
 Revision: 02

54 Beacon Road
TEVEN NSW 2478

12 February 2014

Mr Rod Willis
Group Manager
Development and Environmental Health
Ballina Shire Council
P.O. Box 450
BALLINA NSW 2478

Dear Mr Willis

RE: DA 2014/19 – Proposal to erect a telecommunications tower at 55 Beacon Road, TEVEN

We refer to your letter of 6 February advising of development application DA 2014/16 and, in particular, the proposal by Visionstream Pty Ltd to erect a 30m high monopole tower on a neighbouring property at 55 Beacon Road, Teven. The purpose of this letter is to seek clarification of a number of matters contained in that development application (DA). Please note that this letter is not intended as a formal objection against the DA – however, in the event that your response to our queries does not arrive in sufficient time to enable any further submissions to be made to you by 28 February (closing date for submissions), we would appreciate your taking the matters raised in this letter under consideration in a manner similar to those raised in an objection.

Public Safety – Radiofrequency Emissions

Section 6.10 of the Statement of Environmental Effects attachment to the DA, and Appendix 3 (Summary of Estimated RF EME Levels) to that attachment would seem to offer reassurance to Council that the predicted levels of Electromagnetic Emissions (EME) to be generated by the proposed telecommunications facility will be well within the relevant Australian standards. That is, we should not be concerned about our health and safety.

Our questions relating to these elements of the DA are:

1. How should we interpret the Table of Predicted EME Levels – does it mean that the maximum predicted EME level would be 0.029% of the Australian standard for safe exposure to EMEs?
2. Is Council able to satisfy itself that the process adopted by the applicant to calculate the predicted EME levels was conducted accurately, and that the results are also accurate?

Page | 1

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven.DOC

3. As noted by the applicant, there are already 3 telecommunication towers in the vicinity of the proposed tower – is Council informed of the cumulative effect of EME levels on surrounding areas from the operation of all 4 towers and, if so, what is that cumulative effect?

Proposed site/location of the tower

The Statement of Environmental Effects attachment discusses the process adopted by the applicant in selecting the proposed site for the tower. In doing so, it canvasses 2 other sites on the same geographical feature, each of which sites has an existing tower, and then dismisses those sites as being unsuitable.

Our questions relating to these elements of the DA are:

4. Given that the NSW Telecommunications Facilities Guideline (referred to in section 5.2.2 of the attachment) states under Principle 2 that "Towers may be extended for the purposes of co-location" and "The extension of an existing tower must be considered as a practical co-location solution prior to building new towers" – is Council satisfied with the applicant's apparent disregard of these principles by failing to consider the option of extending an existing tower?
5. Is Council prepared to have the feature at Teven become a nest of telecommunications towers when clearly the principles mentioned above are intended to minimise the presence of towers in our landscape?

Your responses to these matters would be much appreciated.

Yours sincerely,



Peter and Paulene Blackwood

NORTHERN COMMUNICATIONS

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27/2/2014
Ballina Shire Council
Att: Dwayne Roberts

Re: DA 2014/19
NBN Site Reference 2WDB-51-08-TEVE-C

Letter Of Objection

Dear Sir/Madam,

Northern Communications is a small, local family owned business providing communication services to the Far North Coast.

In respect to DA 2014/19 we (Northern Communications) were recently informed by Denis and Gayl Perkins, that another communications facility was possibly going to be constructed on the same hill that we have our own communications facility at Teven.

We were informed that a company called Visionstream was the entity in charge of the proposed new communication site. We contacted Visionstream to enquire why they hadn't approached us to co-locate on our tower and to also inform Visionstream that our tower would be more than capable of handling any equipment for the NBN rollout.

The gentleman we spoke to at Visionstream didn't even know that Northern Communications existed, let alone that another suitable site was nearby.

After we made a few more follow up calls to Visionstream and giving them the specifications of our tower and hut, the Visionstream representative said the project was too far down the track to change things now.

The issues Northern Communications have with the proposed position of the new tower are as follows:

- 1) The proposed new tower/pole is **in direct line** with our microwave and radio links back to our site at Tregeagle. Besides possible interference that could be caused to our equipment (which the Australian Communications and Media Authority (ACMA) strongly legislate) the proposed new tower/pole would also block not only our signals to Tregeagle, but also NSW Fire and Rescue and NSW Ambulance who co-locate on our existing tower.

Ballina Shire Council
24/07/14

Ordinary Meeting Attachments
Page 7 of 395

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven.DOC

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven.DOC

- 2) Good radio frequency design and engineering is to have antennas in close proximity to be on the same vertical plane to minimize interference. This is why towers have a lot less interference issues than sites that have antennas on the horizontal plane, for example water reservoirs etc.
- 3) Visionstream dishes/antennas will be on the same horizontal plane as ours, causing a possible OH and S issue for our staff climbing our tower for maintenance or installation.

There is what is called the "bore site" of their radiated signal and this will be on the same plane and height as our staff on our tower, and I doubt that this has even been calculated or considered by Visionstream.

For these reasons, Northern Communications strongly objects to the proposal.

Hoping that common sense will prevail and a suitable and more cost effective resolution happens for all parties concerned.

Yours Sincerely
Scott & Donna Barker
Northern Communications

Denis & Gayl Perkins
444 North Teven Road
Teven NSW 2478
02 66878 448
landsvale@bigpond.com

Attention : Dwayne Roberts Ballina Shire Council

**Re: PROPOSED FIXED WIRELESS FACILITY
NBN Site Reference
2WDB-51-08-TEVE-C
DA 2014/19**

Letter of Objection Dated 20-02-2014

We have studied the Development Application DA 2014/19 in detail and question the need for another tower to be erected on the site near our house when three others already exist.

We were not aware of this project until the Survey Pegs appeared on our Boundary Fence and we started asking questions.

1: Site Selection

On page 5 it states that an in depth site selection took place.

This is not correct as no contact was made to us in regard to inspecting our property, which adjoins. Reference is also made to the site being appropriately located to minimize visual impact on the immediate and surrounding area.

We strongly disagree with this, as it will have maximum visual impact on us and the entire Teven valley.

2: Candidate Sites:

Reference: Page 10

Report states that Candidate 2 is located at: 287 Tintenbar Road Teven.

This is not the correct address for this tower.

Tower is located on our property, 444 North Teven Road Teven and is capable of accommodating the required NBN Equipment.

They say it has limited load-bearing capacity. What is the proof of this?

The location of this tower is approximately 100metres from the proposed site of Candidate 3, The Greenfield Facility at Beacon Road Teven.

The report states that Candidate 3 has existing telecommunications facilities.

This is not true. There are no towers on that property.

The towers are located at:

Candidate 1: 118 Beacon Road Teven and

Candidate 2: 444 North Teven Road Teven.

1

The location called Candidate 2 only became an option on our insistence once we became aware of the project. We are convinced it has not been seriously considered, as we had to argue with Visionstream that it even existed and we were told it was too late to consider using the existing tower as the site survey and lease agreement for the Greenfield site had already been completed and only had to be signed by the landowner.

3: Construction and Noise

What measures will be taken to reduce Air conditioning Noise levels?

As our Farm shed and House are closely situated to this we do not want to have to tolerate constant noise from air-conditioner.
Prevailing southerly winds will direct any noise to ward the bedrooms of our house.

The tower, which is already located on our property, is sited to the east and does not cause noise issues for that reason.

4: Guideline Principals

Principle 1 Telecommunications Facility sited to minimize Visual Impact

Section (e) Visual Impact

Report states no impact, however, no site inspection was made from our property. **The proposed site will impact greatly on our visual aspect.**

Section (g) Obstruction of view

Report states no obstruction of views and states that our property views are primary aspect northeast.
This is Incorrect. We have almost 360 degrees views.

Principle 2: Facilities to be co-located where possible

Section (b) (d) (e) Use of existing towers

Reports state no existing telecommunications facilities in the vicinity with required height and location capable of providing the service.
This is incorrect as the Northern Communication tower is very close by. This is identified on the Overall Site Plan in their documentation. Tower Height and structure would be suitable for this project. If it is not, what proof do they have to back up this claim?

5: Zoning

Page 22 : 5.3.2 Ballina LEP Special Uses Zone Objectives

Reference A

Response to the Objective outlined claims the subject property contains an existing navigation mast, which is similar in appearance to the proposed facility. **This is not true. That tower is on a neighbouring property to the East**

Reference B

Based on the proposed location of this tower it will be very visible to both us and the wider community of the Teven valley. However the report states the proposed development has been sited to avoid impacting on the rural character of the area. It is stated it would be visually screened from the majority of residential areas. Which it is not.

6: Planning Considerations

Reference # 6.1.1

This section states that our house is 70 meters away, built into the hill, facing north and away from the existing tower on its property.

1: Our house is NOT built into the hill.

It sits atop the hill with views in all directions.

Window height of our house will be 5-6 metres in height above the base of the tower.

2: They have admitted there is a Tower on our property.

However they have made no site Consultation with us before deciding on the proposed site chosen.

Reference # 6.1.2 Design

Report states will not be excessively visible, intrusive or dominant.

This is incorrect. It will be very visible to us and the entire Teven Valley.

Site Photographs & Site Plans

Page 30 shows 2 photographs taken at the proposed site.

Both photos clearly shows the Northern Communications Tower giving a visual detail of how close it is to the proposed site of this new tower but in a higher and more favourable location.

The Overall Site Plan attached to documentation also details the location of the Northern Communications tower site on our property.

Both of these items clearly contradict the statement made on page 10 where it states that the Candidate 2 Co- location option of the Northern Communications tower is located at 287 Tintenbar Road Teven which is incorrect.

Radio Frequency EME Exposure Levels

What is the Cumulative affect on EME risk when our house is to be in between multiple sites and services as is being proposed and what is the effect when our house is 5-6 metres higher up the hill from the base of the proposed tower?

Normal measurements are from one site only, not multiple sites and on level ground.
In our case the risk will be greater as we are higher.

We Object to this location as a Suitable location mainly because the existing tower, which is owned and operated by Northern Communications, (used mainly for Two Way Radio Repeaters) is already on the highest part of the hill which should be a more obvious location for such a tower. The Tower is 30m tall. It is a lattice steel construction, capable of supporting the necessary antennas and available to be used for such purposes. If it is necessary to have another tower erected it should be in the same vicinity as the Northern Communications tower to minimize the impact to the view and the environment. Two towers together are better than 100metres apart and in full view to the west as is proposed.

In the proposed location the base of the tower will be about 5-6 metres below window height on our house so the EME risk will be greater than specified on level ground.

It will be in full view of our normal entry door, garage and our machinery shed/workshop will be right under the tower, only 20metres away.

Any noise, including air-conditioning will be carried by southerly breeze directly to the west end of our house which is where the bedrooms are located. If the existing Northern Communication tower location was used the air conditioning noise would not be a problem as it is at the other end of our hose and further away. Also any EME risk is minimized as the roof centerline faces southeast towards the existing tower and the ground is level with the house making overall height of tower greater. If the tower is moved further east or south east it would then be closer to the existing Telstra & Optus towers, which also begs the question, why not co-locate at either of these two sites or build a new tower at these sites, 30m high if necessary like what is being proposed.

We already have 3 towers, do we really need a fourth one in full view to the west.

Another consideration should be for light aircraft in the Teven Valley with a 30m tower on the western edge of the hill and in the vicinity of the Ballina Airport. In bad weather Aircraft of all types fly around and directly over this hill.

Aircraft safety should be considered.

We trust this information and our opinions will be considered in this Development Application Approval Process.

Denis & Gayl Perkins
20th February 2014

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven.DOC



Our Ref: 2WDB-51-08-TEVE

2 April 2014

Mr Dwayne Roberts
Ballina Shire Council
PO Box 450
Ballina NSW 2478

Dear Mr Roberts

Planning Permit Application 2014/19 for a Proposed Fixed Wireless NBN (Telecommunications) Facility, 55 Beacon Road, Teven, NSW 2478 (Lot 103 DP865070)

Thank you for your letters dated 18 and 27 February 2014, which were received via email on 3 March 2014. We would also like to take this opportunity to address the comments received by Northern Communications dated 27 February 2014.

With regards to the information request from the Civil Aviation Safety Authority:

1. The height of the proposed monopole is positioned at 129.44m AHD at ground level.
2. The height of the facility from ground level to the highest point of the panel antennas is 30.55m.

Examination of Co-location opportunities

NBN Co emphasises that it always seeks to co-locate on existing infrastructure first before proposing new structures. Co-location is always thoroughly examined when seeking new locations for the NBN Fixed Wireless network. Co-location offers reduced visual impacts, considerably lower costs and a speedier decision making process, as such this is only ruled out where it cannot be suitably achieved. Examples of this can be seen in Ballina Shire where NBN Co has proposed to co-locate on existing facilities at Alstonville North, Knockrow and Meerschaum Vale. As part of the early scoping process for Teven a number of existing facilities were considered and assessed to determine whether they could be utilised or extended to provide suitable coverage to the local community, and link into the wider fixed wireless network. These are outlined on the following pages.

It is important to note that the proposed site at Teven has been designed as a Fixed Wireless Hub site. This means that it not only provides the service to the local community around Teven, but also provides an essential connection to adjoining downstream facilities, linking back into the network through North Wardell and Alstonville North. Without the proposed site at Teven other communities cannot link back into this network. From a technical perspective the proposed facility at Teven needs to have a clear line of sight to each adjoining facility and also a sufficient height to provide the NBN service to the local community.



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Ballina Shire Council
24/07/14

Ordinary Meeting Attachments
Page 14 of 395

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven.DOC

Set out below is further information on the existing facilities examined within the search area;

118 Beacon Road, Cumbalum, NSW, 2478 – Telstra 20m monopole

This existing facility comprises of a 20m monopole set within an existing area of 15m tall trees, and is utilised by Telstra. Telstra were approached for a Level 1 request to provide details on the availability of space for co-location. This response indicated that the only available height was 15m, which is not sufficient for any equipment to function above the existing trees. In addition to this, Telstra have existing reservations up to 3m above the existing monopole. NBN Co requires a minimum height of 30m in this location for the panel antennas, which cover the local premises. In addition to this 27m and 28m are required for the parabolic antennas, which link to the adjoining facilities.

Following this feedback it was assessed as to whether this facility could be extended in order to provide the required heights for NBN Co on the existing structure. As Telstra has reservations for the top 5m, plus a further 3m for expansion above the existing structure, any extension would need to accommodate Telstra on the top 8m. Having regard to this in order to accommodate both Telstra and NBN Co, this facility would need to be at least 40m in height, which could not be structurally achieved by extending this existing facility.



Figure 1 – Existing Telstra facility

118 Beacon Road, Cumbalum, NSW, 2478 – Optus 22m monopole

The existing facility here comprises of a 22m steel monopole, set within 15m tall trees which facilitates Optus equipment as well as an aircraft guidance beacon used by Ballina aerodrome. Optus were approached for a Level 1 request. This response offered NBN Co. a height of 10m on the existing structure due to existing Optus reservations and load. Optus advised that even with this height availability the facility will be close to structural capacity with the Optus future load alone.

NBN Co requires a minimum height of 30m in this location for the panel antennas, which cover the local premises. In addition to this 27m and 28m are required for the parabolic antennas, which link to the adjoining facilities. Having regard to the available height, and the existing and future load, this structure would need to be in excess of 40m and as such could not be extended to provide the required NBN coverage for this location.



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Figure 2 – Existing Optus facility

444 North Teven Road, Teven, NSW, 2478 – Northern Communications 30m lightweight lattice

The existing structure comprises of a 30m lightweight steel lattice tower which the ACMA database indicates contains approximately 25 existing items of radio communications equipment for both the emergency services and private enterprises. This equipment is affixed at intervals along this structure as can be seen in the image below. Engineers have advised that this lightweight structure would not be sufficient to carry the load of the NBN Co panel antennas and parabolic dish required. Irrespective of this any co-location would need to provide NBN Co with a height of 30m for the panel antennas and 28 and 26m for the parabolic dish. In addition to this a colocation would need to accommodate the existing equipment and by law must not interfere with them. Having regard to the positioning of the existing equipment and NBN Co requirements, any extension would require an overall height of between 35-40m, which could not structurally be achieved on this existing facility.

It should also be noted that the landowner was approached in July 2012, but indicated that they were not interested in any proposal.



Figure 3 – Existing Northern Communications Facility



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Issues raised by Northern Communications

Following receipt of the objection from Northern Communication's, Visionstream contacted them directly requesting details of the azimuths, orientation, frequency and heights of their existing equipment. Emails were sent on 12 and 26 March, as well as follow up phone calls, however no response was forthcoming. Nonetheless, Ericsson radio engineers have reviewed the details contained on the ACMA database for this site, as well as site photographs and mapping. Based on this assessment we can confirm that the proposed NBN facility is not in the direct line of sight of the Northern Communication's equipment. The proposed structure is placed approximately 251 degrees compared to the Northern Communications structure, which gives NBN approximately 15-25 degrees separation from their azimuth. As such the proposed facility will not interfere with the existing equipment on the adjacent site.

With respect to the occupational health and safety query, this is something that is taken very seriously by Visionstream and Ericsson and is always considered, for every site. The attached Antenna EME Exclusion Zones are contained in drawing 2ALS-51-06TEVE-R1 Rev C, which is attached for your information. It is important to note from these that the 'Limited Access Exclusion Zone' extends to 10.5m in a horizontal plane, from the proposed structure at its greatest distance. As such with the Northern Communications structure approximately 85m from the proposal, any staff on this structure will not be working within the exclusion zones of the NBN facility.

I hope this information provides you with sufficient information to enable the Council to support this proposal, but should you or any Council Officer wish to discuss any aspect of the application in more detail, please do not hesitate to call Richard Turner on 03 9258 5803 or email richard.turner@visionstream.com.au

Yours Sincerely,



Richard Turner
Environmental Planner

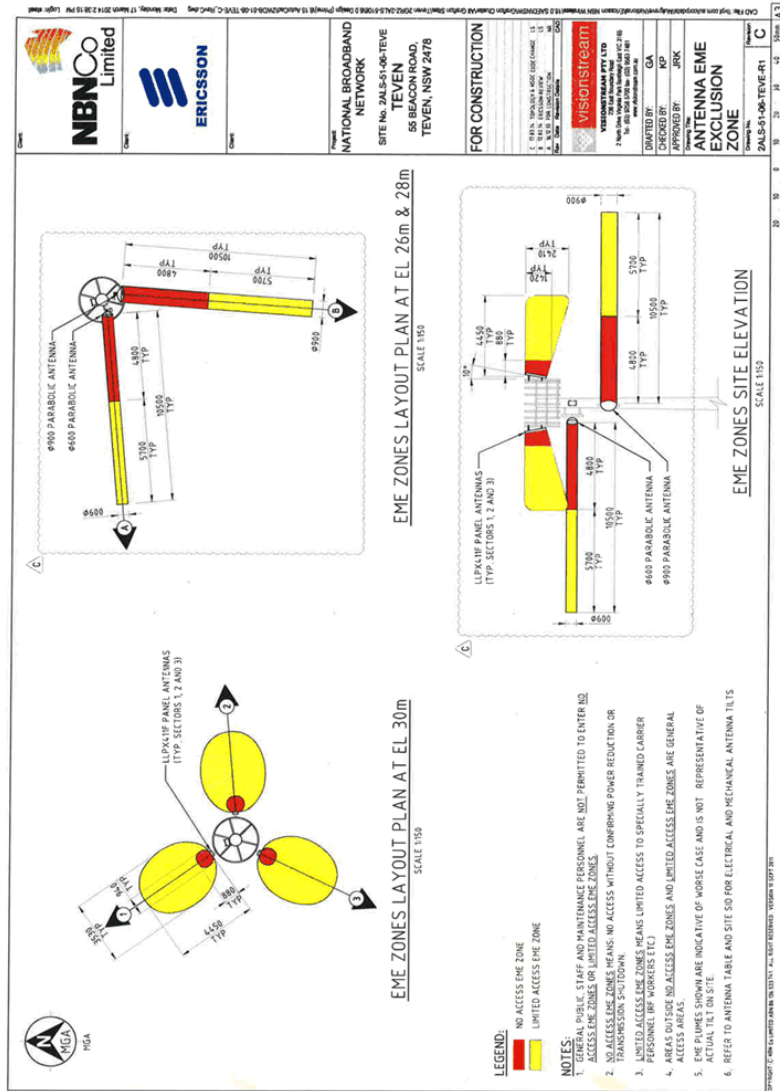
Visionstream



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Frequency	Client	Licence No
852.1125 MHz Rx	Fire and Rescue NSW (3808)	1214520
928.1125 MHz Tx	Fire and Rescue NSW (3808)	1214520
419.200 MHz Tx	Fire and Rescue NSW (3808)	1214670
409.750 MHz Rx	Fire and Rescue NSW (3808)	1214670
462.025 MHz Tx	Ambulance Service of NSW (17661)	1251658
452.525 MHz Rx	Ambulance Service of NSW (17661)	1251658
414.300 MHz Rx	Ambulance Service of NSW (17661)	1251664
404.850 MHz Tx	Ambulance Service of NSW (17661)	1251664
163.7375 MHz	Boral Resources Pty Ltd (3792)	1280562
159.1375 MHz	Boral Resources Pty Ltd (3792)	1280562
473.950 MHz Tx omni	Swanage Pty Ltd (536360)	1412871
479.150 MHz Rx Omni	Swanage Pty Ltd (536360)	1412871
474.600 MHz Tx Omni	BUSLINES GROUP PTY LIMITED (20005712)	1427995
479.800 MHz Rx Omni	BUSLINES GROUP PTY LIMITED (20005712)	1427995
484.625 MHz Rx Omni	Swanage Pty Ltd (536360)	156608
472.450 MHz Tx Omni	Swanage Pty Ltd (536360)	520281
483.925 MHz Rx Omni	Swanage Pty Ltd (536360)	30638
483.325 MHz Rx Omni	Swanage Pty Ltd (536360)	30642
477.650 MHz Rx Omni	Swanage Pty Ltd (536360)	520281
489.825 MHz Tx Omni	Swanage Pty Ltd (536360)	156608
404.550 MHz Tx	BUSLINES GROUP PTY LIMITED (20005712)	1428001
414.000 MHz Rx	BUSLINES GROUP PTY LIMITED (20005712)	1428001
489.125 MHz Tx Omni	Swanage Pty Ltd (536360)	30638
488.525 MHz Tx Omni	Swanage Pty Ltd (536360)	30642
505.500 Mhz Rx		
515.500 Mhz Tx		
506.5125 Mhz Rx		
516.5125 Mhz Tx		
507.5125 Mhz Rx		
517.5125 Mhz Tx		

5.8Ghz Northern Comms link to tregeagle
 3.6 Ghz/5.8 Ghz WWWires
 5.8 Ghz WWWires

8.1 DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven.DOC

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Hieght	Bearing
20 Mtrs	Goon'bah 269 deg
20 Mtrs	Goon'bah 269 deg
30 Mtrs	Omni
35 Mtrs	Omni
30 Mtrs	Omni
35 Mtrs	Omni
16 Mtrs	P'Nest 260 deg
16 Mtrs	P'Nest 260 deg
	No Equipment
	No Equipment
22 Mtrs	Omni
35 Mtrs	Omni
22 Mtrs	Omni
35 Mtrs	Omni
35 Mtrs	Omni
22 Mtrs	Omni
35 Mtrs	Omni
35 Mtrs	Omni
35 Mtrs	Omni
22 Mtrs	Omni
12 Mtrs	Wyreema 267 deg
12 Mtrs	Wyreema 267 deg
22 Mtrs	Omni
22 Mtrs	Omni
15 Mtrs	Tregeagle 260 deg
15 Mtrs	Tregeagle 260 deg
14 Mtrs	Tregeagle 260 deg
14 Mtrs	Tregeagle 260 deg
13 Mtrs	Tregeagle 260 deg
13 Mtrs	Tregeagle 260 deg
25 Mtrs	Tregeagle 260 deg
20 Mtrs	Coorabell
20 Mtrs	Teven Valley

SCHEDULE OF CONDITIONS

GENERAL

1. Development being carried out generally in accordance with the plans and associated documentation lodged by, or on behalf of, the applicant, including plans, prepared by Visionstream Pty Ltd, numbered 2WDB-51-08-TEVE-C1, 2WDB-51-08-TEVE-C2, 2WDB-51-08-TEVE-C3, 2WDB-51-08-TEVE-C4, Revision 2, dated 24 April 2014, stamped approved, except as modified by any condition in this consent.

2. **BCA compliance**

The buildings are to comply with the requirements of the Building Code of Australia and relevant Australian Standards.

PRIOR TO ISSUE OF CONSTRUCTION CERTIFICATE (Building)

The following conditions in this section of the consent must be complied with or addressed prior to the issue of any Construction Certificate relating to the approved development.

3. **Administration/inspection fees**

Where Council is not chosen as the Principal Certifying Authority, the relevant certificate registration fees are required to be paid to Council in accordance with Council's Fee Schedule, prior to the issue of a Construction Certificate.

4. **Issue of construction certificate**

The erection of a structure under the terms and conditions of this Development Consent must not be commenced until:

- (a) Detailed plans and specifications of the structure have been endorsed with a Construction Certificate by:
 - (i) The Council; or
 - (ii) An accredited certifier; and
- (b) The person having the benefit of the development consent has appointed a Principal Certifying Authority has notified the Council (if Council is not the principal certifying authority) of the appointment; and
- (c) The person having the benefit of the development consent has given at least two (2) days notice to the Council of the person's intention to commence the erection of the building.

5. As the tower falls within the requirements for notification of Tall Structures, the proponent will be required to submit advice prior to the issue of a Construction Certificate in the preferred format to RAAF-AIS as stated in the attached CASA Advisory Circular AC139.08(0). Copies of that advice are to be provided to Ballina Byron Gateway Airport's Operations Manager.

PRIOR TO CONSTRUCTION WORK COMMENCING

The following conditions in this section of the consent must be complied with or addressed prior to commencement of construction works relating to the approved development.

6. Erection of Signs

- (1) A sign must be erected in a prominent position on any site on which building work, subdivision work or demolition work is being carried out:
- showing the name, address and telephone number of the Principal Certifying Authority for the work, and
 - showing the name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours, and
 - stating that unauthorised entry to the work site is prohibited.
- (2) Any such sign is to be maintained while the building work, subdivision work or demolition work is being carried out, but must be removed when the work has been completed.
- (3) This clause does not apply in relation to building work, subdivision work or demolition work that is carried out inside an existing building that does not affect the external walls of the building.
- (4) This clause does not apply in relation to Crown building work that is certified, in accordance with Section 109R of the Act, to comply with the technical provision of the NSW Government's building laws.

7. Building waste containment

A suitable waste container capable of holding blowable type building waste must be made available on the building site during the course of construction. Building waste such as paper, plastic, cardboard, sarking etc. must be regularly cleaned up and placed in the waste container so that it cannot be blown off the building site and litter the locality.

8. Builder's toilet

A suitable builder's toilet is to be provided on-site before building work commences. Such facility is to either connect to Council's sewer or a suitable approved chemical closet is to be provided.

9. Safety fencing

The building site is to be provided with adequate safety fencing preventing public access onto the site. Such protection measures are required to protect the public from construction works including dangerous excavations. Signage, restricting unauthorised site entry, containing the builder's name, licence number and contact telephone numbers is to be provided in a visually prominent location on the site.

10. The following notification must be provided to Ballina Byron Gateway Airport's Operations Manager:

- I. at the commencement of works on site;
- II. at least one week prior to the use of cranes higher than 20m above ground level on the site; and
- III. immediately upon completion

These notifications are to ensure that an assessment on the airports airspace can be made and any Notice to Airmen prepared and issued.

DURING CONSTRUCTION

The following conditions in this section of the consent must be complied with or addressed during the course of carrying out the construction works relating to the approved development.

11. An Erosion and Sediment Control Plan (ESCP) which has been prepared in accordance with the requirements of Managing Urban Stormwater – Soils and Construction, LANDCOM, March 2004 must be implemented in full during the construction period.

12. Construction

The hours of operation for any noise generating construction activity (including the delivery of materials to and from the site) on the proposed development are to be limited to within the following times:

Monday to Friday	7.00am to 6.00pm
Saturday	8.00am to 1.00pm

No noise generating construction activities are to take place on Sundays or public holidays.

13. All construction waste is to be transported and disposed of to an approved waste facility. If alternative disposal methods are to be sought, written approval is to be granted by Council. It is an offence to transport waste to a place that can not lawfully be used as a waste facility.

14. The discharge of sediment and waste materials including concrete waste, paint, plaster and the like material into any roadway, natural or constructed drainage system, watercourse and/or adjoining land constitutes a breach of development approval conditions. Council's Authorised Officers may issue a Clean Up Notice, Prevention Notices and/or an on-the-spot fine in accordance with the Protection of the Environment Operations Act 1997.

15. If necessary dust control measures such as wetting down, covering stockpiles and physical barriers shall be used to control and prevent a dust nuisance to surrounding properties.

16. The applicant shall ensure that any fill material imported to the site for the proposed development is obtained from fill sources that have an approved testing regime. The

8.1 **DA 2014/19 - Telecommunications Tower 55 Beacon Road Teven.DOC**

supplier of the fill material must certify to Council at the completion of the construction of the development that the material was free of contaminants, being natural or otherwise.

PRIOR TO ISSUE OF AN OCCUPATION CERTIFICATE

Unless otherwise stated all development and works referred to in other sections of this consent are to be completed together with the following conditions prior to occupation or use.

17. Occupation certificate

An Occupation Certificate is to be obtained prior to commencement of use of the structure. Where Council is not the Principal Certifying Authority the applicant shall ensure that a Certificate of Occupation prepared by the Principal Certifying Authority is submitted to Council.

Civil Aviation Safety Authority Conditions

18. Prior to the issue of an Occupation Certificate the structure is to be obstacle lit with a low intensity steady red obstacle light for night operations. For detailed obstacle lighting requirements refer to subsections 9.4.2, 9.4.3 and 9.4.6 of MOS Part 139;

19. Prior to the issue of an Occupation Certificate a monitoring programme is to be established with the Ballina Byron Gateway Airport, which includes a visual observation of the obstacle lights at least once every 24 hours, or

the obstacle lighting should have a remote monitoring capability, in lieu of visual observations every 24 hours, to alert Ballina Byron Gateway Airport's reporting staff of any outage. For detailed requirements for the monitoring of obstacle lights within the OLS area of aerodromes, refer to subsection 9.4.10 of MOS Part 139.

CONDITIONS OF USE/DURING OCCUPATION

The following conditions in this section of the consent are to be complied with in the day-to-day use or operation of the approved development.

20. Noise – air conditioning

Noise caused by the approved use, including installed air conditioning plant, must comply with the following criteria:

- (a) The use and associated plant must not result in the transmission of "offensive noise" as defined in the Protection of the Environment Operations Act 1997 to any place of different occupancy.
- (b) The LAeq noise level emitted from the air conditioning plant must not exceed 5dB above the background (L90) noise level between the hours of 7.00am and 10.00pm when assessed within 30 metres of the nearest affected residence. The background noise level must be measured in the absence of noise emitted from the use.
- (c) The LAeq noise level emitted from the air conditioning plant must not exceed the background (L90) noise level between the hours of 10.00pm and 7.00am when assessed within 30 metres of the nearest affected residence. The background noise level must be measured in the absence of noise emitted from the use.

(d) Notwithstanding compliance with (a), (b) and (c) above, the noise from the air conditioning plant must not be audible within any habitable room in any nearby residential property between the hours of 10.00pm and 7.00am weekdays and 10.00pm and 8.00am weekends and public holidays.

21. Certification is to be provided within **three** months of the commissioning of the facility that the EME levels from the facility comply with the ARPANSA public exposure limits and be submitted to Council.



Our Ref: 2WDB-51-08-TEVE

6 August 2014

Mr Dwayne Roberts
Ballina Shire Council
PO Box 450
Ballina NSW 2478

Dear Mr Roberts

Development Application 2014/19 for a Proposed Fixed Wireless NBN (Telecommunications) Facility, 55 Beacon Road, Teven, NSW 2478 (Lot 103 DP865070)

We are writing in response to the DA 2014/19 for a Telecommunications Facility at 55 Beacon Road Teven, and the resolution at the Ballina Council Meeting on 24 July 2014 that:

"The application be deferred to allow further analysis of the potential to co-locate the proposed tower with any of the existing three telecommunications facilities."

There are three existing telecommunications facilities in the vicinity of the proposed NBN facility that were investigated for a co-location outcome at Teven. NBN Co always seeks to co-locate on existing structures when planning the NBN Fixed Wireless Network. By way of example, co-location was investigated and proven to be feasible at three locations (Alstonville North, Knockrow and Meerschaum Vale) within the Ballina Shire area.

During the initial site scoping and investigation at Teven, existing structures were considered and assessed to determine their suitability for the NBN Fixed Wireless network, in terms of their ability to provide adequate service to the local community and their ability to link to the wider network through adjacent facilities. They were also assessed for their accessibility (property access and structural capacity), as well as against any pertinent planning issues (in this case the Obstacle Limitation Surface (OLS)).

An overview of each of the co-location options is outlined below and on the site context map attached to this letter:

Optus 22m Monopole – 118 Beacon Rd, Cumbalum

The Optus facility comprises a 22m steel monopole with three turret mount panel antennas extending 3m above the top of the monopole and an Aviation Obstruction Light (beacon) that belongs to Ballina Airport at a height of 25m. Optus advised NBN in August 2012 that this facility had recently replaced an aviation obstruction light owned by Ballina Airport, and that due to the navigational role of this light, the tower cannot be extended, or replaced. For this reason, co-location with the Optus pole is not considered a viable option.

Telstra 20m Monopole – 118 Beacon Rd, Cumbalum

The Telstra facility comprises a 20m steel monopole with 12 panel antennas affixed to a headframe at 20m height; 4 argus antennas extending 4 metres below the headframe; and a



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parabolic antenna at a height of 22m. The tower is within an approximately 100m² compound set amongst 15m high trees at an elevation of approximately 130m.

NBN Co approached Telstra in late 2012 regarding access to this structure, and was advised that the only space available would be lower than a height of 15m. This is absolutely insufficient to provide an NBN service to the Teven community, or to communicate to adjoining NBN network facilities.

Furthermore, Telstra advised that it would require all of its' existing *and* reserved antennas (stretching over a 10m height – including OH&S separations between sets of antennas), to remain at the top of a new facility. This is in keeping with industry protocol – the incumbent carrier remains at the top of any replaced / extended structure.

As NBN Co requires a minimum height of 27m (dish) and 30m (panel antennas) with Telstra's existing and reserved antennas on top, we would have to propose a new 40m structure – doubling the height of the existing structure.

We highlight to Council that a new 40m pole in this location would be just 50m from the Optus facility, which Ballina airport uses for a navigational light at 25m in height. As above, we remind Council that Optus has received instruction from the airport that it may not increase the height of its' pole for operational reasons at the airport.

A 40m co-located Telstra facility would therefore exceed the height of the restricted Optus pole with the navigational light by 15m. Given the constraints imposed by the OLS, and the instructions received by Optus, NBN Co does not believe that proposing a 40m pole at this location is a viable option, for civil aviation safety considerations.

However, we highlight to Council that the proposal at 55 Beacon Rd, for a 30m pole, at a ground elevation that is approximately 10m lower than the Telstra and Optus facilities, is a responsible proposal that does not cause conflict with the navigational light, the airport's operations or aviation safety.

Northern Communications 30m Lattice Tower – 444 Teven Rd, Teven

Firstly, we highlight to Council that the 30m Northern Communications lattice tower is located on Mr Denis Perkins' property, 40m from his residence. We note that in Mr Perkin's address to Council at the meeting of 24 July 2014, he did not make mention of this fact.

This facility comprises a 30m lightweight steel lattice tower at a location that is approximately 5m higher in elevation than the Optus and Telstra facilities to the east. The tower has approximately 25 individual items of existing radio communications equipment affixed to it, providing a range of radio, emergency service and private enterprise radio services.

Our Engineers have advised that this lightweight lattice tower would not be sufficiently strong to carry the load of the NBN Co panel antennas and parabolic dishes, particularly at the height required of 27 to 30m. As with the Telstra facility, the incumbent operators would take premier position (above) in any stronger, swapped out facility. Accommodating all of the existing antennas above the proposed NBN antennas would result in a both a very tall structure, and a larger, bulkier structure. (The triangular design would have to divert to a square lattice tower to facilitate the extra height and extra antenna load.) We highlight to Council that the existing triangular shape also inhibits a simple extension at the top.



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Finally, we advise Council that replacing the existing tower is considered unfeasible due to the significant number of existing carriers with antennas on the structure and the complexity of designing a tower that can accommodate them all. Co-location with the lattice tower is therefore not considered a viable option for NBN to pursue.

Interactions With Mr Denis Perkins, owner of 444 Teven Rd, Teven.

We also note that Mr Perkins made a statement to Council on 24 July 2014 that at no time had NBN Co approached them about a facility on their property. This is not correct. NBN Co approached the Perkins family in July 2012, but we were told in a phone call that they were not interested in any proposal on their property. For this reason, we proceeded to contact other landowners, and developed the proposal now before Council.

However, upon learning of the proposal at 55 Beacon Rd, Mr Perkins contacted NBN Co's project team 18 months later, on 30 October 2013, to offer his property for use. (In doing so, Mr Perkins advised NBN Co staff that it was his brother who had earlier rejected our approach on the phone.) On 1 November 2013, Mr Perkins sent an email to the NBN team with photos of locations on his property that we could use, including land just 20m from our proposed site. Mr Perkins then attended a Northern Rivers NBN information session on 6 November 2013 to further discuss his offer in person with the deployment team, and advised our staff that we could place it on his property, "on the other side of the fence".

NBN CO's representatives were therefore surprised to hear Mr Perkins advise the Council that nobody from NBN Co had approached them to propose a facility on their property; and even more surprised to hear Mr Perkins describe the proposed facility as visually unacceptable, since he had offered in writing a nearly-identical location on his land – even closer to his residence. A photo provided by Mr Perkins is presented below.



Photograph provided by Mr Perkins in email of 1 November 2013 offering a location within 20m of the facility proposed for 55 Beacon Rd



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Interference Issues

Ericsson radio engineers have reviewed the details contained on the ACMA database for this site, as well as site photographs and mapping. Based on this assessment we can confirm that the proposed NBN facility is not in the direct line of sight of the Northern Communication's equipment. The proposed structure is placed approximately 251 degrees compared to the Northern Communications structure, which gives NBN approximately 15-25 degrees separation from their azimuth. As such the proposed facility will not interfere with the existing equipment on the adjacent site.

Conclusion

NBN Co impresses upon Council that it does rigorously investigate co-location options, and that it chooses to co-locate as a first preference, where it is feasible, technically, structurally, and with regards to site-specific planning and property constraints.

We respectfully assert to Council that we have already undertaken proper due diligence with regards to co-location at Teven, and regrettably, it has not found to be viable in this instance, for the reasons outlined above.

We advise that the DA submitted was carefully considered. We highlight to Council that its' planners have accepted in their assessment report that co-location is not feasible, and furthermore, they have recommended approval of this proposal.

We respectfully request that Council determine the DA as presented. In doing so, we finally highlight that the proposed facility at Teven is considered an important piece of network infrastructure, which provides a service to the Teven community and supports an NBN service to the nearby Wardell community, which must communicate their data through this proposed facility at Teven.

I hope this information provides you with sufficient information to enable the Council to support this proposal. Should Council have further inquiries, I can be contacted on 03 9575 4117, or via email at joel.rodski@visionstream.com.au.

Yours Sincerely,



Joel Rodski
Environmental Planner
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PROPOSED NBN FACILITY AT TEVEN – SITE CONTEXT PLAN

