PROPOSED TELECOMMUNICATIONS FACILITY

LOT 7201 GRIFFIN ROAD, CURL CURL, NSW

VISUAL IMPACT ASSESSMENT

7TH MAY 2020
NNS0001A_S2711
REPORT
PREPARED FOR OPTUS MOBILE PTY LTD

URBIS

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Peter Haack
Lead Visual Technologies Consultant	Ashley Poon
Project Code	NNS0001A_S2711
Report Number	Curl Curl Telco-LVIA

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INTRODUCTION

Optus Mobiles Pty Ltd (Optus) propose the construction and operation of a new mobile base station, which will have a dual use as a floodlight pole, at Field number 5, John Fisher Park (north of the Lagoon), Lot 7201 Griffin Road, Curl Curl, New South Wales (NSW) (***Figure 1***).

The proposal, located in the Northern Beaches Council local government area, involves the erection of a monopole, installation of three panel antennas, nine remote radio units and a three-bay equipment shelter at the base of the monopole, in association with other ancillary equipment. The overall height of the combined mobile tower and light pole will be 25.7 metres (m).

Urbis Pty Ltd (Urbis) has been engaged by Optus to undertake a Visual Impact Assessment (VIA) of this proposed facility to support a development application (DA).

Figure 1: Site location

1. APPROACH

While there are no specific legislative requirements for the methodology of an assessment such as this in New South Wales, the industry typically refers to the guidance offered by:

- Guidance note EIA-N04 Guidelines for Landscape Character and Visual Impact Assessment, NSW State Government, Roads and Maritime Services (2013).
- The Guidance for Landscape and Visual Impact Assessment (GLVIA), Third Edition, Landscape Institute and Institute of Environmental Management & Assessment (2013).

The methodology used for this proposal is described below and conforms generally to the direction offered by the above guidelines as well as other proven assessment methodologies.

This preliminary assessment report assesses the landscape and visual impact of the proposal, that is the day to day visual effects on people's views. The method to measure visual impacts is based on the combination of the sensitivity of viewers to the proposed change and the magnitude of the proposal on that visual setting or view.

The following study components were included as part of this assessment:

1. Review the proposal with regard to potential visual impacts.
2. Characterisation of the existing landscape and visual setting.
3. Qualitatively assess:
    - Visual modification at key viewpoints – How would the proposal contrast with the landscape character of the surrounding setting?
    - Visual sensitivity at key viewpoints – How sensitive would viewers be to the proposal?
4. Propose visual impact mitigation and management measures.

1.1. ASSESSMENT OF IMPACTS

The visual impact assessment is based on an analysis of the landscape and visual setting and an assessment of the potential impacts of the proposal on its viewshed. The critical issues considered for this VIA were:

- The number and location of sensitive viewing locations;
- The duration of the view – either stationary or mobile;
- The degree to which the proposed works would be visible; and
- The degree to which the proposal contrasts or is compatible with the visual character of the urban setting – degree of magnitude or visual modification level.

The assessment method assumed that if the proposal would not be seen, there is no impact.

2. SITE CONTEXT AND APPRAISAL

2.1. SITE CONTEXT

The selected site for the proposed telecommunication facility is Field number 5, John Fisher Park, Curl Curl. The site currently comprises a sports field, associated club buildings (Curl Curl Football Club) and is adjacent to Curl Curl Lagoon.

The area is zoned for public recreation (RE1 Zone).

Curl Curl Lagoon is also listed in Schedule 1 of State Environmental Planning Policy (SEPP) 71 as a coastal lake. Of relevance to the proposal is the aim of SEPP 71 to ensure that the visual amenity of the coast is protected.

The site will be accessed via Abbott Road (refer to ***Figure 2***).

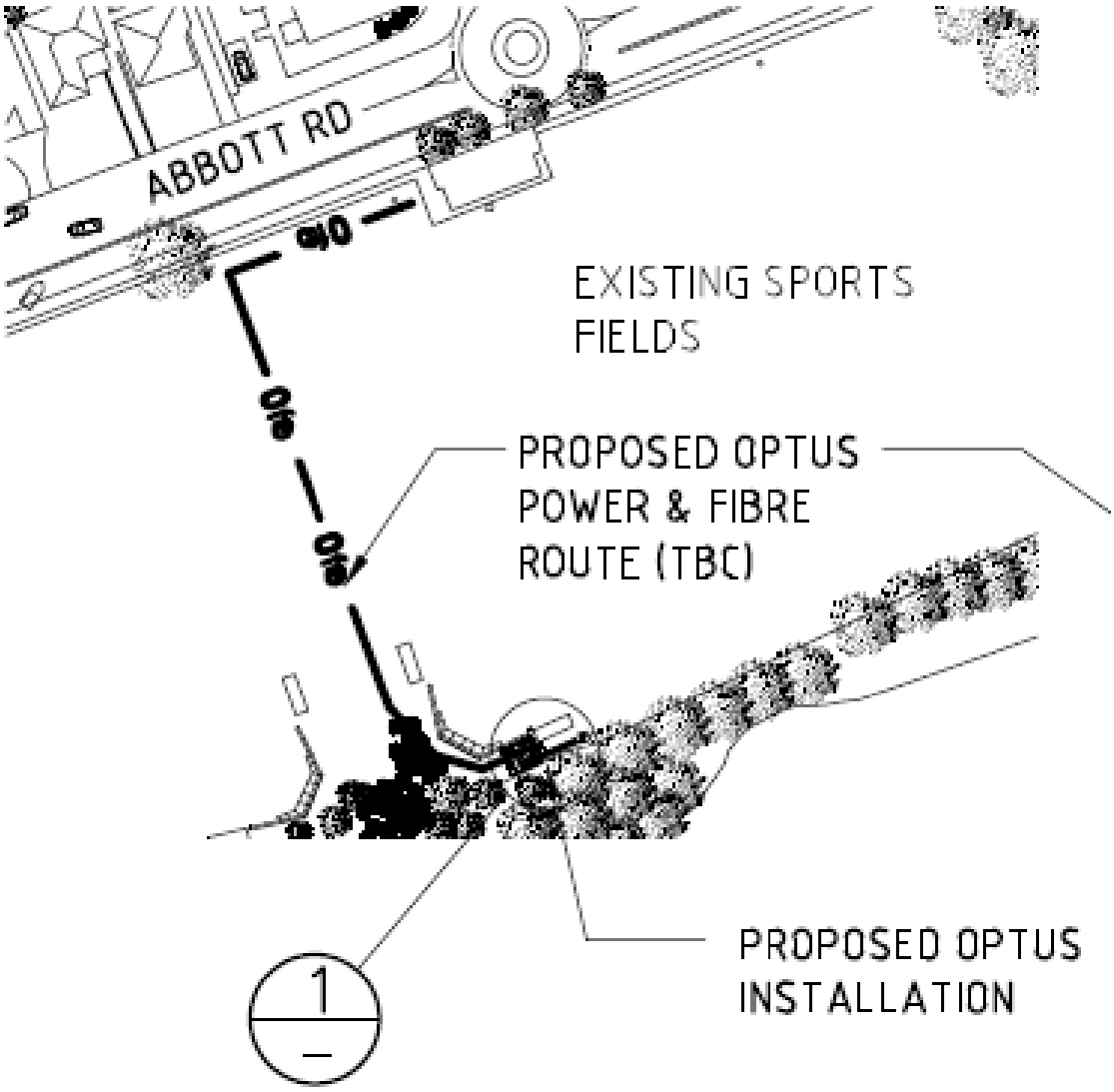

Figure 2: Site context

2.2. VEGETATION AND LANDSCAPE FORM

The proposal site is located to the north-west of Curl Curl Beach, in the gully between the northern ridge line extending from Dee Why Head and the Freshwater ridge line to the south.

The Curl Curl township is located on the shores of the northern beaches of Sydney. Residential development extends around the bay and the low hills surrounding Curl Curl Lagoon (refer to ***Figure 3*** and ***Figure 4***).

An extensive industrial zone is situated to the west of the site at Brookvale. Open sports fields and open space areas run along the lagoon from Curl Curl Beach to the edge of this industrial zone.

The residential area extends to the foreshore reserve of North Curl Curl Beach. The beach is separated from the hinterland by a low dune which is covered with low to medium height coastal vegetation.

The vegetation lining the edge of the lagoon is comprised of coastal riparian communities, with the typically 10 to 15 m high trees creating a dense screen.

The proposal is located adjacent to sporting fields with a narrow strip of vegetation along the edge of the lagoon (refer to ***Figure 5***).

Figure 3: Development lines the bay. Dunes along the coastal edge block views west towards the proposal site

Figure 4: Topography rises to both the north and south of the proposal site

Figure 5: Dense vegetation lines the Lagoon to the south of the proposal site

2.3. BUILT FORM AND EXISTING INFRASTRUCTURE

The proposal will be located in a cleared area at the edge of sporting fields and adjacent to Curl Curl Lagoon.

The sporting fields contain numerous elements of infrastructure associated with the playing of sports. These include goal posts, catch nets and a number of lighting poles up to 22 m in height (refer to ***Figure 6***).

Residences in the surrounding area are freestanding and both single and double storey. Existing visible infrastructure includes lightpoles, powerpoles and overhead wires (refer to ***Figure 7***).

The existing elements within the urban setting surrounding the proposed site are equally, if not more, visible than the proposed development if assessed on the basis of the total field of view that they occupy.

Figure 6: Sports field infrastructure in the vicinity of the proposal site

Figure 7: Abbott Road residential area immediately adjacent to the proposal site

3. THE PROPOSAL

3.1. KEY FEATURES

As illustrated in ***Figure 4***, the proposal involves the development of a mobile telecommunication facility adjacent to a sports field at John Fisher Park, Curl Curl. The facility replaces one of the existing, 22 m high light poles surrounding the sporting fields.

From a visual impact perspective, the most significant components of the proposal will be:

- A 22.5m floodlight pole with the structural capacity to support telecommunications equipment.
- Three panel antennas of the following dimensions:
  - 2688 mm (H) x 350 mm (W) x 208 mm (D).
  - Attached on a turret mount at a height of CL 23.9m providing an overall height of 25.7m
- An Optus vandal proof equipment shelter on a raised metal platform of the following dimensions:
  - 2126 mm (H) x 2254 mm (W) x 926 mm (D).
- 14 remote radio units.

Lighting similar in appearance that that which exists on other lighting poles surrounding the playing fields will be attached to the pole beneath the telecommunications equipment.

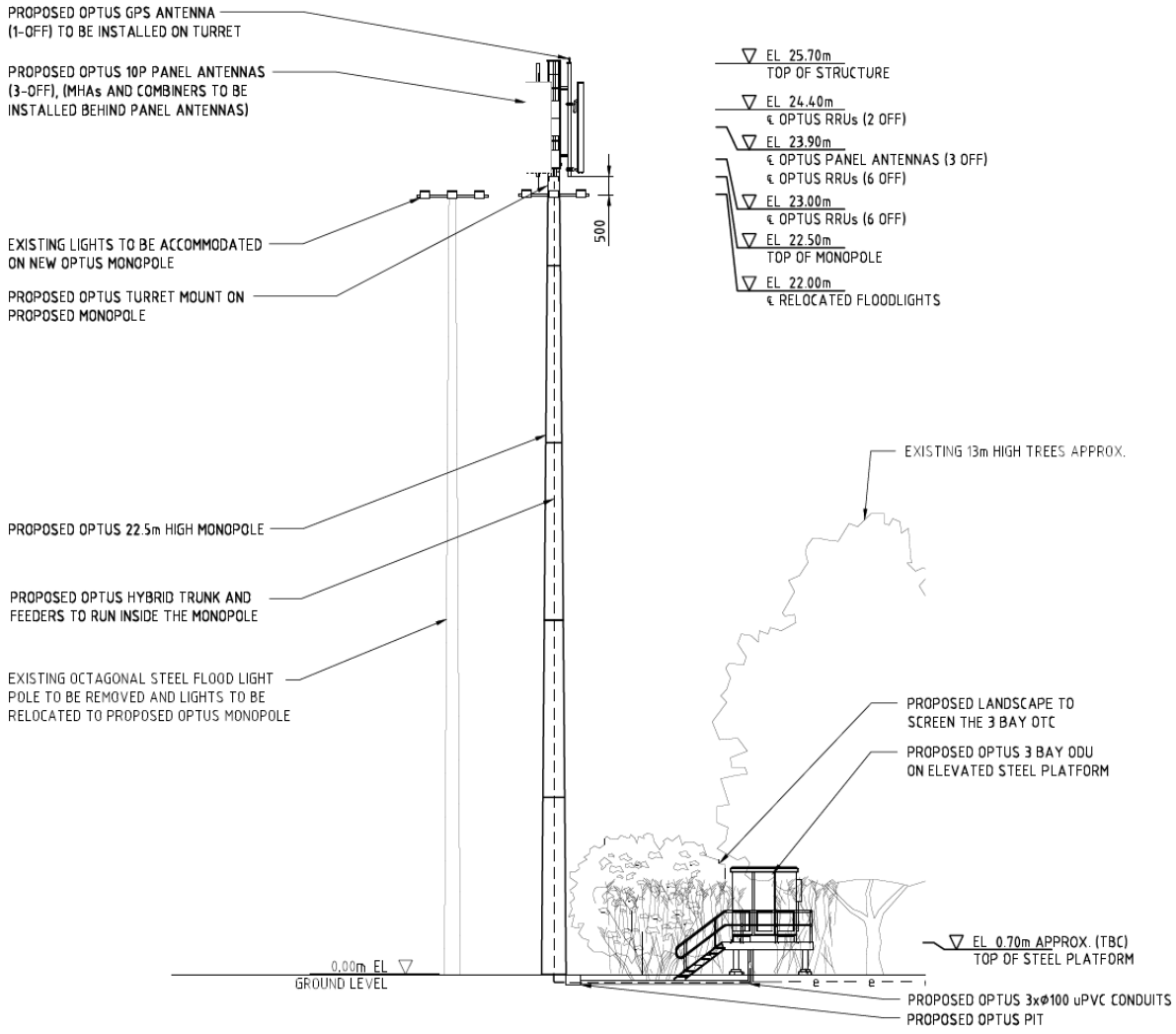

Figure 8: Elevation view of the proposal

4. VISUAL IMPACT ASSESSMENT

4.1. OVERVIEW

Typically, visual assessment methodologies consider the visual sensitivity of varying land use types and their associated user groups. The level of sensitivity is then considered in the context of the degree of visual change resulting from a proposed development on its setting, with a resulting impact level then assigned.

Higher visual sensitivity uses include residential, tourism and recreational land uses, all of which are present within urban areas. Therefore, the determination of visual impact within urbanised, or developing, areas is somewhat problematic, as change is a part of the process of growth and, under planning schemes for urban areas, activities of quite different aesthetic forms and scale are permitted.

The desired function of the components within an urban setting determine their form and, as a result, urban landscapes become a collection of varied elements.

4.2. VISUAL FIT WITHIN THE RESIDENTIAL SETTING

A key consideration of the determination of visual impact within the built environment is not whether an element is visible or not, but rather its visual fit within the context of the setting and the expectation by viewers that such an element would typically occur and be accepted as being compatible within that setting.

Visual impacts will result from the exposure of sensitive viewers to proposed elements which contrast strongly, or which are incompatible with the landscape character of the setting.

Apart from the degree to which an element may or may not contrast with a particular urban setting, acceptance of visual change is typically highest when the change results in positive benefits for the community. Visual change is typically perceived negatively when community benefits are less tangible or where there are concerns about impacts unrelated to visual matters.

Existing elements within the urban setting surround the proposed development are equally, if not more, visible than the proposed development if assessed on the basis of the total field of view that they occupy.

4.3. PERCEPTUAL RESPONSES – INFLUENCE ON VIEWER SENSITIVITY

Negative perceptual responses in viewers influencing visual change have been recognised in studies relating to high voltage powerlines, where electromagnetic fields (EMF) are a factor. Similar concerns in relation to electromagnetic energy emissions (EME), also known as electromagnetic radiation (EMR), have been raised in opposition to the deployment of telecommunications towers.

As with EMF, it is therefore logical to conclude that viewer perceptions, and therefore sensitivity, of the visual impact of mobile telecommunication facilities are influenced by factors other than visibility.

By their nature, developing urban areas are subject to progressive change. Elements subject to change can include increases in the bulk and height of built form, changes in architectural styles, materials and colour, increases in urban density and changes to infrastructure and the technology that supports our communities.

There is growing acceptability of modern infrastructure in our landscapes, particularly given our need for safety and security through the ability to communicate.

4.4. VISIBILITY OF THE PROPOSAL

The viewshed is the area from which views of a proposed development may be possible. The viewshed mapping considers the effect of topography on the screening of views. However, it could be considered a worst-case assessment as it does not take into account the screening effects of vegetation. As indicated in ***Figure 9***, the undulating topographic form alone provides visual screening to a number of areas.

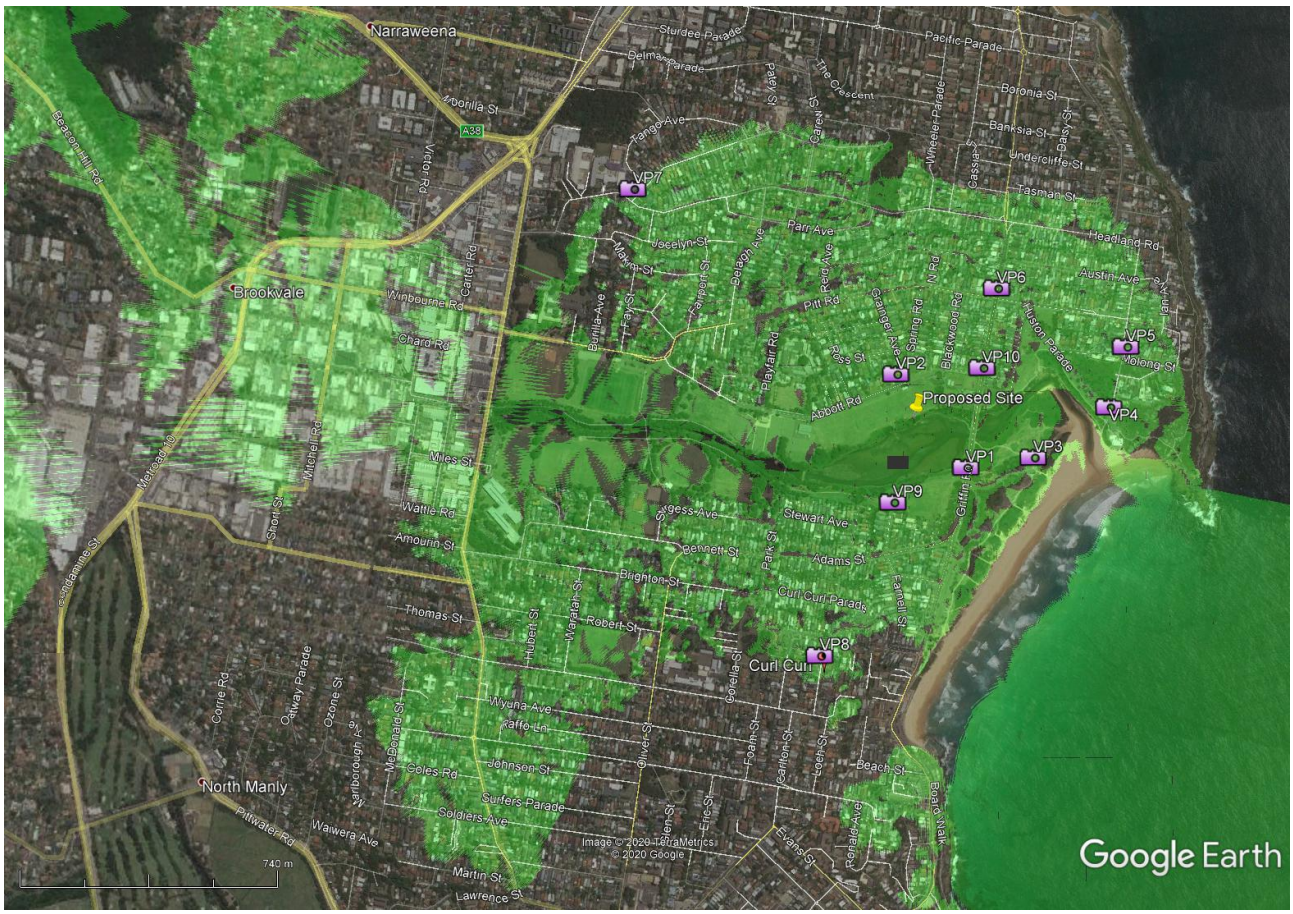

Figure 9: Viewshed of the proposal

4.5. ASSESSMENT OF SENSITIVE VIEWPOINTS

The viewpoint (VP) locations that are included in this assessment are from uses considered to be of higher sensitivity, such as residential areas, open space and main streets in residential areas (refer to ***Figure 6***). Representative viewpoints, particularly within residential areas, have been selected due to their higher levels of visual exposure to the proposal. These are typically from roads within residential areas that are aligned directly towards the proposal.

The locations selected for photography and assessment are within the public realm, within proximity to the sensitive, privately owned visual use areas. Photo simulations have been prepared for the most sensitive viewpoints, these being VP1, VP2, VP3, VP5, VP6 and VP9 (refer to ***Appendix B***). The photo-simulations could be considered worst-case as they do not illustrate any proposed vegetation.

The assessed viewpoints relate to locations with views to the proposal and the locations selected for photography and assessment are within the public realm, within proximity to the highest sensitivity visual use area, for example residential or recreational uses.

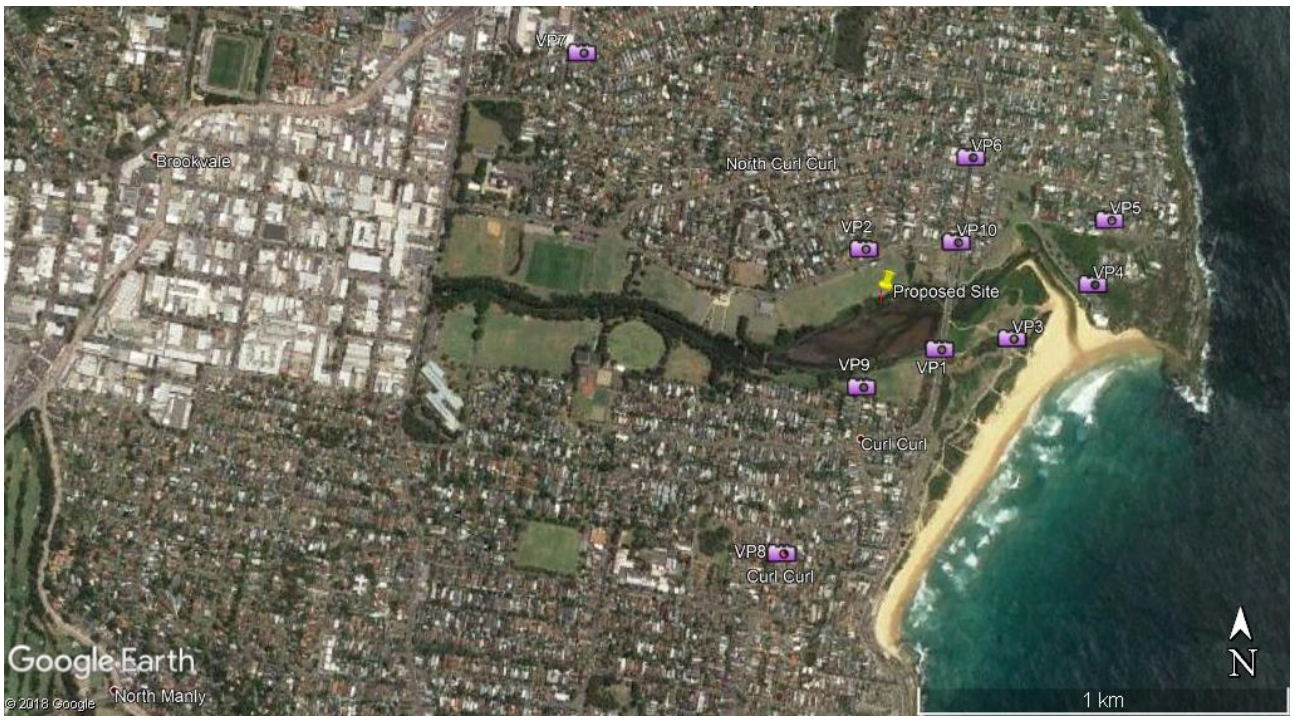

Figure 8: Sensitive viewpoint locations

4.5.1. Tourist Routes / Main Road Viewpoints – VP1, VP6 and VP10

VP1

The proposal is located approximately 180 m from Griffin Road, a major road that provides access to the beaches and Curl Curl Lagoon. Its distance from the road results in views to it being from the oblique to the perpendicular, and therefore not immediately in the forward line of sight of motorists crossing the bridge over the lagoon.

Low vegetation surrounding the lagoon provides for open views towards the proposal from the section of Griffin Road adjacent to Curl Curl Lagoon and John Fisher Park. From these locations, most of the proposal will be visible (refer to ***Figure 9***).

Although of a similar height to the existing light poles, the greater diameter of the proposal's pole results it being more visually apparent.

As a result, although there are numerous other vertical elements within the visual setting, the visual impact for this viewpoint is considered to be moderate.

VP10

Further along Griffin Road from the lagoon, to the north and south, views are mostly screened by taller and denser vegetation, as well as built form adjacent to the road. From these locations, only varying amounts of the upper parts of the monopole and the antennae would be visible (refer to ***Figure 11***).

The visible parts of the proposal would be consistent with the form of roadside power poles in the foreground and less visually prominent than the poles and overhead wires combined.

As a result of the relative lack of the proposal visible, as well as the high degree of visual consistency with other elements within the setting, the visual impact for this viewpoint is considered low.

VP6

To the north in the vicinity of VP6, Griffin Road is slightly elevated. However, intervening built form and vegetation blocks views to the proposal (refer to ***Figure 10***).

As a result of a lack of visibility of the proposal, it is considered that there will be no visual impact for this viewpoint.

Figure 9: Photo simulation - View northwest from VP1 - Griffin Road

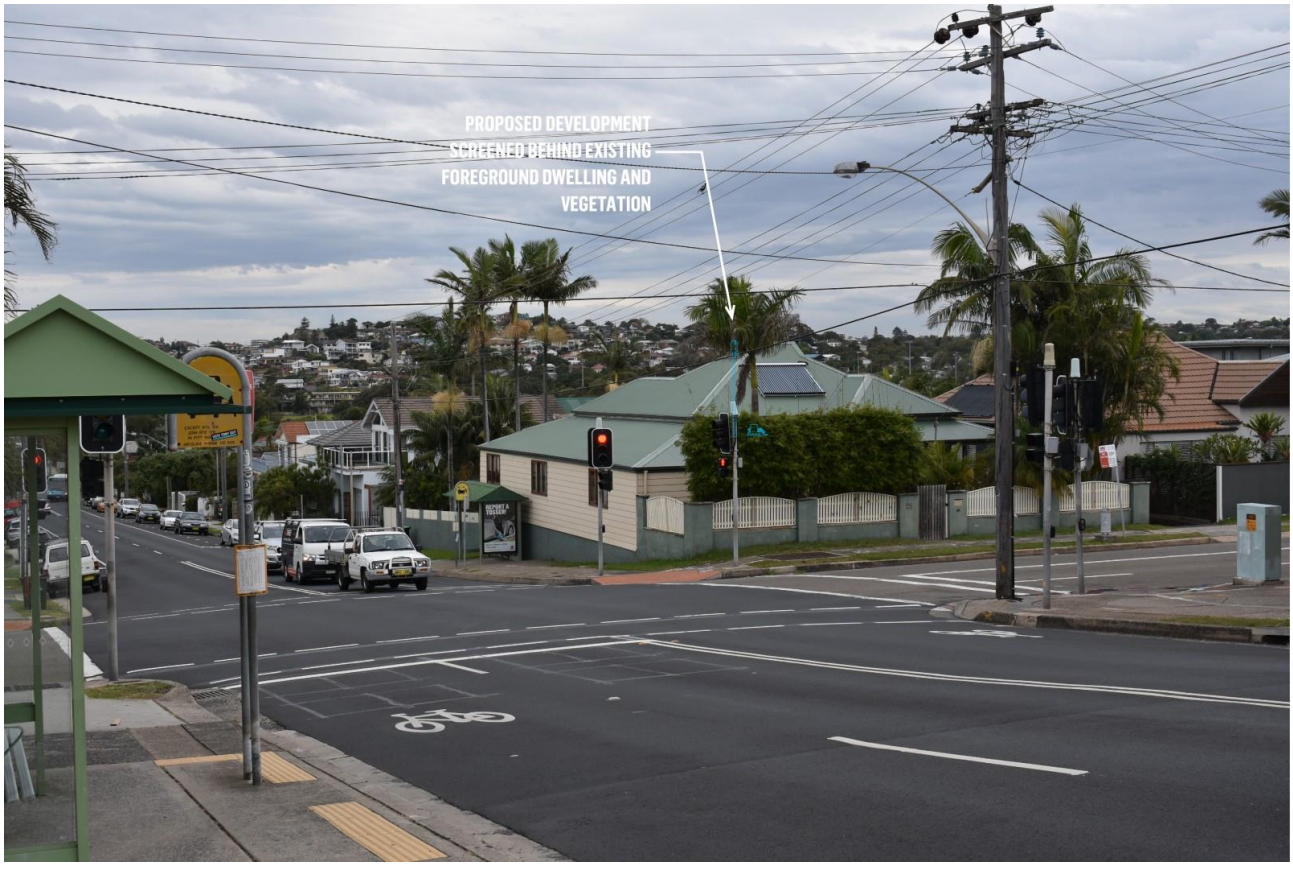

Figure 10: Photo simulation - View south southwest from VP6 - Corner of Griffin Road and Pitt Road

Figure 11: View southwest from VP10 - Intersection of Griffin Road and Abbott Road

4.5.2. Residential Viewpoints – VP2, VP5, VP7, VP8 and VP9

VP2

Residences immediately adjacent to John Fisher Park have relatively unimpeded views towards the proposal. Although of a similar height to the existing light poles, the greater diameter of the proposal's pole results it being more visually apparent given the relatively close proximity (refer to ***Figure 12***). The equipment shelter is a relatively small element within the context of the setting, comparable in scale and form with other sports related structures, such as player shelters and coaching boxes.

As a result, although there are numerous other vertical elements within the visual setting, the visual impact for this viewpoint is considered low to moderate.

VP5

The headland residential area has elevated views to the west along Curl Curl Lagoon to the proposal. However, given the distance, the difference in diameter of the pole and the slight difference in height are not readily distinguishable from the existing lighting poles.

As a result, for this viewpoint, the visual impact is considered low to very low.

VP 7 and VP8

The surrounding residential areas are typically located on land more elevated than the proposal site. Therefore, there is a degree of overlooking of the valley and the lagoon. However, due to intervening built form and taller vegetation, views towards the proposal are mostly screened.

Where views are possible along streets aligned towards the proposal, given the distance, the difference in diameter of the pole and the slight difference in height are not readily distinguishable from the existing lighting poles.

For the majority of residential areas, views to the proposal are likely to either blocked of screened by vegetation or buildings in the foreground.

As a result, for these viewpoints, the visual impact is considered low to very low.

VP9

The residential area to the south of the lagoon and the proposal site fronts John Fisher Reserve. This area is mostly screened from views to the proposal by tall and dense vegetation lining the edge of the lagoon.

The topography throughout the parkland is flat, with elevation rising slightly to the south through the residential area. As a result, overlooking is not possible and views from within the residential area further to the south are screened by intervening vegetation and built form.

As a result, for residential viewpoints to the south, the visual impact is considered very low.

Figure 12: Photo simulation - View south from VP2 – Abbott Road near intersection with Spring Road

Figure 13: Photo simulation - View southwest from VP5 – Molong Road

Figure 14: View southeast from VP7 – Headland Road

Figure 15: View north northeast from VP8 – Seaview Avenue

Figure 16: Photo simulation - View north from VP9 – Lalchere Street

4.5.3. Foreshore Reserve Viewpoints – VP3 and VP4

As indicated in the viewshed analysis (***Figure 9***) the proposal will not be visible from Curl Curl Beach as it will be screened by topography as well as vegetation. As a result, there will be no visual impact for most locations along the beach.

From the beach access carparks and the North Curl Curl Life Saving Club, views of the upper parts of the monopole and antennae may be possible, depending on the specific viewing location (refer to ***Figure 17*** and ***Figure 18***).

However, due to the relative lack of visibility, the visual impact is considered low for these viewpoints.

Figure Figure 17: Photo simulation - View west northwest from VP3 – Beach car park

Figure 18: View west from VP4 – North Curl Curl Surf Life Saving Club car park

5. AMELIORATION STRATEGIES

Actions exist to potentially ameliorate the landscape and visual impacts of the Project. These are outlined in the following sections.

5.1. ON-SITE ACTIONS

On-site actions relate to initiatives which can be undertaken within the boundaries of the Project area.

5.1.1. Alternative Design

Consideration could be given to a revised design which provides for better integration within the setting. This could include:

- A monopole topped with slimmer profile headframes and antennae.

5.1.2. Amelioration by Vegetation

Given the height of telecommunications towers, it is impractical to provide, and realistic to expect, at-source amelioration with vegetative screening. However, the presence of vegetation at the base of a monopole can assist in reducing the apparent height of the tower.

Consideration could be given to the planting of tall shrubs and / or small trees, to 5 m in height along the proposals eastern, northern and western boundaries, to assist with amelioration of views from John Fisher Park and adjacent residential development.

5.1.3. Colour and Materiality of Facility Equipment

The monopole, sheds and antennae could be painted to better integrate them with their immediate backdrop, either vegetation or the sky.

The monopole is proposed to be constructed of concrete and will appear a matt, mid grey. The antennae should be of a matt, light grey finish, which is equivalent to Colorbond Surfmist®).

Where back dropped by the sky, colours such as pale greys provide improved visual amelioration under a range of atmospheric and lighting conditions. (This approach has been borne out through numerous studies into the colouration of wind turbines that are usually painted with RAL Colour 7035 - Pale Grey).

The 3 bay outdoor unit should be of a “Pale Eucalypt” / “Paper Bark” colour. This will ensure visual compatibility with the colour of any proposed screening vegetation.

6. CONCLUSION

Throughout the wider visual catchment, where views towards the proposal may be possible, they will mostly be of the upper parts of the monopole and antennae.

Higher impacts will mostly be experienced from residents to the north of the proposal along Abbott Road. However, given the similarity of form of the proposal with the existing lighting towers, the visual impact for these viewpoints is considered low to moderate.

With regard to the sensitivity of users, residents are considered to be of a high visual sensitivity, whereas those involved in the playing of field sports are considered to be of a lower visual sensitivity due to the activity they are undertaking being not dependant on the visual quality of the setting

From distant viewpoints, throughout the residential area and the Curl Curl beach foreshore, although the upper parts of the project will be visible above the surrounding canopy vegetation, the greater distance will result in a lower level of visual prominence, as well as high degree of visual compatibility with the vertical elements of the townscape.

6.1. SUMMARY

It is considered that the proposed use and development is an appropriate response for the subject site and surrounds for the following reasons:

- It is an appropriate use given the visual character of sporting related infrastructure which already exists within the setting.
- The proposal is not of a scale of visual prominence that would result in an adverse impact to the visual amenity of surrounding properties.
- The majority of the proposal is mostly screened from more distant viewpoints by intervening vegetation and built form.

DISCLAIMER

This report is dated 7th May 2020 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd's (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of Optus Mobile Pty Ltd (**Instructing Party**) for the purpose of a Development Application (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

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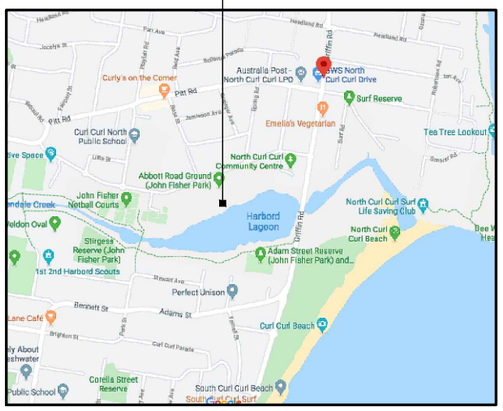
This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

APPENDIX A THE PROPOSED DEVELOPMENT

PROPOSED OPTUS BASE STATION



LOCALITY MAP

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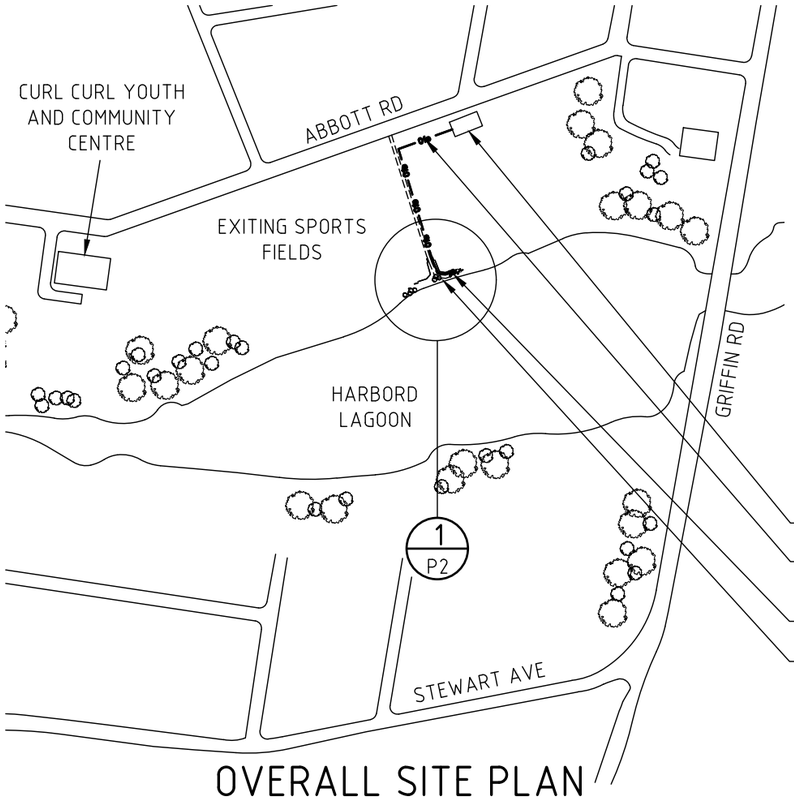
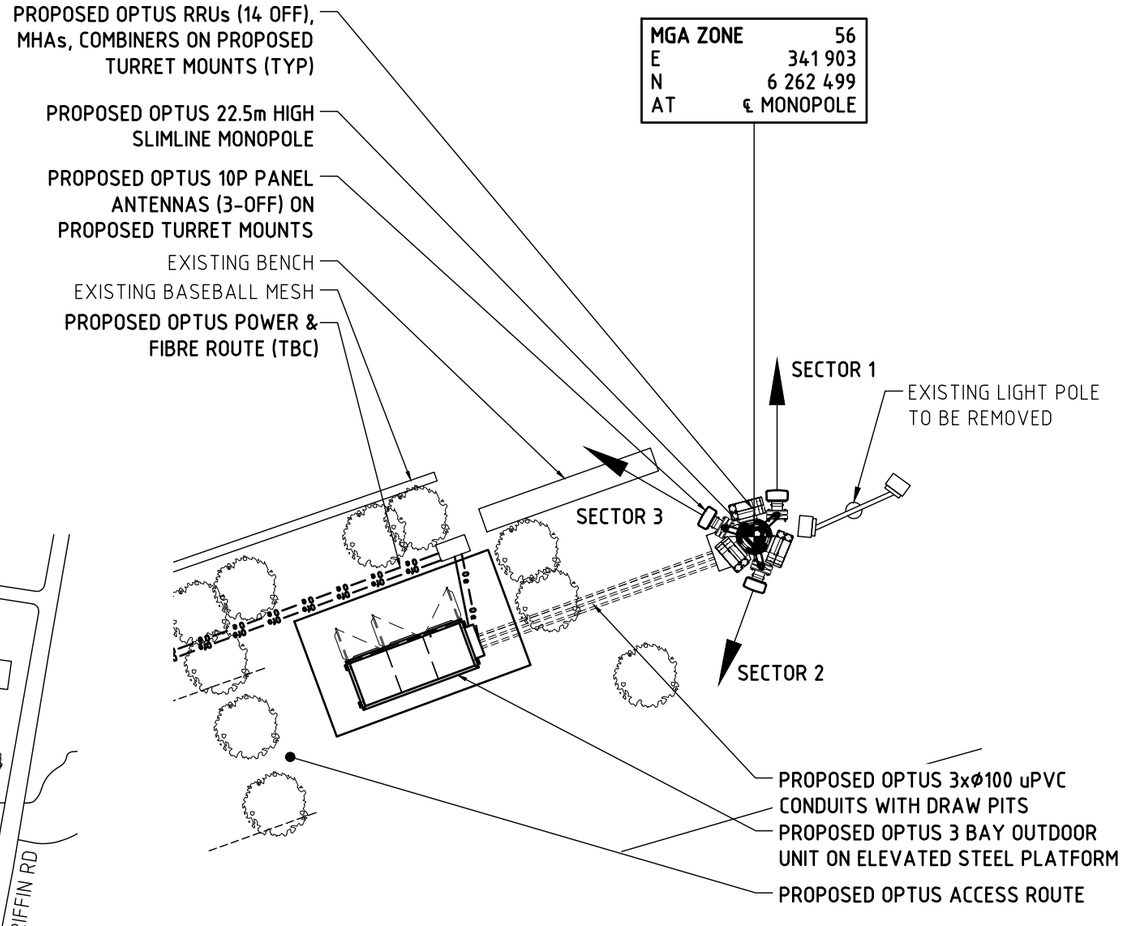


OVERALL SITE PLAN

SCALE 1:5000



DETAIL 1/P1

SCALE 1:100

NOTE:
THIS DRAWING IS DIAGRAMMATIC ONLY AND SHOULD NOT BE SCALED. DIMENSIONS, COORDINATES, AND LEVELS SHOWN ARE NOMINAL AND SUBJECT TO CONFIRMATION BY SURVEYOR.

SITE ADDRESS:

LOT 7356 DP1167221
ABBOTT ROAD SPORTSGROUND
NORTH CURL CURL NSW 2096

NOTES:

1. **BASIS OF DESIGN**
   - SITE INSPECTION 20/10/15
2. **PANEL ANTENNAS**
   - 1 OFF PER SECTOR (EACH 2.7m LONG) AT EL 23.90m
   - SECTOR 1 - 0°, SECTOR 2 - 200°, SECTOR 3 - 300°
   - MOUNTED ON PROPOSED TURRET MOUNTS
3. **TRANSMISSION**
   - FIBRE OPTUS TO CONFIRMED
4. **OUTDOOR CABINET**
   - 3 BAY OUTDOOR UNIT (2254Lx926Wx2126H), COLOURED "PALE EUCALYPT/PAPER BARK" ON ELEVATED STEEL PLATFORM.
5. **OPTUS MONOPOLE**
   - 22.5m HIGH MONOPOLE WITH TURRET MOUNT AT EL 23.9m.
6. **FEEDER CABLES/ HYBRID TRUNK CABLES**
   - SIZE: 9/18 TRUNK CABLES (2 OFF) + AVAS5-50 FEEDERS (6 OFF)
   - LENGTH: 30m APPROX.
7. **SITE ACCESS**
   - VIA ABBOTT ROAD
8. **ANTENNA ACCESS**
   - VIA CHERRY PICKER
9. **POWER SUPPLY**
   - 3-PHASE 63 AMP POWER SUPPLY TO BE PROVIDED
   - DETAILS TO BE CONFIRMED/ADVISED.
10. **OTHER (PAINTING, LANDSCAPING, SCREENING)**
    - LOCATED IN FLOOD ZONE.
    - EXISTING FLOOD LIGHT POLE TO BE REMOVED, LIGHTS TO BE RELOCATED TO THE NEW OPTUS MONOPOLE AT CL 22.0m.

Rev	Date	Revision Details	Consultant	CAD	Designer	Verifier	Approver
01	30.04.20	ISSUED FOR APPROVAL	LENDLEASE	GM	TA	SK	SK

Client: OPTUS

Project: MOBILE NETWORK AUSTRALIA
SITE No:- S2711 - CURL CURL BEACH
ABBOTT ROAD SPORTSGROUND

Drawing Title: DRAFT SITE LAYOUT SHEET 1 OF 2

Drawing Status: FOR APPROVAL

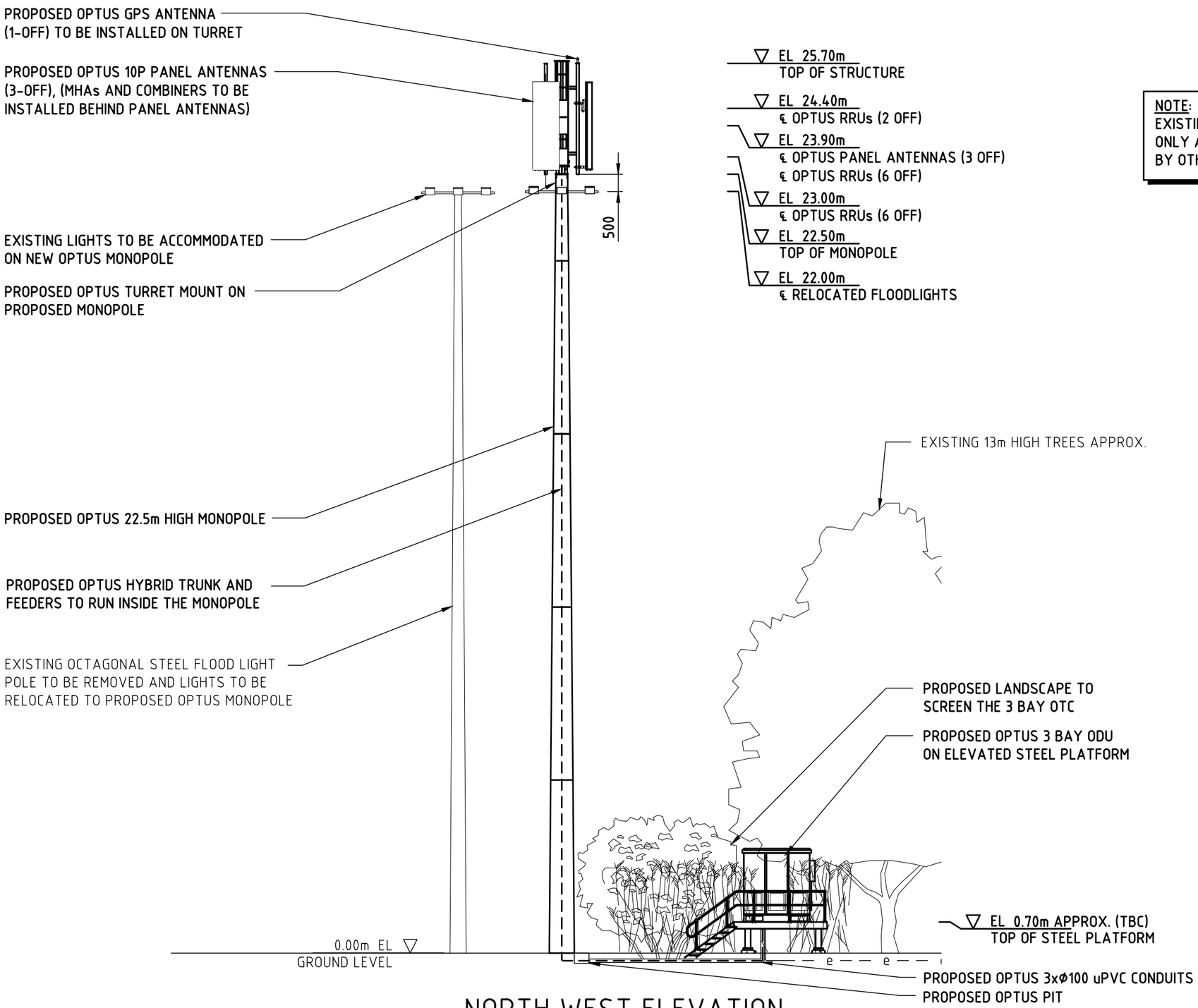
Drawing No. S2711-P1

Revision 01

20 10 0 10 20 30 40 50mm

A3

CAD File: O:\Stay Alive- GF\S2711 Curl Curl Beach\2.0 CAD\2.2 Existing LL CAD (Do not send)\2.2.1 DSL\S2711 DSL 200430.dwg Date: 30.04.2020 5:57 PM



NOTE:
THIS DRAWING IS DIAGRAMMATIC ONLY AND SHOULD NOT BE SCALED.

NOTE:
EXISTING ANTENNAS AS SHOWN ARE INDICATIVE ONLY AND ARE BASED ON INFORMATION SUPPLIED BY OTHERS AND/OR BY INSPECTION ON SITE.

NORTH WEST ELEVATION

SCALE 1:125

Rev	Date	Revision Details					
			LENDLEASE Consultant	GM CAD	TA Designer	SK Verifier	SK Approver
01	30.04.20	ISSUED FOR APPROVAL					

Client: OPTUS

Project: MOBILE NETWORK AUSTRALIA
SITE No:- S2711 - CURL CURL BEACH
ABBOTT ROAD SPORTSGROUND

Drawing Title: DRAFT SITE ELEVATION

Drawing Status: FOR APPROVAL

Drawing No. S2711-P2

Revision 01

20 10 0 10 20 30 40 50mm

A3

APPENDIX B PHOTO SIMULATIONS OF THE PROPOSED DEVELOPMENT

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

PHOTOSIMULATIONS FOR PROPOSED DEVELOPMENT

PREPARED FOR

OPTUS MOBILE PTY LTD

07 MAY 2020

TECHNICAL SUMMARY FOR PHOTOSIMULATIONS

LOT 7201 GRIFFIN ROAD,
NORTH CURL CURL, NSW

PHOTOSIMULATIONS PREPARED BY:
Urbis, Level 12, 120 Collins Street, MELBOURNE 3000.

DATE PREPARED :
07th May 2020

VISUALISATION ARTIST :
Ashley Poon, Urbis – Lead Visual Technologies Consultant

Bachelor of Planning and Design (Architecture) with over 15 years' experience in 3D visualisation

VISUALISATION SUPERVISOR :
Peter Haack, Urbis - Director, Urban Design and Landscape Architecture

Bachelor of Landscape Architecture, RMIT 1990.

Diploma of Applied Science (Amenity Horticulture), University of Melbourne, 1981.

Registered Landscape Architect – # 000619 – Current.

Fellow of the Australian Institute of Landscape Architects (AILA).

Member AILA National Education Committee (2005 – 2018).

Member Parks and Leisure Australia - Current.

LOCATION PHOTOGRAPHER :
Phil James - Urbis - Associate Directior - Design

(Photos taken under direction from Ashley Poon, Urbis - Lead Visual Technologies Consultant)

CAMERA :
Nikon D7200 – 24 Megapixel Digital SLR Camera (Nikon DX format - equiv 1.5x crop sensor)

CAMERA LENS AND TYPE :
Nikon AF-S DX Nikkor 18-55mm zoom lens.

Unless indicated otherwise, all photos have been shot at ~33mm (equivalent to 40° horizontal field-of-view) and is equivalent to using a 50mm lens on a full frame camera. (Also equivalent to 40° horizontal field-of-view)

SOFTWARE USED :
- 3DSMax 2020 with Arnold (3D Modelling and Render Engine)
- AutoCAD 2015 (2D CAD Editing)
- Globalmapper 16 (GIS Data Mapping / Processing)
- Photoshop CC 2019 (Photo Editing)

DATA :
- Digital 2D CAD drawings and associated plans of the proposed development received from Optus.
- Additional supporting digital GIS data (LiDAR, terrain contours and cadastre) from data obtained from PSMA Australia Ltd, Navigate Pty Ltd. Australian Bureau of Statistics.

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

PHOTOSIMULATIONS - VIEW LOCATION MAP

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_MAP
REV: -

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

VP 1 : GRIFFIN RD, LOOKING NORTH WEST TOWARDS SITE | STANDARD 50MM VIEW - EXISTING PHOTO TAKEN 2019-05-10 12:30 AEST

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_1A
REV: -

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

VP 1 : GRIFFIN RD, LOOKING NORTH WEST TOWARDS PROPOSED DEVELOPMENT | 3D PHOTOSIMULATION

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_1B
REV: -

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

VP 2 : ABBOTT RD, LOOKING SOUTH-SOUTH EAST TOWARDS SITE | STANDARD 50MM VIEW - EXISTING PHOTO TAKEN 2019-05-10 12:48PM AEST

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_2A
REV: -

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

VP 2 : ABBOTT RD, LOOKING SOUTH-SOUTH EAST TOWARDS PROPOSED DEVELOPMENT | 3D PHOTOSIMULATION

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_2B
REV: -

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

VP 3 : UNNAMED RD, LOOKING WEST-NORTH WEST TOWARDS SITE | STANDARD 50MM VIEW - EXISTING PHOTO TAKEN 2019-05-10 12:18PM AEST

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_3A
REV: -

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

VP 3 : UNNAMED RD, LOOKING WEST-NORTH WEST TOWARDS PROPOSED DEVELOPMENT | 3D PHOTOSIMULATION

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_3B
REV: -

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

VP 5 : ROBERTSON RD, LOOKING WEST-SOUTH WEST TOWARDS SITE | STANDARD 50MM VIEW - EXISTING PHOTO TAKEN 2019-05-10 1:59PM AEST

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_5A
REV: -

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

VP 5 : ROBERTSON RD, LOOKING WEST-SOUTH WEST TOWARDS PROPOSED DEVELOPMENT | 3D PHOTOSIMULATION

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_5B
REV: -

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

VP 6 : GRIFFIN RD, LOOKING SOUTH-SOUTH WEST TOWARDS SITE | STANDARD 50MM VIEW - EXISTING PHOTO TAKEN 2019-05-10 1:29PM AEST

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_6A
REV: -

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

VP 6 : GRIFFIN RD, LOOKING SOUTH-SOUTH WEST TOWARDS PROPOSED DEVELOPMENT | 3D PHOTOSIMULATION

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_6B
REV: -

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

VP 9 : LALCHERE ST, LOOKING NORTH TOWARDS SITE | STANDARD 50MM VIEW - EXISTING PHOTO TAKEN 2019-05-10 12:05PM AEST

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_9A
REV: -

URBIS

LOT 7201 GRIFFIN ROAD, NORTH CURL CURL, NSW

VP 9 : LALCHERE ST, LOOKING NORTH TOWARDS PROPOSED DEVELOPMENT | 3D PHOTOSIMULATION

DATE: 07.05.2020
JOB NO: S2711
DWG NO: VP_9B
REV: -

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