

Joint Regional Planning Panel (Southern Region) – 2 December 2010

JRPP Reference No.	2010STH014
DA No.	RA10/1004
Proposed Development:	Telecommunications Facility - Lot 1 DP 782318, 496 Murramarang Road, Kioloa
Applicant	Communications Planning
Report By:	Peter Johnston, Shoalhaven City Council

ASSESSMENT REPORT AND RECOMMENDATION

EXECUTIVE SUMMARY

Reason for Consideration by Joint Regional Planning Panel

The application has been referred to the Joint Regional Planning Panel (JRPP) pursuant to clause 13C(b) of the State Environmental Planning Policy (Major Development) 2005 as the development is greater than 13m in height and within the coastal zone.

Proposal

The DA seeks approval for the installation and operation of a telecommunications facility that will supply telecommunications services to Kioloa, Bawley Point and surrounding areas comprising 60m tower and associated infrastructure.

Permissibility

The site is zoned part 1 (d) (Rural "D" (General Rural) Zone) and part 7 (f1) (Environment Protection "F1" (Coastal) Zone) pursuant to the Shoalhaven Local Environmental Plan 1985 (SLEP 1985). The proposed communications facility is intended to be located within the 1(d) zoned portion of the site. The proposal is not listed as a prohibited use and is therefore permissible with development consent pursuant to the SLEP 1985. The proposal while not being a rural land use will not compromise the existing or potential future agricultural use of the land. Objective 1(c) (i) "protection of important natural and cultural environments" is discussed later in the report. The proposal is generally consistent with objectives of the zone.

In addition, development for the purposes of telecommunications facilities on the subject site is permissible with development consent under clause 115 of State Environmental Planning Policy (Infrastructure) 2007 (SEPP Infrastructure).

Consultation

The application was notified in accordance with Council's Community Consultation Policy on two occasions with more than 100 submissions received, with support for a telecommunications facility in the area but objecting to the locations proposed.

Main Issues

Visual impact and threatened species impact.

RECOMMENDATION

It is recommended that RA10/1004 be refused for the following reasons:

1. **Insufficient information has been provided to enable a determination under Section 5A of Environmental Planning & Assessment Act 1979, as amended, on whether there is likely to be a significant effect on threatened species, populations or ecological communities, or their habitats by the proposed telecommunications tower.**
2. **Pursuant to Section 79C(1)(a)(i) the proposed development when considered under clauses 7 & 8 of *State Environmental Planning Policy 71 – Coastal Protection* is of unsuitable scale and size for the location and impacts on the natural scenic quality of the surrounding area.**
3. **Pursuant to Section 79C(1)(b) the likely visual impacts of the development are unacceptable, including environmental impacts on both the scenic quality of the area and the direct visual impact on rural residences and tourist developments to the north west and the University Campus buildings to the south of the proposed telecommunications tower.**

ASSESSMENT REPORT

1. Background

The current application was lodged on 4 June 2010. A formal Development Advisory Unit (DAU) meeting was held prior to the applications lodgement and the applicant was advised that visual impact and threatened species impacts were the critical issues for the proposal.

Initial assessment of the application indicated that a site justification statement, visual assessment and additional threatened species information were required and additional submissions were subsequently received.

The subject site is currently used as an environmental studies campus for Australian National University (ANU) which consists of a manager's residence, residential cabins and learning centre facilities located approximately 700m south of the proposed communications facility.

2. Subject Site and Surrounds

The subject site:

- Is located on the western side of Murramarang Road roughly midway between Kioloa village to the south and Bawley Point to the north;
- Has a real property description of Lot 1 in DP 782318;
- Is zoned part 1 (d) (Rural "D" (General Rural) Zone) and part 7 (f1) (Environment Protection "F1" (Coastal) Zone) pursuant to SLEP 1985;

- Is adjoined by Murramarang National Park (NP) to the west, NP, Aboriginal Land and Kioloa Caravan Park to the south, undeveloped ANU campus environmental 7(f1) zoned land to the east, and private rural residential, undeveloped Council land, Council waste transfer station and Racecourse Beach Tourist Park to the north;
- Has a total area of 335.3 hectares of which the proposed development will occupy 165m² plus access track;
- Has direct frontage and is legally accessed via an existing track from Murramarang Road;
- Contains an ANU costal research school with classrooms, accommodation, manager's homestead and a small rural component which comprises rural sheds and a number of dams;
- Has an existing power line running north south through the site to the west of the proposed communication facility;
- Contains native vegetation, threatened endangered ecological community and threatened fauna species and is identified as bushfire prone land; and
- Is partially impacted by acid sulphate soils.

Refer to **Attachment 'A'** for additional details on the site's location.

The closest residential properties are 63 Bundle Hill Road and 358 Murramarang Road which are located north of and approximately 530m and 540m respectively from proposed alternate location 5. The Racecourse Beach Tourist Park is located approximately 380m east.

3. Proposal

The DA seeks approval for the installation and operation of a telecommunications facility that will supply telecommunications services to Kioloa, Bawley Point and surrounding areas comprising:

- The development of a 10m X 15m fenced compound with gates;
- The installation of a 60m high lattice tower;
- The installation of a headframe to support a set of panel antennas at 59.5m;
- The installation of a headframe to support a set of panel antennas at 55.0m;
- The installation of a set of parabolic radio dishes at 52.5m;
- The installation of two (2) communications equipment shelters (3m long x 2.5 m wide X 3m high) located adjacent to the base of the tower within the fenced compound;
- The installation of a series of cables running from the radio transmission equipment in the shelters to the antennas on the lattice tower. The majority of the cable will be run up the leg of the tower with the remainder run in an elevated steel cable tray from the shelters to the base of the tower;
- The installation of necessary and associated infrastructure for the Telecommunications
- Facilities including antenna feeder cables, electrical connection, earthing, underground cables, above ground cables, safe access infrastructure and safety equipment.

The applicant considered a number of alternative sites in their proposal. The site justification report indicates that five (5) sites were investigated. The criteria that were used in the selection process were:

- Radio coverage;
- Constructability;
- Accessibility of the site for construction and maintenance;
- Permissibility of the development on the land;
- Sensitive land uses;
- Land owner's attitude;
- Minimising electro magnetic emissions (EME);
- Environmental impacts; and
- Other factors

The sites considered were:

Site 1 – North east corner of the ANU property on western side of Murramarang Road - this was the original preferred option by the applicant as it was located centrally in their target area. This site was considered to be unacceptable after review of visual impact on the coast as viewed from the adjoining beaches and headlands.

Site 2 – Bawley Point Telephone Exchange – not preferred by the applicant as the location would not provide adequate coverage to Kioloa, Merry Beach and Pretty Beach, would not have adequate area to construct the tower and associated infrastructure, and was not supported by the land owner;

Site 3 – West of ANU workers cottage – provides over 85% coverage however not supported by land owner or site manager as concern that the tower would be too close to the manager's residence. This location would also impact on the heritage significance of the former post office discussed later in the report;

Site 4 – 65/65A Bundle Hill Road – provides over 85% coverage. This site would remove the tower from impacting on resident's views as it would be located west of the surrounding residential properties, however is not supported by land owner. Would necessitate the construction of an access track suitable for construction vehicles;

Site 5 – Eastern section of ANU property near power line – This site was subsequently added and is now the applicant's current preferred location as it is located on the same land as the original site (site 1), it provides for a reduction in the visual impacts to the coast, provides over 85% coverage to the required target market with good separation for EME impacts, would be easy to access, develop and service, and was originally supported by the land owner.

Refer to **Attachment 'B'** for a copy of the development application plans and site justification statement and visual impact assessment for site 5.

4. Community Consultation

In accordance with Council's Community Consultation Policy the DA was notified as follows:

- Individual property owners within a 500m radius of the site were notified of the proposal with site 1 as the preferred option (44 letters sent). The notification period was from 16 June 2010 to 16 July 2010 with revised location (site 5) notified from 20 October 2010 to 3 November 2010;
- The proposal was advertised in the local press (Milton Ulladulla Times) on 16 June 2010 and 30 June 2010 and revised location readvertised on 20 October 2010 ; and
- The application and supporting documentation were on display at Council's Ulladulla office and on Council's website.

In excess of 100 submissions were received within the notification periods including a petition from the surrounding residents containing 115 signatures. The Batemans Bay Local Aboriginal Land Council were notified but did not provide a submission.

5. Statutory Considerations

The following planning instruments and controls apply to the proposed development:

- i) State Environmental Planning Policy (Major Development) 2005;
- ii) State Environmental Planning Policy (Infrastructure) 2007;
- iii) State Environmental Planning Policy No.71 – Coastal Protection;
- iv) Illawarra Regional Environmental Plan;
- v) SLEP 1985 (as amended);
- vi) Development Control Plan No. 93 – Waste Site Minimisation and Management;

Additional information on the proposal's compliance with the above documents is detailed in the following section of this report.

6. Statement of Compliance /Assessment

The following provides an assessment of the submitted application against the matters for consideration under 79C of the EP&A Act 1979.

(a) Any planning instrument, draft instrument, DCP's and regulations that apply to the Land

- i) State Environmental Planning Policy (Major Development) 2005 (SEPP 2005):*** The provisions of SEPP 2005 apply to the proposed development as the facility is located within a „coastal zone' and is greater than 13m in height (60m proposed). In accordance with the requirements of Clause 13C (Coastal development to which this part applies), Subclause (b) the submitted application

is classified as „regional development’ with the determining authority for the application being the JRPP.

ii) State Environmental Planning Policy (Infrastructure) 2007 (SEPP2007): The provisions of SEPP 2007 apply to the proposed development as the proposed facility is consistent with the SEPP definition of „telecommunications facility’. In accordance with the requirements of SEPP 2007, the proposal does not satisfy the criteria of Clause 114 (Development permitted without consent) and therefore is considered as development permitted with development consent. The currently submitted application is seeking to obtain the required development consent.

iii) State Environmental Planning Policy No.71 – Coastal Protection (SEPP 71): The provisions of SEPP 71 apply to the site. The subject site being within the „coastal zone’ as defined by SEPP 71 (i.e. one kilometre landward of the western boundary of coastal waters). SEPP 71 requires a consent authority to take certain matters into account when determining a development application that is located within the coastal zone. The clauses/matters contained in the SEPP71 that have relevance to this application are overviewed below:

- Part 1 (Preliminary): Clause 2: The original site (site 1) did not ensure that the visual amenity of the coast or beach amenity will be protected as the location of a 60m tall lattice tower communication facility would if approved impact negatively on the scenic quality of the surrounding area and coast. Site 5 does generally protect the visual amenity of the coast and beaches as viewed from the coast looking west. Site 5 impacts however, on the visual amenity of resident’s views of the coast looking east from elevated residential land off Bundle Hill Road and its surrounds.
- Part 2 (Matters for consideration) Clause 8: The original proposal (site 1) is inconsistent with the requirements of this clause as it was located on relatively flat low lying land (< 10m AHD) and less than 380m to the foreshore. A 60m tower was not considered to be suitable development having regard for existing surrounding land uses and vegetation, as it would, if built project some 40m above the average tree canopy, would project above the ridge line of land as viewed from the coast looking west in several locations, it would diminish the scenic qualities of the area;

The revised proposal (site 5) meets the criteria as viewed from the coast, however it is inconsistent with certain elements when viewed from surrounding residential land to the west looking towards the foreshore and from the ANU campus facilities (heritage item) looking north;

In summary, the proposed development is inconsistent with the aims and applicable provisions of SEPP 71.

iv) Illawarra Region Environmental Plan (IREP): The subject land is affected by the provisions of IREP. An assessment against the requirements of the IREP has indicated that the subject land is not identified as, land of prime crop and pasture

potential, land supporting rainforest vegetation, land containing extractive materials, land containing coal resources nor is the land part of the sub regional commercial centre.

The proposal is more than 11m in height and the assessment of visual impact elsewhere in this report deals with the considerations in Clause 139 (Development applications-high rise buildings) relevant to this proposal.

v) **SLEP 1985 - as amended:** The provisions of SLEP 1985 apply to this site. The clauses/matters contained in SLEP 1985 that have relevance to this application are:

- Clause 2: Site 5 is consistent with the general aims and objectives as outlined in this clause except for subclause (2)(f) in that the proposal is not sympathetic to the coastal environment when viewed from residential properties west of the site looking back to the coast.
- Clause 9: The site is zoned part 1 (d) (Rural “D” (General Rural) Zone) and part 7 (f1) (Environment Protection “F1” (Coastal) Zone). The proposed communications facility is intended to be located within the 1(d) zoned portion of the site. The proposal is not listed as a prohibited use and is therefore permissible with development consent.
- Clause 20E: The Statement of Environmental Effects (SEE) prepared by Communications Planning indicated that there are no known items of aboriginal cultural heritage within or in close proximity to the site and that the site has a low potential of items of archaeological significance given the small amounts of excavation required for the communications facility.

The subject land is identified as having an item of local heritage significance under schedule 7 to SLEP 1985 being a federation weatherboard residence (former post office) located approximately 700m south of the proposed development. The weatherboard residence is significant due to its use as a residence for the sawmill workers who worked in the area during the times of logging in the area. A heritage impact statement attached to the SEE was reviewed by Council’s heritage consultant who concluded:

“The proposed tower is a very tall structure and is being installed to improve telecommunications in the local area. It is set 700m away from the item and the two sites have no visual link as there is extensive bushland between them. The tower has a small footprint in relation to the overall site. The impact of the tower on the heritage item will be negligible. The tower will be visible from many vantage points in the area including Kioloa Beach where it will be read against the green backdrop of the hill to the west. Consideration should be given to painting the structure a

recessive dark green colour to allow it to blend in better with the backdrop”.

In conclusion, the proposed development is consistent with the requirements of the clause as it relates to the SLEP 1985.

- Clause 27: Site 1 is identified as having a high probability of acid sulphate soils between 1m and 3m below ground surface with site 5 being identified as not affected by acid sulphate soils.
- Clause 28: A review of Council’s Bushfire Prone Lands Map has indicated that the subject site is identified as bushfire prone. The applicant submitted a bushfire assessment as part of the application, however, as the structures to be built are not habitable and as the proposal is not classified as „critical infrastructure’, the applicant has provided sufficient detail.

An assessment against the requirements of *Planning for Bushfire Protection 2006* and Clause 28 (1), (2), (3) and (4) has been undertaken by the Rural Fire Service (RFS) who have responded requiring the inside of the proposed compound to be managed as an inner protection area (IPA) while the first 2m outside of the proposed compound be maintained as an outer protection area (OPA) in accordance within section 4.1.3 and Appendix 5 of *‘Planning for Bush Fire Protection 2006’* and the RFS document *‘Standards for asset protection zones’*.

- Clause 37A: The submitted application was notified in accordance with Council’s Community Consultation Policy. Refer to Community Consultation section of this report for further details.

In summary, the proposed development does conflict with the aims and objectives of SLEP 1985 in relation to visual impact.

- vi) *Development Control Plan 93 - Controls for Waste Minimisation and Management (DCP 93):*** The provisions of DCP 93 apply to this development. A waste minimisation and management plan (WMMP) for the construction and the ongoing use of the proposed development has not been submitted with the development application. In accordance with the requirements of DCP 93, a WMMP is required to be lodged prior to the release of the Construction Certificate.

(b) Likely impact of that development on the natural and built environment and social and economic impacts in the locality

- i) *Context and setting:*** The surrounding area is relatively undeveloped coastal lands with dense native vegetation cover up to a canopy of approximately 20m in height. There are no existing structures in the vicinity project above the tree or

ridge-line. The land profile is generally <10m in elevation from the shoreline heading west for approximately 1000m before increasing in elevation up to 200m along the ridgeline to the north-west at an average grade of 1:16.

- ii) **Visual impact assessment:*** An inspection was carried out on 10 August 2010 with the aid of helium balloons tethered to a 60m cable to identify the impacts of the site 1 tower location. A series of photos were taken from various vantage points along the coast to the east of the site and from elevated residential properties to the west. The inspection and photos revealed that site 1 was considered to have unacceptable visual impact when viewed from Racecourse and Kioloa Beaches and the headland between them. This site also had moderate visual impacts when viewed from the rural residences and tourist cabins to the northwest of the site. The applicants were asked to revisit alternate locations and provide a revised justification statement and visual assessment for a more suitable alternate location on 17 August 2010.

The applicants requested that site 5 be considered, approximately 280m west of the original proposal. Revised site plan, elevation plan and SJS were submitted by the applicants on 8 October 2010. The revised documentation was subsequently re-notified in accordance with Council's Community Consultation Policy.

A second site assessment was carried out with helium balloons which revealed that a tower of 60m high located approximately 640m from the foreshore (site 5) had substantial reduced visual impact from the beach and headland locations to an acceptable level. However, the new location had greatly increased the visual impact on a number of landholders above 40m elevation to the north-west of the site as detailed below. Taking into consideration the Land and Environment Court Planning Principles the following comments are provided:

- **View impact on 63 Bundle Hill Road** - The subject property is located above 40m elevation and currently enjoys uninterrupted coastal water views from the front yard ranging from Bawley Point to Kioloa. The coastal water views obtained from the living areas of the existing dwelling are focused through existing vegetation to the south east and north east which are available sitting and standing. The existing views would be classified as highly valuable. The impact of the proposed tower on the living areas of the dwelling and front yard is dramatic, demonstrated by photo 1 in **Attachment C** which shows the helium balloons projecting above the tree line, and the interface between the ocean with the sky. Whilst the actual area of the view affected is relatively narrow, the affected view is the principle view corridor for the dwelling and the reason for the dwellings location and design. The interruption of the existing coastal views for 63 Bundle Hill Road is considered unacceptable.
- **View impact on 65 Bundle Hill Road** - Known as Bundle Hill cottages, this site contains a number of small tourist cabins scattered east to west from elevation 70m to 100m with owners dwelling at 100m. The proposed tower would be visible from some of the tourist cabins that enjoy filtered views of the

coast and ocean through the existing trees. The financial viability of these cabins is predicated on their elevated location and natural vistas of the coast and ocean. On walking around the site between the cabins the helium balloons were evident above the interface between land and sea. The visual impact at this site is less severe than that of 63 Bundle Hill Road however it is unreasonable for the same reasons as detailed for 63 Bundle Hill Road. Refer photo 2 in **Attachment C**.

- **View impact on 65B Bundle Hill Road** - This is a residential dwelling at 130m elevation with uninterrupted views of the coast. The helium balloons were evident from the front veranda in sitting and standing positions however they did not rise above the interface between land and sea. There would be some visual impact to the owner of this dwelling, however given that the proposed structure would tend to blend with the treed background and only impact on a relatively small area of his views, the visual impact to this site would be classified as moderate and not unreasonable. Refer Photo 3 in **Attachment C**.
- **View Impact on ANU Kioloa Campus** – The impact on the ANU campus is shown in photo 4 (**Attachment C**) which was taken from the service road leading past the accommodation cabins on the campus. The photo shows the helium balloons clearly elevated above the tree line and in plain view from most of the campus buildings. The visual impact is considered unacceptable from the ANU campus and in their submission the site managers for the ANU campus have objected to the tower in this location because of its visual prominence.

The proposed tower has an unacceptable visual impact and should not be supported, particularly in relation to 63 Bundle Hill Road and the ANU Campus.

- iii) Threatened species:* The applicant submitted an “*Environmental Survey, including seven-part test (Section 5a Environmental Planning and Assessment Act 1979) for proposed Kioloa Communication Tower*” prepared by Malcolm Bruce, environmental consultant and arborist.

The consultant conducted a survey of site 1 on 13 March 2010. The survey included a vegetation survey (50mx50m quadrant) around the proposed location as well as a fauna survey on the same morning. The survey (timing and effort) may not have been adequate to detect all threatened species known to the locality. A 5km radius search of wildlife atlas records around (and on) the subject lot provided results for a number of threatened species (flora and fauna) that have not been considered or assessed as required.

The consultant has only provided the results of a desktop search of wildlife atlas (1km) records to come up with a limited list of threatened species that could potentially utilise the site.

The consultant identified the vegetation within the study area as being river-flat eucalypt forest endangered ecological community. Within the Statement of Environmental Effects the applicant stated that “*there are also some orchid flowers*” on the development site. The applicant’s environmental consultant did not originally consider the potential impact of the development on orchids. There are records for threatened terrestrial orchids within 5km of the site.

In relation to other impacts the consultant has not considered the impact of the telecommunications tower compound fencing on flying and gliding threatened fauna. It is assumed the tower will need security fencing which could potentially impact on threatened species, particularly those occurring at low densities. Threatened owls, bats, and gliding possums are all known to have been snared on barbed-wired fences in the Shoalhaven, often with fatal results. Another telecommunication tower proposal in the Shoalhaven has included an especially designed security fence that minimise the snaring risk to these types of threatened fauna.

Another impact that has not been considered is the potential for Osprey to nest on the tower. Osprey have been recorded nesting on a similar tower in Ulladulla which causes problems in terms of maintaining the facility and potentially wasted breeding effort when the birds are disturbed during the breeding season.

The consultant has submitted a NSW EP&A Act s5A “assessment of significance” that does not include a clear conclusion. Council’s Threatened Species Officer inspected the original site on 1 July 2010 and concurs that whilst the site has been cleared and maintained, numerous native flora species were observed in the ground layer and terrestrial orchids could potentially occur on the site. The close proximity to larger trees including hollow-bearing specimens suggests inappropriate security fencing around the tower could impact on particular threatened fauna species.

The applicant’s consultant was requested to provide additional information to enable a complete assessment of significance to be carried out as detailed below:

- The impact of the proposal on threatened terrestrial orchid species for which there are wildlife atlas records in the locality. Records from a larger area than previously searched need to be considered. Other orchid species, based on a habitat and vegetation type analysis, and surveys at the appropriate time of the year may have to be considered before the impact of the proposal can be assessed.
- The impact of perimeter fencing on threatened fauna species needs to be considered and assessed. Perimeter fencing should be designed to minimise the risk of snaring owls, bats, and gliding possum species.
- The impact of the tower on osprey also needs to be considered and assessed. Ideally the tower should be designed such that osprey cannot nest on the structure.

- If hollow-bearing trees need to be removed or lopped the impacts must be considered and assessed. A NSW EP&A Act s5A “assessment of significance” that includes a clear conclusion as to whether the impact is likely to have a significant effect or not on threatened species.

Additional information was subsequently provided on 9 November 2010. Council’s Threatened Species Officer reviewed the additional information and advised that the additional report did not provide any survey information on the existence of orchids for any of the alternate sites and as such an assessment of significance in accordance with Section 5A of EP&A Act was not possible.

In conclusion, it is not possible on the information provided to determine if the development is likely to have a significant effect on threatened species, populations or ecological communities, or their habitats.

- iv) **Social and Economic Impacts:*** The proposed development will provide improved mobile phone coverage and wireless internet coverage to the surrounding areas for day to day and emergency use which will improve social connectivity of the residents to other areas.

The local environment is highly valued by the residents and visitors as being some of the last undeveloped coastal land within 4 hours drive of Sydney. Residents and visitors alike live and visit the area to experience a slower, less developed lifestyle in a landscape that is acknowledged for its uninterrupted environmental beauty. The area relies financially on low key tourism which the objectors believe will be permanently compromised by a “twenty storey” metal structure projecting above the tree canopy, disrupting the existing bush setting.

The proposed development is likely to have positive economic impact for the area generally in terms of improved mobile phone and wireless internet coverage for small business operators or people wanting to telecommute however the negative impact on tourism for a number of accommodation businesses north-west of the proposed facility could be significant.

(c) The suitability of the site for the development

Site 5 is located within rural land and is permissible with development consent. The revised site is considered to be positioned a satisfactory distance from the coast to minimise visual impacts of the structure on the coastline however due to the proposed tower height and the contours of the surrounding land, residential properties to the north west of the proposed tower will be impacted visually.

(d) Any submissions made in accordance with the Act or the regulations

The application was notified by way of a public notification as outlined in section 4 (Community Consultation). In excess of 100 submissions and a petition were received with overwhelming support for a facility but not in either of the two locations preferred by the applicant. A summary of the main issues raised by submissions includes:

- The visual impact of the proposal has been significantly understated by the applicant;
- The application has not adequately addressed clause 8 section f of SEPP71 concerning scenic qualities of the coast;
- The proposal conflicts with the zoning objectives of the SLEP in terms of the protection of important natural environments;
- The photo montages provided in the original SEE were misleading;
- Lack of consideration of co-location with small tower in an elevated position on ANU property but below the ridge line;
- A much improved site could be simply sourced in the western portion of the ANU and west of residents of Bundle Hill whose ocean views, for which they have paid dearly for, will not be impacted upon.
- The preferred location in the western portion of the ANU and considerably west of the residents on Bundle Hill would also obscure this hideous structure from all other persons view and not affect the amenity of the area.
- The Kioloa area relies heavily on tourism for its sustainability and growth. People come to this area for its pristine natural beauty and this tower only detracts from this. Surely in an area such as this there could be a better location available.
- Belief that the scenic beauty of the area will be severely compromised with the building of a tower equivalent to the height of a twenty storey building.

(e) The public interest

- i) **EME and associated health impacts:** The EME from the tower and associated health impacts is an issue that needs to be considered as part of this application's assessment. ARPANSA is the Federal Government agency charged with the responsibility for protecting the health and safety of people and the environment from the harmful effects of radiation. The limits as set by ARPANSA have been subsequently set by Australian Communications and Media Authority (ACMA) who administer the Commonwealth legislation and associated regulations. The applicant in their submitted Statement of Environmental Effects advised:

"The maximum cumulative radiofrequency electromagnetic energy (RF EME) levels for the communications facility proposed at the site is estimated to be less than 5% of the ACMA mandated public exposure limit. The proposed telecommunications facility will always operate well within the limits of the ACMA Standard or any amendment to that standard endorsed by the Government. The only area where the energy levels will

potentially exceed the general public exposure limit is directly in front of the panel antennas and radio dishes. Because the antennas and dishes will be elevated more than 30 metres above ground level, there is no possibility of any member of the public ever accessing this area.”

No compliance report on the actual expected levels of EME were provided with the application.

7. Other Issues

- i) Telecommunications Legislation/Requirements:** The activities proposed by this application are subject to a range of Federal legislation which includes the Commonwealth Telecommunications Act, 1997, Telecommunications Code of Practice 1997, Telecommunications Low Impact Determination 1997, Telecommunications Regulations 1997 and the Australian Communications Industry Code of Practice 2004 (C564:2004). The proposal under the above legislation is not classified as a “low impact facility” (ie. no development approval required) and is therefore classified as a “high impact” determination and subject to the provisions of the EP&A Act 1979. In accordance with the Code of Practice, the applicant has applied the precautionary principles in respect of site selection, designing the infrastructure and operation of the site in order to demonstrate compliance with the regulations regarding maximum human exposure limits for radio frequency fields and to take appropriate measures to restrict general public access to the radio frequency hazard areas.
- ii) Easements/Restrictions on the use of the land:** A title search has been undertaken and identified that the land is burdened by several easements for right of way, public car parking area and pedestrian right of access to the beach. The area of the proposed works is clear of these easements.
- iii) Native Vegetation Act:** The proposal may require separate consent under this act as there is a current Property Vegetation Plan that does not include clearing for the proposed tower. Preliminary discussions with Southern Rivers CMA has indicated that no formal application has been made and that threatened species assessment will be the primary issue in their consideration of the proposal. Approval under the Native Vegetation Act is not a matter for consideration under Section 79C of EP&A Act 1979.

8. Referrals

Internal:

- **Heritage Advisor** – Comments included under SLEP 1985.
- **Threatened Species Officer** – Comments included in discussion on threatened species.

External:

- **RFS** - No objection to the proposal and have provided of a number of recommended conditions that should be imposed on any issued development consent (ie. provision of pedestrian access around the shed, design/construction requirements and property to be managed as an IPA).
- **Department of Defence** – No objection to the proposal and no conditions recommended for imposition on any issued development consent.

8. Options

The JRPP may:

- a) Resolve to refuse the application (ie. on the grounds recommended in this report); or
- b) Resolve to approve the application subject to conditions; or
- c) Write to the applicant requesting them to amend/modify the proposal and subject to the matters being satisfactorily resolved a further report be submitted to the JRPP for its consideration.

9. Conclusion

This application has been assessed having regard to the matters for consideration under Section 79C of the EP&A Act 1979. Following a detailed assessment, it is considered that development application No RA10/1004 should be refused subject to the reasons provided to the JRPP.

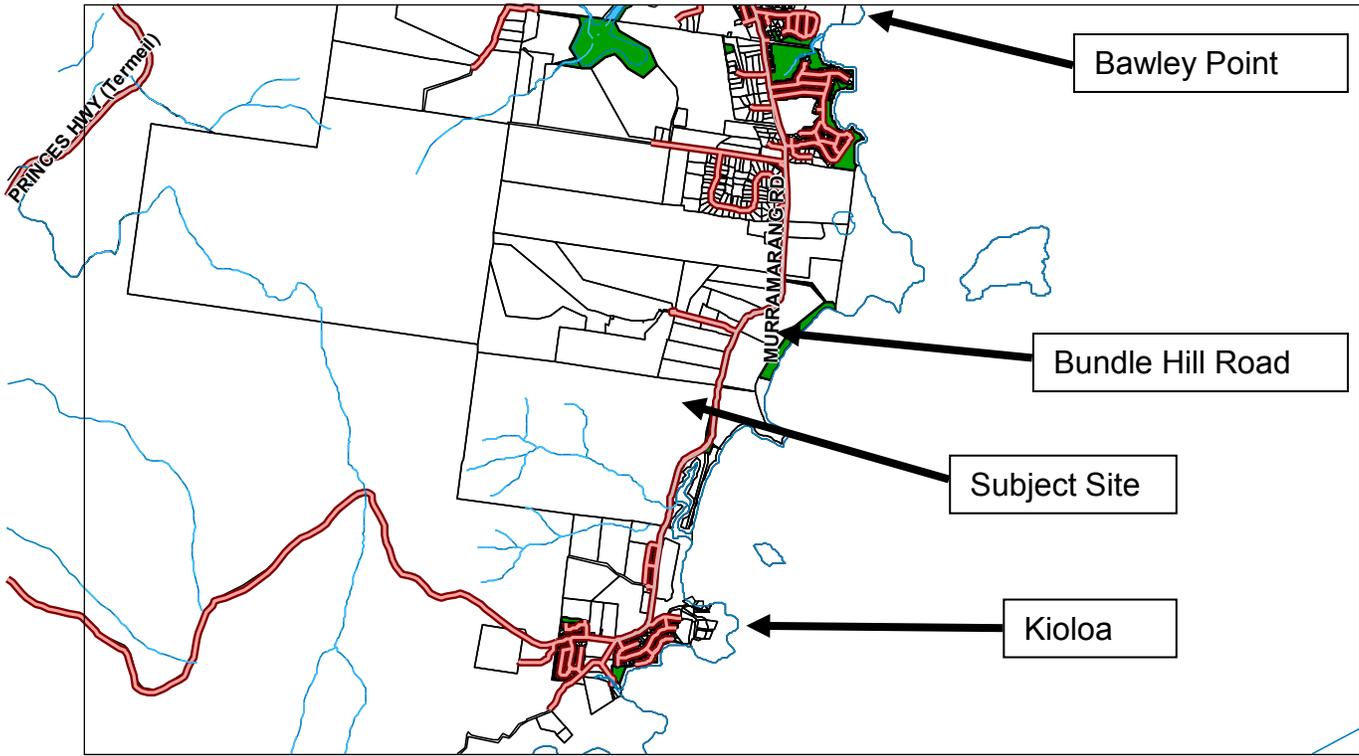
10. Recommendation

It is recommended that RA10/1004 be refused for the following reasons:

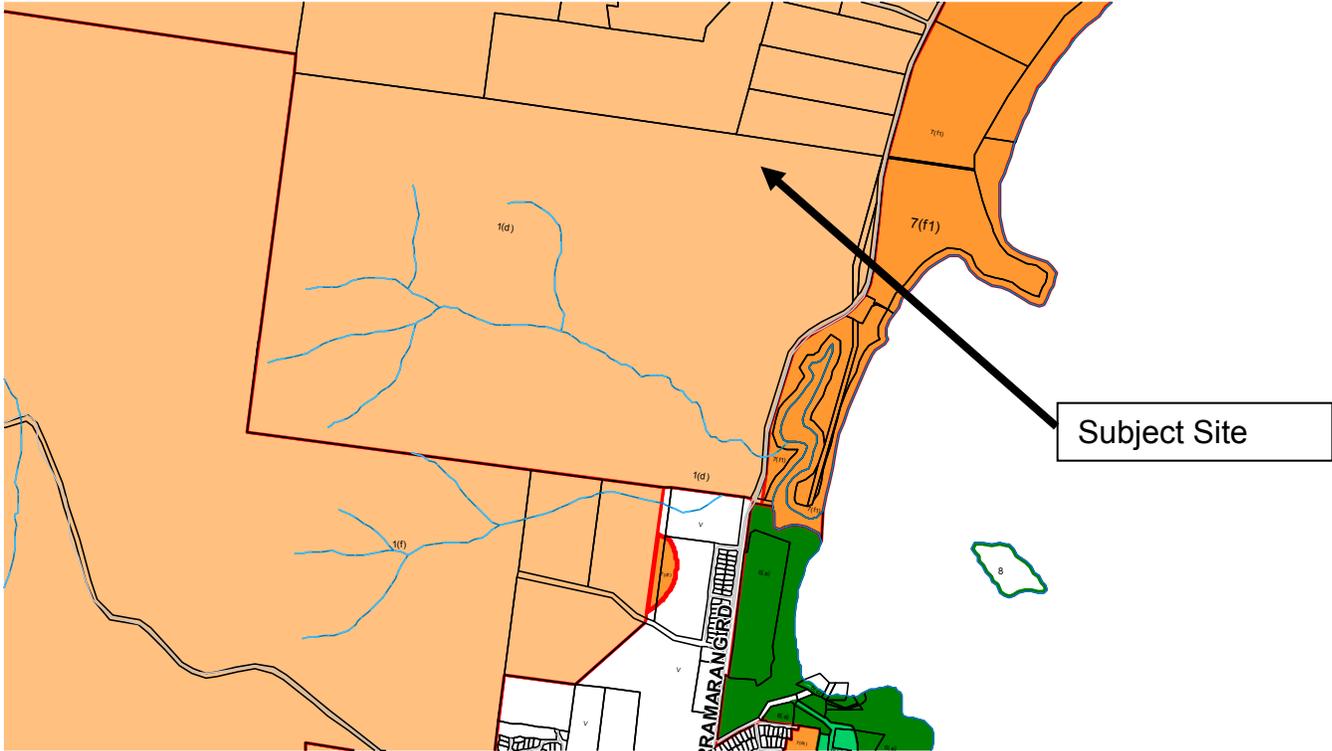
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- 2. Pursuant to Section 79C(1)(a)(i) the proposed development when considered under clauses 7 & 8 of *State Environmental Planning Policy 71 – Coastal Protection* is of unsuitable scale and size for the location and impacts on the natural scenic quality of the surrounding area.**
- 3. Pursuant to Section 79C(1)(b) the likely visual impacts of the development are unacceptable, including environmental impacts on both the scenic quality of the area and the direct visual impact on rural residences and tourist developments to the north west and the University Campus buildings to the south of the proposed telecommunications tower.**

Signed: Peter Johnston
Date: 16 November 2010

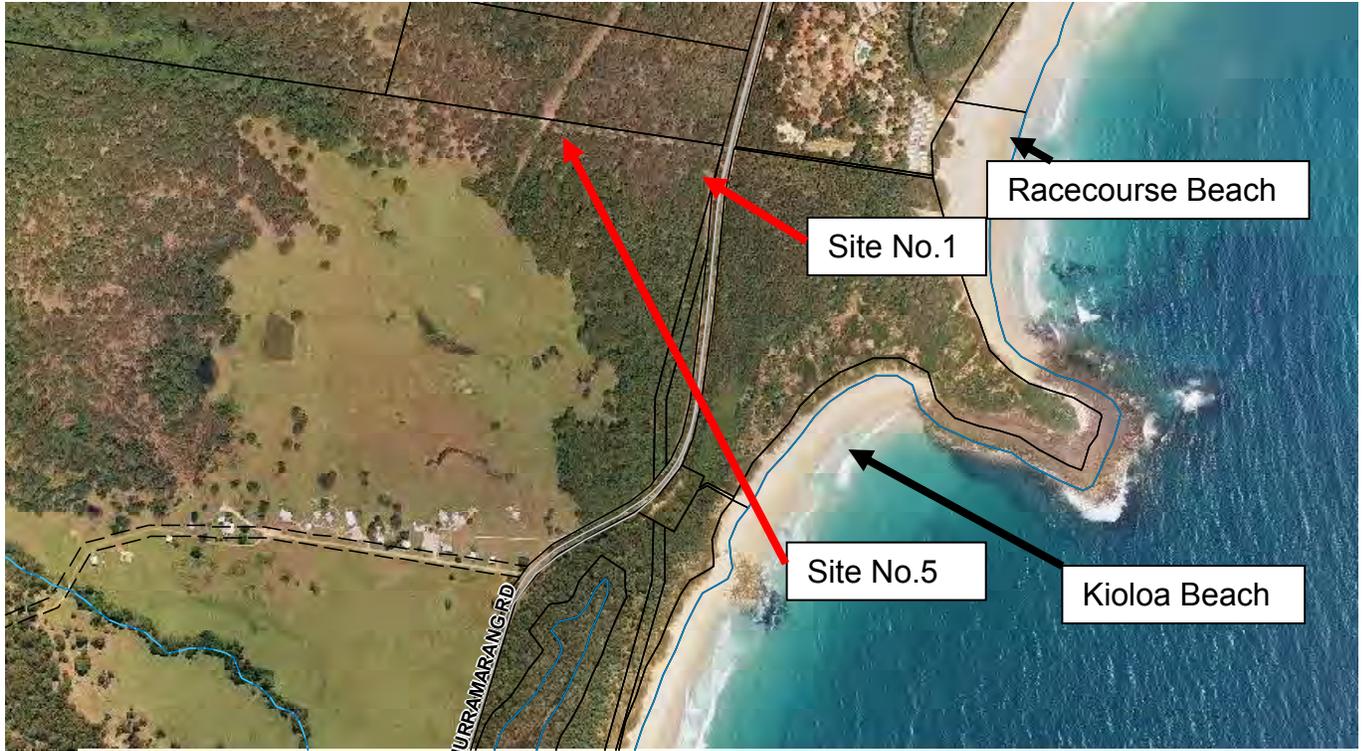
ATTACHMENT 'A'



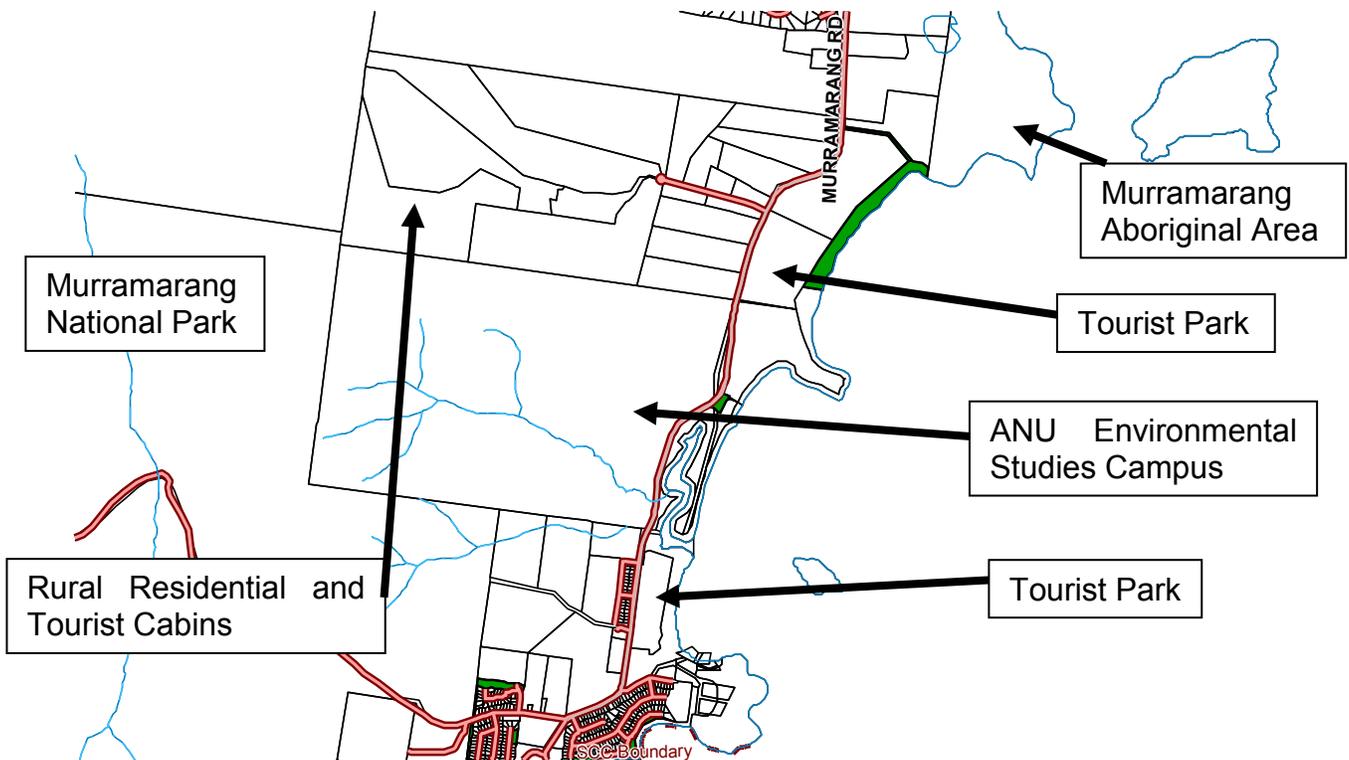
MAP OF SUBJECT SITE IN CONTEXT OF LOCALITY



ZONING MAP OVERLAY



DEVELOPMENT AREA



ADJOINING LAND USES

DRAWING SCHEDULE -

DATE OF ISSUE									
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ARCHITECTURAL DRAWINGS

A-00	COVER SHEET	A							
A-01	SITE LOCATION PLAN	A							
A-02	SITE LAYOUT PLAN	A							
A-03	ELEVATION	A							

SURVEY DRAWINGS

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TYPICAL DETAILS DRAWINGS

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STRUCTURAL DRAWINGS

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DH&S DRAWINGS

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EME ZONES DRAWING

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ELECTRICAL DRAWINGS

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DISTRIBUTION

CROWN CASTLE INTERNATIONAL	1	1							
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SITE NAME : **KILOLA**
 SITE NUMBER : **34 00016**
 SITE ADDRESS : **ANU KILOLA COASTAL CAMPUS
 KILOLA, NSW 2539**



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 Bondi Junction NSW 2022
 E-mail: info@complan.com.au

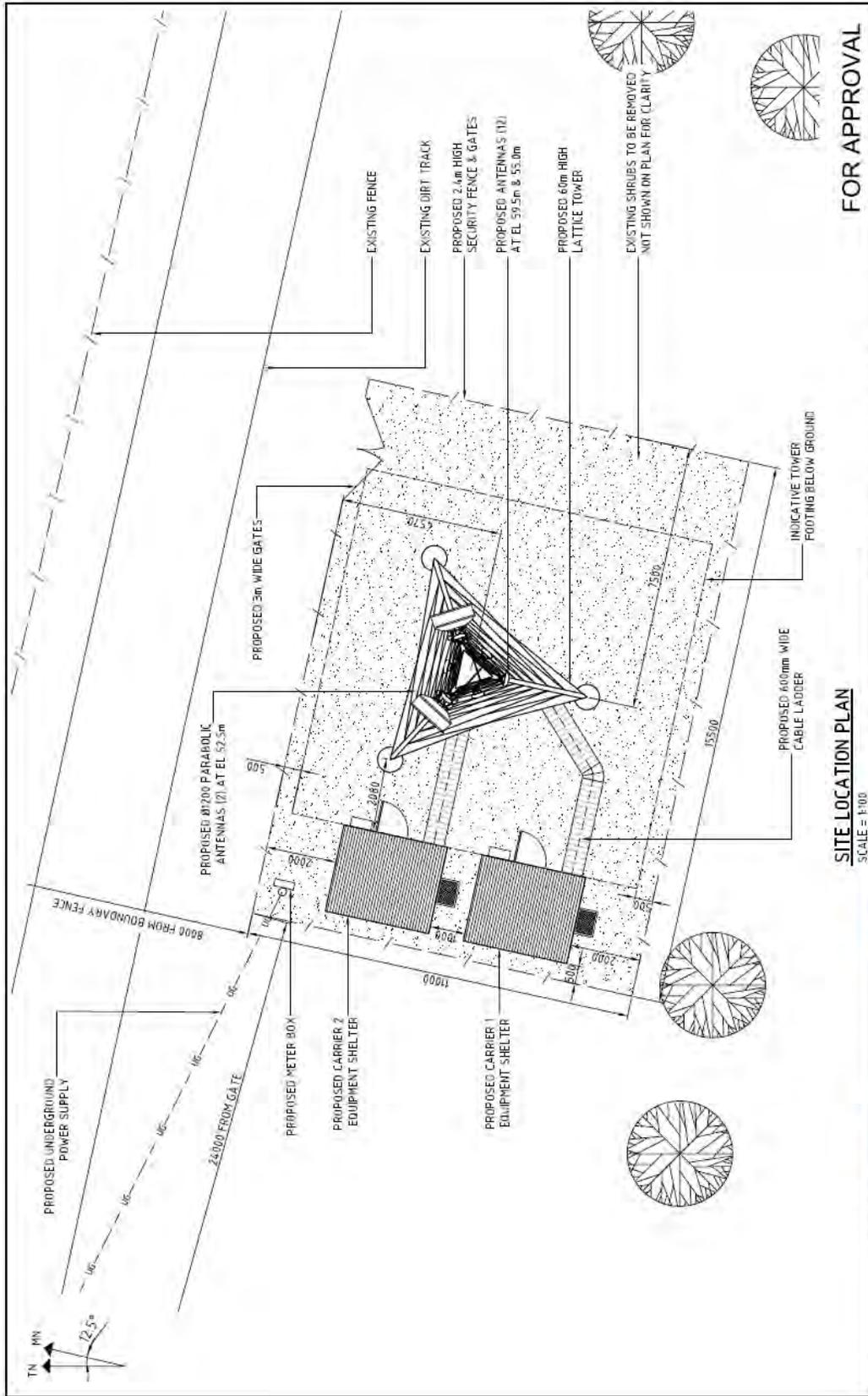
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FOR APPROVAL

A3 DWG SHEET



FOR APPROVAL

SITE LOCATION PLAN
SCALE = F100

<table border="1"> <tr> <td>Designed by</td> <td>PH</td> <td>MV</td> <td>Scale</td> <td>1:500.00</td> </tr> <tr> <td>Checked by</td> <td></td> <td></td> <td>Scale</td> <td>A3 SHOWN</td> </tr> <tr> <td>Approved by</td> <td>DD</td> <td></td> <td>Project No.</td> <td>14-00</td> </tr> <tr> <td>Drawing No.</td> <td colspan="4">34.00016-A02 A</td> </tr> </table>	Designed by	PH	MV	Scale	1:500.00	Checked by			Scale	A3 SHOWN	Approved by	DD		Project No.	14-00	Drawing No.	34.00016-A02 A				<p>Project Title</p> <p>CROWN CASTLE AUSTRALIA SITE No:-3400016 KIOLOA</p>		<p>Client</p> <p>Communications Planning Pty Ltd</p> <p>454 Mt Wellington Road, Mt Wellington, Auckland Tel: +64 9 252 2222 Fax: +64 9 252 2222</p>	<p>Engineer</p> <p>MWD Consulting Engineers Pty Ltd</p> <p>Level 1, 100-102, The Arcade, Auckland, New Zealand Tel: +64 9 252 2222 Fax: +64 9 252 2222</p>
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Approved by	DD		Project No.	14-00																				
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1	DATE	DESCRIPTION	BY	CHK
1	20/12/2010	ISSUED FOR APPROVAL	AS	AS

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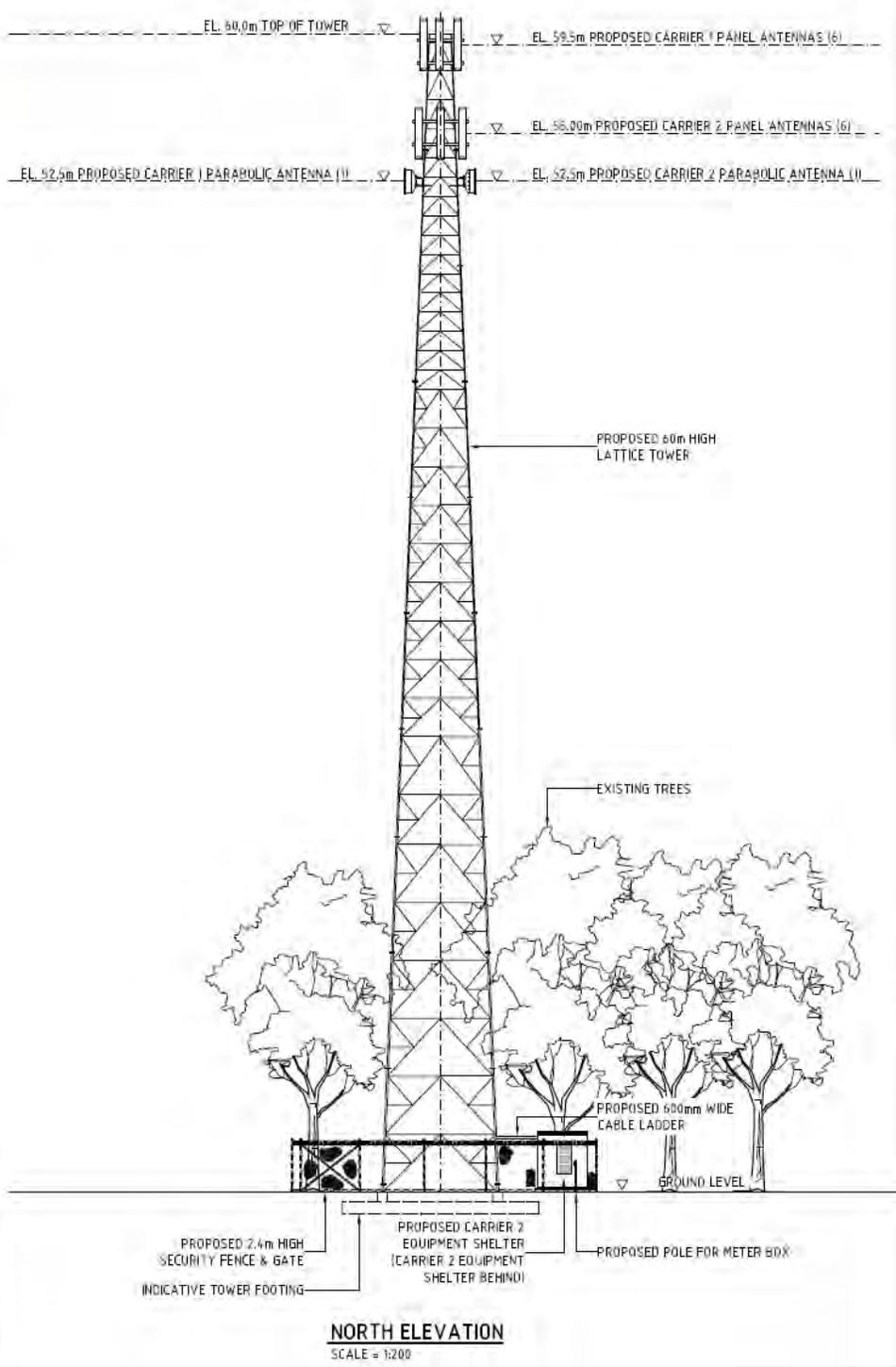
Commonwealth Planning Agency
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CROWN AUSTRALIA
 Project: CROWN CASTLE AUSTRALIA
 SITE No:-3400016
 KILOLA

ELEVATION

Checked	Drawn	Scale	Date
AS	AS	AS SHOWN	14/10

3400016-A03 A



FOR APPROVAL

Kioloa Communications Facility

Site Justification Report

This "site justification report" details the potential alternate locations considered for the proposed communications facility. The report discusses the applicants rationale used in the selection process, including a site comparison approach which weighed up the pros and cons for each site and included the possibility of co-location of services with the existing ANU communication facilities located on the subject property.

We have also received advice from Council in relation to the investigation of alternate sites for the proposed communications facility with consideration of the potential impacts of the proposal on the coastline and the scenic value and amenity of the coastline and how these impacts can be reduced. To satisfy the Council's request and to demonstrate that the nominated position is suitable and appropriate, we provide the information below. We are confident the proposed location represents a suitable location and the one of the most appropriate locations available, that satisfies the requirements of the communications facility and other requirements for the development of a communications facility.

Council staff indicated that they had some concerns about the appearance of the proposed tower from some locations on the coastline and that this may be of some interest to the Joint Regional Planning Panel. Council requested the applicant to review potential alternative sites to the west of the current location that would alleviate some of the potential impacts on the scenic quality and amenity of the coastline and general area. Following a review of the topography, radio frequency coverage objectives, construction requirements, consultation with the property owners and consideration of environmental planning legislation, the applicant has selected the proposed property and location. We consider the nominated position addressed some of the issues raised by Council and is a suitable location which should not generate any significant impacts in the environment or amenity of the area.

Alternative 1: NE corner of ANU property

Indicator	Performance	Comment
Radio Coverage	The site is located centrally within the target coverage area and achieves over 85% of the coverage objectives with predicted communications services to Bawley Point, Kioloa, Pretty Beach and surrounding areas.	
Constructability	The site is located on flat ground. There is not expected to comprise	

	<p>large amounts of bedrock. There is adequate space for machinery and for assembling of the tower. There is an existing power supply located 280 metres away and within the same parcel of land.</p> <p>The site is located close to Murramarang Road and there is an existing dirt access track within 10 metres of the proposed compound. In dry weather there is good access for vehicles including cranes, drilling rigs and cherry pickers.</p>	
Access	<p>A proposal in this location would be permissible with the Consent of the JRPP. The proposal is subject to SEPP (Infrastructure) 2007.</p>	
Environmental Planning	<p>The site is well separated from houses, schools, child care centres and other land uses that may be considered sensitive by members of the community. The nearest house is located over 300 metres away.</p>	
Sensitive Land uses	<p>The owner of the property is supportive of the proposal and an agreement has been reached for the use of the land for the communications facility. A number of locations were discussed and the owner preferred a location in the northwest corner of the property.</p>	
Owners attitude	<p>The site is centrally located within the target coverage area and will therefore provide a facility that is close to the target market. The services will be able to be provided at the lowest power levels given the adaptive power control features of the base station. The antennas are located on private property within a fenced compound and the antennas located over 50 metres above ground level.</p>	
Minimising EME	<p>There is no significant vegetation clearing required. The site has been disturbed before. The tower will be visible from some positions on the coastline. Apart from the visual obstruction of the tower, there are not expected to be any significant environmental impacts.</p>	
Environmental Impacts	<p>None.</p>	
Other Factors		

Alternative 2: Bawley Point Telephone Exchange – Thrush Street

Indicator	Performance	Comment
Radio Coverage	This site is located in the northern end of the target coverage area and	

	a radio facility in this location would not provide adequate services to Kioloa, Merry Beach, and Pretty Beach. The proposal would provide good coverage to Bawley Point. This site has adequate transmission options.	
Constructability	There is limited space available. There is existing telecommunications equipment on the site. There is not enough space for a lattice tower or room for the equipment shelters. There is an existing power supply located less than 40 metres away from Thrush Street	
Access	The site is located close to Thrush Street and there is an existing dirt access track to the land. There is good access for vehicles including cranes, drilling rigs and cherry pickers.	
Environmental Planning	A proposal in this location would be permissible with the Consent of the JRPP. The proposal is subject to SEPP (Infrastructure) 2007.	
Sensitive Land uses	The site is located close to houses. There are several residential buildings located within 100 metres of the site.	
Owners attitude	The owner of the property is not supportive of the proposal.	
Minimising EME	The site is located to the north of the target coverage area and will therefore need to operate at full power to potentially reach the customers in the areas to the south of the coverage area being Kioloa, Merry Beach and surrounding areas. The antennas would be elevated on a tower with no access to members of the public.	
Environmental Impacts	There is no significant vegetation clearing required. The site has been disturbed before. The tower will be visible from several houses and some positions on the coastline. Apart from the visual obstruction of the tower, there are not expected to be any significant environmental impacts.	
Other Factors	None.	

Alternative 3: West of the ANU Workers Cottage

Indicator	Performance	Comment
Radio Coverage	The site is located near the centre of the target coverage area and	

	achieves over 85% of the coverage objectives with predicted communications services to Bawley Point, Kioloa, Pretty Beach and surrounding areas. There is some concern in relation to the transmission options given the locations steep topography and the distance from the main road.	
Constructability	The site is located on a sloping hill to the west of the workers cottage. The site is likely to be quite rocky and construction would be difficult due to the slope, bedrock and access. There is a power supply to the workers cottage to the south east that is located approximately 150 metres away and an underground supply would need to be installed.	
Access	The site is located on a slope and there is currently no suitable access to the site. A new track would have to be developed that is suitable for cranes, cherry pickers and other construction vehicles.	
Environmental Planning	A proposal in this location would be permissible with the Consent of the JRPP. The proposal is subject to SEPP (Infrastructure) 2007.	
Sensitive Land uses	The site is located close to the ANU Caretakers residence as well as some of the other ANU accommodation. There may be some concerns raised by the occupants of the house and students using the accommodation.	
Owners attitude	The owner of the property was not supportive of the proposal in this location.	
Minimising EME	The site is centrally located within the target coverage area and will therefore provide a facility that is close to the intended customers. The services will be able to be provided at the lowest power levels given the adaptive power control features of the base station. The antennas are located on private property within a fenced compound and the antennas located over 50 metres above ground level.	
Environmental Impacts	There is no significant vegetation clearing required. Due to the slope and rock surface, some excavation will be required. The site is located in the vicinity of some heritage listed cottages. The tower will be visible from some positions on the coastline as well as from the buildings on the ANU property.	

Other Factors	None.
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Alternative 4: 65 / 65A Bundle Hill Road, Bawley Point

Indicator	Performance	Comment
Radio Coverage	The site is located on the eastern slopes of the Murramarang Range to the west of Racecourse Beach. The site is well elevated and is centrally within the target coverage area. A proposal in this location achieves over 85% of the coverage objectives with predicted communications services to Bawley Point, Kioloa, Pretty Beach and surrounding areas.	
Constructability	The site is located on a sloping hill with sparsely positioned trees in the surrounding area. There is likely to be rock close to the ground surface and construction would be difficult due to the slope, rock and limited access. There is a power supply to the house and holiday accommodation buildings that are located approximately 150 metres away. It would be appropriate to implement an underground supply. There is likely to be a need to remove some trees for the tower, power supply and access track. Some excavation of the ground will be required to establish a level area for the compound and tower foundation.	
Access	The site is located on a slope and there is currently no suitable access to the site. A new access track would have to be developed that is suitable for cranes, cherry pickers and other construction vehicles. The new track will be an extension of an existing track.	
Environmental Planning	A proposal in this location would be permissible with the Consent of Council. The proposal is subject to SEPP (Infrastructure) 2007. The site is located more than 1000 metres from the coast line.	
Sensitive Land uses	The site is well separated from schools, child care centres and other land uses that may be considered sensitive by members of the community. The nearest house is the property owner's dwelling and	

	there are several other buildings within 300 metres. The owner of the property is not supportive of the proposal.
Owners attitude	
Minimising EME	The site is centrally located within the target coverage area and will therefore provide a facility that is close to the intended customers. The services will be able to be provided at the lowest power levels given the adaptive power control features of the base station. The antennas are located on private property within a fenced compound and the antennas located over 50 metres above ground level.
Environmental Impacts	Some vegetation clearing is required to establish the compound and provide power and access. The site is predominantly natural bushland. The tower is to the west of the houses and therefore some distance from the main view lines toward the coast. Further research is required in relation to the flora and fauna impacts; however, the risk of significant impacts is low.
Other Factors	None.

Alternative 5: Eastern section of ANU property near power line.

Indicator	Performance	Comment
Radio Coverage	The site is located centrally within the target coverage area and achieves approximately 85% of the coverage objectives with predicted communications services to Bawley Point, Kioloa, Pretty Beach and surrounding areas. This location enables "Line of sight" to other communications facilities and the connection of some of the radio equipment to their respective networks.	
Constructability	The site is located on flat ground that has been previously disturbed and cleared. The site is located adjacent to an existing power line easement. There is not expected to comprise large amounts of bedrock. There is adequate space for machinery to access the site for assembling of the tower. There is an existing power supply located 80 metres away. The selected location does not require the removal of any large eucalypt trees.	

Access	The site is located adjacent to an existing dirt road that runs along the northern boundary of the property between Murramarang Road and the power lines. There is an access gate less than 20 metres away in the power line easement as well as the gate off Murramarang Road. In dry weather there is good access for vehicles including cranes, drilling rigs and cherry pickers.
Environmental Planning	A proposal in this location would be permissible with the Consent of the JRPP. The proposal is subject to SEPP (Infrastructure) 2007. This site is located further from the coastline than Alternate site 1 and the magnitude of the potential visual impact from the coast line is less than Alternate site 1.
Sensitive Land uses	The site is well separated from houses, schools, child care centres and other land uses that may be considered sensitive by members of the community. The nearest house is located over 500 metres away.
Owners attitude	The owner of the property is supportive of the proposal and an agreement has been reached for the use of the land for the communications facility. A number of locations were discussed and the owner preferred a location in the northern side of the property.
Minimising EME	The antennas will be located on the tower at a height above 40 metres and will therefore be a significant distance from the located accessible to the general public. The site selected is well separated from houses and other sensitive land uses with the closest house being approximately 500 metres away. The proposed radio communications facility will always operate in compliance with ARPANSA Standard or any other standard endorsed by the Australian Communications and Media Authority.
Environmental Impacts	There is no significant vegetation clearing required. The site has been disturbed before. The tower will be visible from some positions on the coastline and from some of the surrounding properties. Apart from the visual obstruction of the tower in some residences, there are not expected to be any significant environmental impacts.
Other Factors	This location was considered following comments by Council regarding

	the proximity of Candidate 1 to the coastline and the potential visual impact of candidate 1 on the Coast line.	
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Site location justification

It was concluded that the proposed site in the north section of the property immediately east of the power line easement is the most appropriate site for the following reasons:

- The proposed site is located on a flat ground and is centrally located within the target coverage areas of Bawley Point, Kioloa and surrounding areas.
- The proposal is not inconsistent with Council policies and relevant environmental planning instruments.
- The proposal better achieves the guidelines of the Coastal Protection SEPP by further reducing the potential visual impacts in comparison to candidate 1.
- The land has already been disturbed and the area occupied by the communications facility has been cleared previously for agriculture or other uses.
- The selected compound location is adjacent to an existing access track and is close to a set of gates along the power lines. The existing track will provide good access to the compound for construction activities as well as on-going maintenance of the communications facility.
- The site has access to a power supply from a power line less than 100 metres away.
- The installation of the facility is not expected to cause any significant environmental degradation apart from the appearance of the tower from some locations in the surrounding properties.
- The location of the site is well positioned from and between other telecommunications facilities and will significantly improve the telecommunications services in Kioloa, Bawley Point and surrounding areas and therefore satisfy the demand for better telecommunications services in the area as well as provide significant community, safety and social benefits.
- The owner of the property is supportive of the proposal in this location and will allow the communications facility to occupy the land.



Figure 1: Maps showing location of potential alternative sites.

Visual Impact Assessment

During the site visit we assessed the alternative location that was selected as a result of previous correspondence with Council and supported by Council. Council requested the proposed communications facility be located further from the coastline to reduce the potential visual impacts. We have been done and the potential visual impacts from the coast line have been significantly reduced and some of the potential visual impacts have been alleviated. Following an assessment of the alternative location, Council's representative completed a thorough assessment of the possible views for the proposed communications facility from several locations including Racecourse Beach, Shelly Beach, the Kioloa Boat Ramp, along Murramarang Road and several rural properties on Bundle Hill Road. The assessment of the potential visual impact involved the erection of a set of 3 helium balloons on a 60m rope positioned on the ground at the selected location for the tower. The balloons provided an approximate height and position of the tower that could enable the assessment of the potential visibility of the proposal from positions on the coast line and at some surrounding rural properties. Based on the view toward the tower location from the positions selected by Council's representative and information collected, we identified the following:

Photo Illustration: A visual illustration of the proposal is attached to this document and shows the potential view of the area where the tower is located when viewed from the southern headland of Racecourse Beach. Council nominated this location as the preferred position to assess the visual impact in accordance with the provisions of SEPP 71 – Coastal Protection. An assessment of the photographic illustration and the views of the helium balloons indicate that the visual illustration is realistic and consistent with the location and height of the tower as demonstrated by the balloons during the site visit. It is important to note that the photo illustration provided is different to the previous photo illustration provided to Council because it considers the alternate location that Council asked the applicant to consider. As can be seen by the photo illustration, the tower is partially visible from the headland and less of the tower is visible than the previous tower position. The alternate location is a significant improvement as a result of the tower being less visible, less obtrusive and further away from the coastline.

Visibility of the proposed communications facility from Council nominated locations

Racecourse Beach: The proposed tower is not likely to be visible from most locations on the beach. The tower is more than 700 metres from the coastline and there of dense and tall trees on the land between the beach and the tower location that prevent the tower from being visible. It is important to acknowledge that most people visiting the coast line spend most of there time on the beach as they occupy the sandy shoreline or go swimming from these areas. As the tower is not expected to be visible from this location, the majority of people visiting the coast line will not be in a position where the tower is visible.

Shelly Point: As shown on the photographic illustration provided, the tower is visible from positions on the headland. The top section of the tower is visible. It is important to note the proposed tower is an open lattice tower that comprises steel members joined together. It is not a solid structure and the till section of the tower is less than 2 metres wide. Given the following factors:

- The distance of the tower from the headland being over 900 metres;
- the open design of the tower and it therefore being partially transparent;
- the width of the tower being less than 2 metres for the top section; and
- the top of the tower being below the ridge line of the mountains,

the tower is not expected to be a major visual feature of the coast line and is not expected to significantly adversely affect the experience of people occupying the headland for passive recreation purposes or the scenic value of the area. An important feature of the location of the tower and the potential view from the coastline is that the tower does not protrude above the ridgeline of the Murrumurang Range to the west of the coastline.

North Shelly Beach: The tower is visible from rocky section at the north end of Shelly Beach. The tower is located to the right of the main view lines toward the mountain range or the view lines along the beach to the south west. The tower is located in a north west direction which is not a common view line for people on the coast line. It is important to note that the tower is not likely to be visible from the sandy shore line of the beach which is the more common location for people to sit or stand. The coastal heaths on the periphery of the beach can impede the view of the tower. It is important to note the potential views of the tower decrease when moving in a north west, west or south west direction.

Mid Rocky section of Shelly Beach: The proposed tower is not likely to be visible from this location on the beach.

Murrumurang Road: People travelling along Murrumurang Road are not likely to get a clear view of the tower. The trees along the western side of the road provide significant screening and obstruct views of the proposed tower.

65 Bundle Hill Road: Sightlines of the proposed tower are predominantly obstructed by surrounding trees and bushland when viewed from the main residence. It was concluded that the proposed tower is not likely to be seen from this residence and would not result in any significant impacts on the amenity or scenic value of the house. The tower may be visible from some of the commercial visitor accommodation.

65A Bundle Hill Road: Sightlines of the proposed tower are often screened by vegetation from some positions on the property and the house. There are some locations on the verandah of the house where the proposed tower will be visible. The tower is located more than 1000 metres away and the top of the tower does not protrude the coastline meaning the visual background of the tower is bushland and not the ocean. Given the large distance from the tower location, the size of the tower and the design of the lattice tower, the proposal is not expected to have a significant adverse impact on the scenic landscape of the residence or the visual amenity of the area.

63 Bundle Hill Road: This property is a rural property with a single residence. The property is located at the base of the mountain range and is surrounded by trees in most directions apart from the some clearing of trees to the east of the house. The proposed communications facility will be visible from this property and residence. The tower has been designed to achieve the technical requirements while trying to minimise the visual impact and designing solutions that are not obtrusive. It is important to note that the proposal is a communications tower with the top section of the tower being less than 2 metres wide and the tower being partially transparent. The tower is not a bulky structure, will not cause any shadowing of any neighbouring property or significantly obstruct the views in any general direction. The tower is located approximately 500 metres from the residence and therefore is a significant distance away. A structure with a width of less than 2 metres when viewed from 500 metres away is unlikely to dominate the general views from the residence and is not expected to block the views of the surrounding area in any direction. The views of the tower could be potentially alleviated or reduced by the planting of some trees in between the tower and the residence.

Kioloa Boat Ramp: This vantage point is located over 2000 metres from the tower location and the tower is not expected to be visible to the naked eye. With aided vision or if a person is specifically looking for the tower, the tower will be visible and protrude above the tree line. The tower is not expected to significantly adversely affect the experience of people using the boat ramp, occupying the area for passive recreation purposes or will not significantly affect the scenic value or amenity of the area. The proposal is not expected to have any significant impact on the scenic values of the coastline in this location.

Summary

It is typically not possible to develop a communications tower to service a large area that is not visible from surrounding properties. It is essential for the communications antennas supported by the tower to be well above the tree line and have unobstructed views of the surrounding area in all directions. As a result of these requirements for a communications facility, it is not possible to alleviate all of the potential visual impact. There will always be some degree of visual impact from all communications towers, however we have tried to minimise the visual impact through the design and selected location of the communications facility.



Figure 1: Directions of view lines from located selected by Council

ATTACHMENT 'C'



Photo 1 – View shot from front of living area to 63 Bundle Hill Road.



Photo 2 – shot from the internal access road between tourist cottages at 65 Bundle Hill Road.



Photo 3 – shot from the front verandah of 65A Bundle Hill Road.

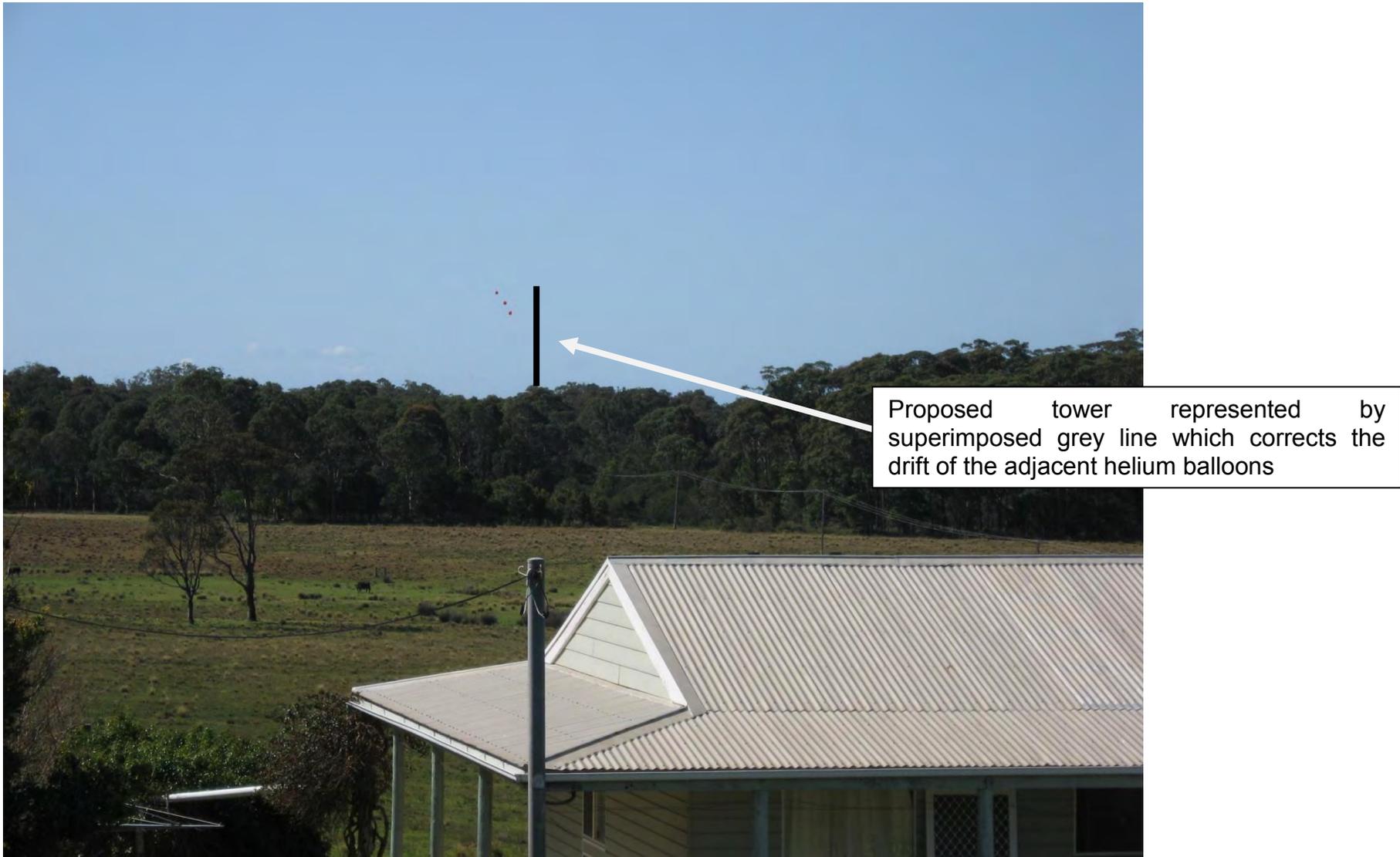


Photo 4 – shot looking north from the main access road to the ANU campus just below the manager’s residence.