INGHAM PLANNING PTY LTD

VISUAL IMPACT ASSESSMENT REPORT

Proposed Telecommunications Facility at 13 Sycamore Road Lake Albert

Prepared for Ventia Pty Ltd
on behalf of Australian Tower Network Pty Ltd
& Optus Mobile Pty Ltd

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1. INTRODUCTION – THE PROPOSED DEVELOPMENT

1. This Visual Impact Assessment Report relates to a development application for installation of a telecommunications facility (mobile phone base station) on a parcel of land at 13 Sycamore Road, Lake Albert, located approximately 5kms southeast of the Wagga Wagga CBD. The subject land is described as Lot 8 in DP 716602 and comprises a small rural holding containing a single storey dwelling and a flower growing business.

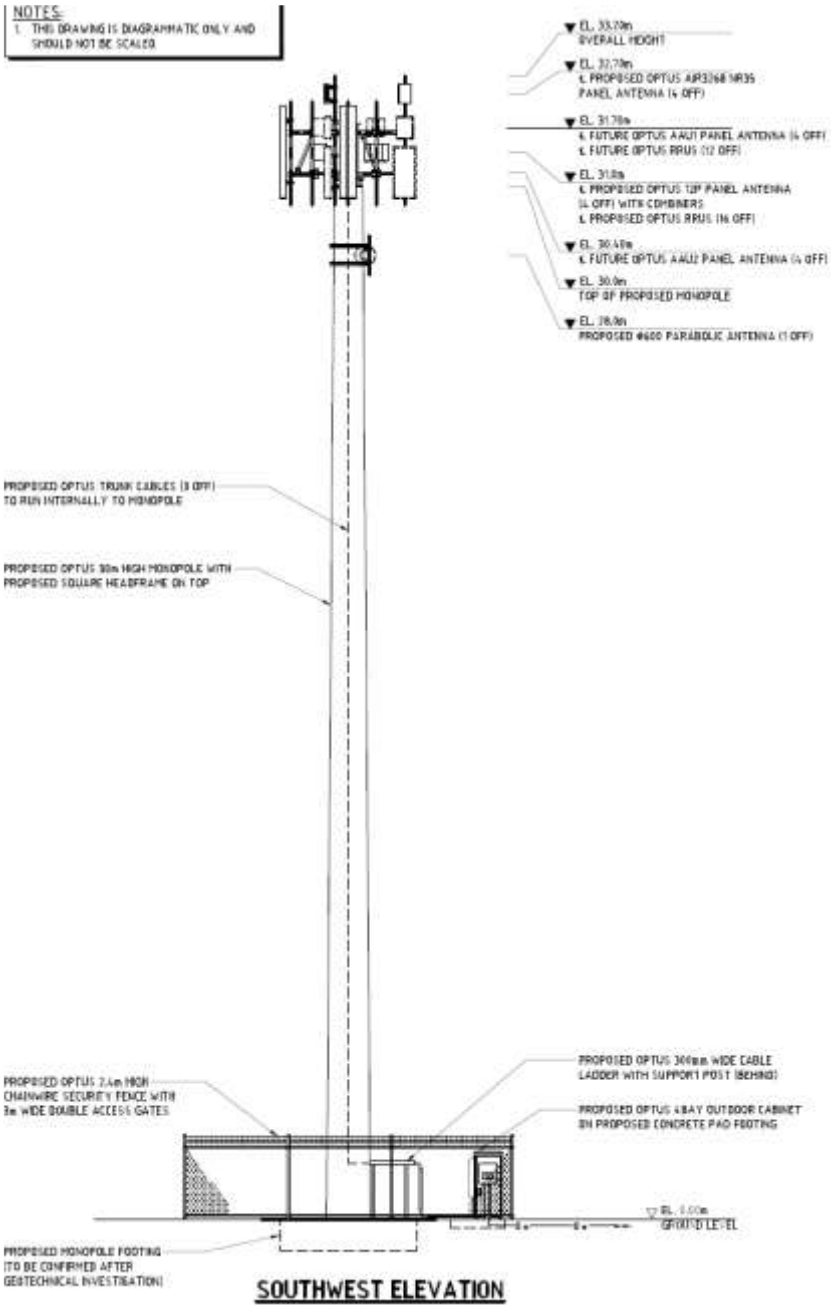
2. The site is located on the south-east fringe of the urban area of Wagga Wagga, within a semi-rural locality zoned R5 Large Lot Residential, comprising rural-residential and small farm holdings. Topography is generally flat and mostly cleared, with tree cover limited to small clusters of trees and individual scattered trees predominantly along road frontages and property boundaries and around existing dwellings. An aerial view of the locality is provided below in **Figure 1** with the proposed location near the rear westernmost corner of the site shown with a red circle.

Figure 1 – Aerial View of the Locality and Location of the Proposed Facility

3. The Applicant proposes installation of a mobile phone base station comprising a 30m high monopole, square headframe, 4 5G panel antennas, 16 Remote Radio Units, a 600mm microwave dish, a 4 bay outdoor equipment cabinet, and associated ancillary equipment and services, together with a compound fence and access driveway. The proposed facility will extend to a maximum height of 33.2m above existing ground level.

4. An elevation view (southwest elevation) of the proposed facility is shown below in **Figure 2**.

Figure 2 – Elevation View of the Proposed Telecommunications Facility



Source: Ventia Statement of Environmental Effects

5. The proposed facility is required to service the increased demand for Optus telecommunications services in the Lake Albert locality, including improved speeds and data band width. The Applicant has explored a range of potential sites in the area and determined that the proposed site at 13 Sycamore Road is the only feasible site that is available and can meet service requirements.

6. The development application proposes to install the proposed telecommunications facility adjacent to the southwest side boundary (2.5m side setback), near the westernmost rear corner of the site, setback in the order of 100m from Sycamore Road. **Figure 3** below, is a photomontage view of the facility in the proposed location, looking northwest from Sycamore Road, east side, near the 14 Sycamore Road southern driveway.

Figure 3 – Location of the Telecommunications Facility within 13 Sycamore

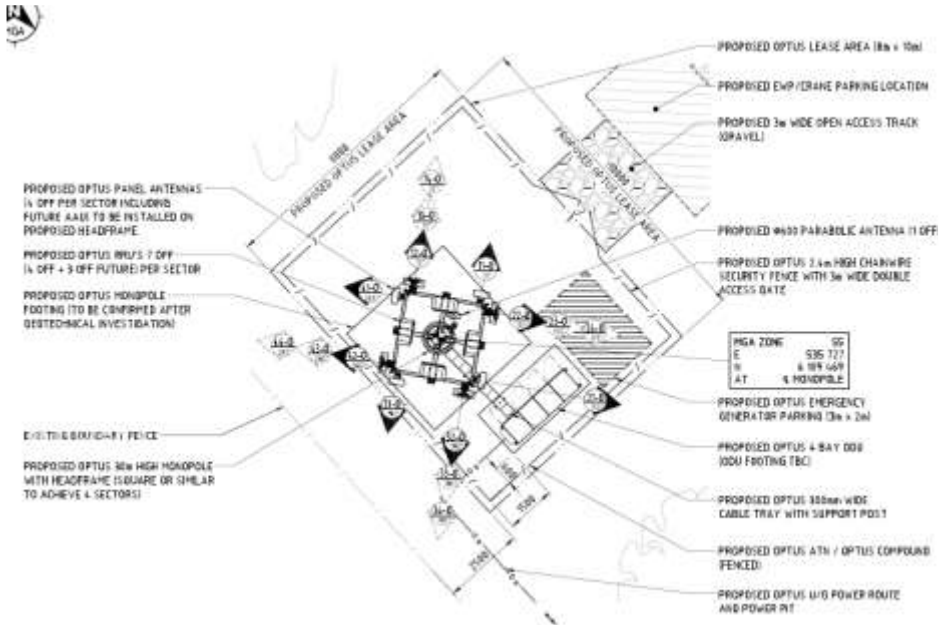
Source: Ventia Statement of Environmental Effects and Photos

7. An aerial view of the subject land 13 Sycamore Road, is shown below in **Figure 4**, with the boundaries of the land edged in red. The telecommunications facility is proposed to be located near the westernmost rear corner of the site.

Figure 4 – Aerial View of the Subject Land 13 Sycamore Road Lake Albert

8. A plan view of the telecommunications facility is shown below in **Figure 5**.

Figure 5 – Plan View of the Proposed Communications Facility



Source: Ventia DA Plans & Photos

9. The proponent in addition to the photomontage view of the facility in the revised location looking northwest from Sycamore Road (**Figure 3**), has provided 2 additional photomontage views from Sycamore Road as shown below in **Figure 6** and **Figure 7**. **Figure 6** below, shows a view looking predominantly north towards the proposed facility, from Sycamore Road (corner of Elm Road), 170m to the south of the facility. **Figure 7** on the following page , shows a view looking southwest towards the proposed facility, from Sycamore Road, near the southwest corner of No. 16 Sycamore Road, 130m northeast of the facility.

Figure 6 – Photomontage View Looking North from Sycamore Road

Figure 7 – Photomontage View Looking Southwest from Sycamore Road

10. I have been requested to prepare a visual impact assessment of the telecommunications facility having regard to the NSW Telecommunications Facilities Guideline and in particular, Principle 1 relating to the design and siting of telecommunications facilities to minimize visual impact.

2. ASSESSING THE VISUAL IMPACT OF TELECOMMUNICATIONS FACILITIES

11. Visual impact is often a significant issue with respect to mobile phone telecommunications infrastructure, where such facilities require the installation of a tall tower or monopole. These taller supporting structures are generally necessary to provide adequate service levels, including sufficient signal clearance over existing buildings and tree canopy, to function effectively. In localities where topography is flat to very gently sloping, as is the case with the Lake Albert locality, a tower or monopole height of at least 30m are necessary.

12. It is not always possible to locate mobile phone antennas in a discreet fashion on an existing building, where buildings are generally of a low height. Nor is it always possible to find a location that results in a generally minor visual impact. Co-location offers the best outcome in terms of visual impact, however in many cases this is not possible, either because a co-location option is not available in the service area or where an existing facility is available, it is not possible to achieve the required height to accommodate the additional antennas.

13. Like many other items of infrastructure comprising taller structures, such as electricity transmission line towers, wind turbines and tall lighting poles, the infrastructure will extend above existing buildings and vegetation, and hence be readily seen in the landscape, particularly when viewed from closer viewing distances.

14. Consideration of visual impact requires balancing the need for the facility and the associated benefits that will be provided to the broader community in maintaining and enhancing an essential service, with locational and design options that minimize visual impact on the locality, particularly in locations of good to high visual quality.

15. Visual impact assessment does involve some degree of subjectivity in that what is attractive or visually obtrusive to some, may not be so to others to the same extent, particularly in relation to the built form. Matters of taste and individual preference are very personal and should be given little, if any, weight in an objective visual impact assessment.

16. An objective visual impact assessment should have regard to the visual character, qualities, and physical setting of the location of the proposed telecommunications facility. Where visual character and setting is of good quality or high visual significance, for example due to its attractive visual qualities, uniqueness, or prominence, then visual impact of a development will be of particular importance. Where visual character and setting is of more modest quality, visual impact would be given a much lower weighting.

17. The visual prominence of a building or structure does not necessarily mean that such a development be deemed unacceptable. Iconic and landmark structures, recognized as having great design merit, such as the Sydney Opera House and the Sydney Harbour Bridge, are prominent in the high-quality visual setting of Sydney Harbour, yet contribute positively to the visual qualities of that setting. Alternatively, a building or structure of more modest design quality, that is also visually prominent, may not have an unacceptable impact, where located in an area with low to moderate visual quality and amenity.

18. While some items of "industrial infrastructure" may be considered to have a positive visual impact, it is generally accepted that telecommunications facilities such as mobile phone towers, do not make a positive contribution to the visual qualities of the localities within which they are located. Typically planning controls and guidelines in relation to such facilities seek to encourage their location within industrial areas, where they are seen as more compatible with the visual character of industries, or alternatively, in locations such as large areas of open space, or within infrastructure corridors. However, it is often not feasible to locate telecommunications facilities in such locations.

19. A building or structure, such as a mobile phone tower, which is visually prominent, may be acceptable in areas with low to moderate visual amenity, but would be entirely inappropriate in an area of high visual quality and amenity. If a proposed structure has more limited visibility and is designed to blend into the setting as much as possible, it may be readily acceptable visually, even within a setting of higher visual quality.

20. In the case of a mobile phone transmission tower, there are options available to reduce visual impact such as minimizing tower/pole height, locating the tower/pole on lower ground, rather than on a prominent ridge, integrating it into existing vertical elements (e.g. light/power poles) and/or incorporating some screen landscaping below the level of the antennas.

21. A judgement must be made in relation to the visibility of a proposed building or structure, balanced against the visual quality of the locality and feasible measures available to reduce visual impact. The NSW Telecommunications Communications Guideline (the Guidelines) encourages initiatives designed to mitigate visual impact and such options should be considered in any visual impact assessment.

22. Expectation plays a part in visual assessment and relates to "visual familiarity" and the manner an object is perceived in its context. By way of example, the protrusion of church spires into the skyline of a low-rise residential area does not create a discordant element, as there is community expectation that one will see some church spires in a residential environment.

23. While light and electricity poles are not a positive visual element in the landscape, they are such an integral part of the environment of our cities and towns that they become absorbed into the visual experience to the extent that they are generally not consciously noticed.

24. Larger buildings and items of infrastructure similarly appear less noticeable in industrial areas, where the presence of such structures is anticipated by the viewer. In the early years of the provision of telecommunications towers, visual impact of such facilities was more noticeable, as they were a relatively unfamiliar item in the landscape. With the proliferation of such facilities over the last 20 plus years, they have become a familiar and more visually acceptable element within the landscape.

25. Visual impact assessment should include an evaluation of view impact. Proposed development should not significantly obstruct or detract from high quality views, such as views to water bodies, natural and man-made iconic features or landmarks, significant natural and cultural landscapes, such as recognised scenic protection areas, national parks, major parklands, and heritage areas.

26. Views to and from the public domain are more important than private views. In conservation areas, or where there are nearby heritage items, consideration needs to be given to protecting townscape and heritage qualities and the visual catchment and setting of heritage items and their curtilage.

27. Applying the above visual assessment principles results in a set of criteria that should be applied to the visual impact assessment of a proposed telecommunications facility. These criteria are summarized as follows:

- *Acknowledge the role of telecommunication facilities as essential infrastructure for wireless communication services.*
- *Avoid locations within areas of high landscape and visual quality, or visually sensitive locations and locations that result in excessive prominence within an area of recognised visual or scenic quality, wherever possible.*
- *Locate facilities in locations of low to moderate visual quality wherever possible.*
- *Where possible, locate facilities in land use settings such as industrial, infrastructure or commercial areas, where telecommunications facilities are more compatible with established built form character and land use.*
- *Avoid locations that will result in obstruction of important high-quality and iconic views, particularly views of those features from the public domain.*
- *Where possible locate facilities discreetly on existing buildings or co-located with existing telecommunications facilities.*
- *Include visual mitigation measures such as minimizing height of facilities, utilizing neutral colours, and providing screen landscaping.*
- *Objectively balance the need for the proposed facility with the visual impact arising from the proposed facility.*

28. In addition to consideration of the above visual impact assessment criteria, visual impact is to be assessed against Principle 1 of the NSW Telecommunications Guideline Including Broadband October 2022, as set out in Section 3 of this Visual Impact Assessment Report. Principle 1 of the Guideline aims to minimize the visual impact of telecommunications facilities.

3. NSW TELECOMMUNICATIONS GUIDELINE PRINCIPLE 1 - VISUAL IMPACT ASSESSMENT OF THE PROPOSED FACILITY

29. The NSW Telecommunications Guideline Including Broadband (the Guideline) is designed to support the roll out of broadband in NSW and aims to ensure that both wireline and wireless telecommunications infrastructure, including for broadband, can be provided in an efficient and cost-effective manner to meet the community needs for telecommunications services.

30. The Guideline includes principles for the design, siting, construction, and operation of telecommunications facilities, and aims to minimize impacts of facilities and meet the requirements of the Telecommunications Act 1997.

31. Part 3 of the Guideline sets out principles to guide the preparation and assessment of proposals for telecommunications facilities. Principle 1 relates to the design and siting of telecommunications facilities, to minimize visual impact. The matters to be considered under Principle 1 are reproduced, as follows:

a. As far as practical, integrate a telecommunications facility that is mounted on an existing building or structure with the design and appearance of the building or structure.
b. Minimise the visual impact of telecommunications facilities, reduce visual clutter (particularly on tops of buildings) and ensure physical dimensions (including support mounts) are sympathetic to the scale and height of the building to which it is to be attached and to adjacent buildings.
c. If a telecommunications facility protrudes from a building or structure and is predominantly seen against the sky, either match the prevailing colour of the host building or structure or use a neutral colour such as pale grey.
d. Where possible and practical, screen or house ancillary facilities using the same colour as the prevailing background and consider using existing vegetation or new landscaping.
e. Locate and design a telecommunications facility in a way that responds to its setting (rural, residential, industrial or commercial).
f. Site and design a telecommunications facility located on or adjacent to a listed heritage item or within a heritage conservation area with external colours, finishes and scale sympathetic to the heritage item or conservation area.
g. Locate telecommunications facilities to minimise or avoid obstructing significant views of a heritage item or place, a landmark, a streetscape, vista or a panorama, whether viewed from public or private land.
h. Consult with relevant council when proposing pruning, lopping or removing any tree or vegetation. Obtain a tree preservation order, permit or development consent if required.
i. Remove redundant telecommunications facilities and restore the site to the condition it was in prior to the facility's construction.
j. Remove redundant components of existing facilities after upgrades.
k. Where possible, consolidate telecommunications facilities to reduce visual clutter and work with other users on co-location sites to minimise cumulative visual impact.
l. Accord with all relevant industry design guides when siting and designing telecommunications facilities.
m. Assess potential visual impact in alternative site assessments.

32. The Applicant has demonstrated that it is not feasible to locate the proposed facility on an existing building or co-locate the facility with an existing telecommunications facility. The proposed facility does not result in visual clutter. The subject land is not within a scenic protection area or heritage conservation area and is not located adjacent or near any identified heritage item. The proposed location provides a very substantial 100m setback to Sycamore Road, mitigating visual impact as viewed from Sycamore Road.

33. There are existing views towards the proposed facility and over the subject land from Sycamore Road to the east, northeast and southwest and from nearby dwellings to the north, south and east of the selected site and to a lesser extent from the west. These views could not be described as high-quality views towards iconic or landmark features, water bodies or natural and cultural landscapes of high visual quality.

34. The proposed location is within a semi-rural urban fringe setting, comprising rural-residential and small farm holdings. Topography is generally flat and mostly cleared, with tree cover limited to small clusters of trees and individual scattered trees predominantly along road frontages and property boundaries and around existing dwellings.

35. The locality is not identified as having scenic or landscape significance and would not constitute an area of high visual quality or as having a high level of visual interest. Nevertheless, the locality exhibits attractive semi-rural qualities typical of rural-residential areas on the urban fringe. Overall, the locality is considered of moderate visual quality and as such, warrants consideration of potential visual mitigation measures.

36. By way of comparison, the nearest telecommunications facility is located within the Council's Sewerage Treatment Plant (STP) some 367m to the northwest of the proposed site and is situated within an area of low visual quality. It has not been possible to locate the proposed telecommunications facility within the STP site. The balance of the area where the facility could potentially be located, including the area around other identified potential alternative sites, is of moderate visual quality, similar in quality to that which surrounds the selected location. Accordingly, it is not possible to locate the proposed facility within an area of lesser visual quality compared to the site selected.

37. Viewing distance is a significant factor with respect to the visual impact of telecommunications facilities. Any material visual impact is typically limited to viewing distances of less than 300m. The visual impact at closer viewing distances (130m to 170m) is illustrated in the photomontages at **Figures 6** and **7.** At these viewing distances, the proposed facility will be readily seen, with the antennas and up to two thirds of the monopole clearly visible.

38. As viewing distance increases, the upper third to a half of the monopole and the antennas remain visible. However, at and beyond a viewing distance of 500m, these components of the facility are a relatively small element in the landscape and overall visual impact relatively minor.

39. The visual mitigation effect of increased viewing distance is illustrated on the following page in **Figure 8**, which shows a view from Sycamore Road, approximately 150m south of the location of the proposed facility, looking northwest towards the existing Telstra telecommunications facility in the Vincent Road sewerage treatment plant site. At this location the viewing distance is in the order of 500m. **Figure 6** on Page 5 shows a similar view with a photomontage of the proposed telecommunications facility inserted into the view. At closer viewing distances such facilities are readily visible, even where trees provide some screening.

Figure 8 – View Looking Northwest of the Telstra Telecommunications Facility

40. Primary visual impact will be limited to Sycamore Road, within a distance 200m northeast and southwest of the site, as well as the adjoining rural-residential property to the directly east of the proposed facility at 14 Sycamore Road, directly to the south at No. 11 Sycamore Road, and directly to the west at 41 Vincent Road.

41. The view of the proposed facility from No's 15 and 16 Sycamore Road is very limited due to the screening effect of trees and the existing dwelling on the subject land at 13 Sycamore Road. There is ample separation distance and intervening tree canopy to mitigate visual impact from dwellings to the south of Elm Road and from No. 9 Sycamore Road and the dwellings to the rear at No's 43 and 45 Vincent Road and from Vincent Road.

42. The photomontages provided in **Figures 3, 6** and **7** suitably illustrate visual impact at closer viewing distances, upon vehicular and pedestrian traffic in Sycamore Road and from the front boundaries of properties close to the site in Sycamore Road. As noted above, the proposed facility will be readily seen from these locations, even if additional screen planting could be provided.

43. Views from nearby dwellings in Sycamore Road are not orientated directly towards the site of the proposed facility and are partly obscured by existing tree canopy. The most affected dwelling directly east of the facility at 14 Sycamore Road is located behind a row of trees extending along the eastern side of Sycamore Road.

44. Telecommunications facilities located behind tree canopy present a materially reduced visual impact, compared to facilities that have minimal tree canopy screening. This is illustrated in the photo view of the existing Telstra facility to the northwest off Vincent Road, shown above in **Figure 8**.

45. As noted above, a substantial row of trees in the order of 18m to 20m high is located on the eastern side of Sycamore Road, opposite the site, as shown below in **Figure 9.** These trees will screen most of the facility, apart from the antennas and uppermost portion of the monopole, from views from nearby dwellings on the eastern side of Sycamore Road.

Figure 9 – View of Existing Trees East Side of Sycamore Rd. Opposite the Site

46. The neighbouring dwelling to the south of the site at No. 11 Sycamore Road (shown below in **Figure 10**) will have a partial northeast view of the proposed facility through existing trees located to the northeast and along the shared side boundary between the 2 properties. Separation distance, and the angle of view in combination with the screening effect of existing trees, ensures a moderate and acceptable visual impact as viewed from Sycamore Road and the existing dwelling at No. 11 Sycamore Road.

Figure 10 – View South Towards the Dwelling at 11 Sycamore Road

47. The dwelling at No. 41 Vincent Road is located some 170m to the west of the proposed facility. The primary outlook from the rear of this dwelling is towards the southeast, however, there is an angled outlook east from the rear of this dwelling towards the proposed facility.

48. The existing tree on the development site adjoining the northwest boundary of the proposed compound will offer some screening of the lower portion of the pole. Consideration should be given to planting at least 2 additional trees in the westernmost corner of the development site, near the proposed facility, with such trees capable of achieving a mature height of at least 20m and a substantial canopy spread.

49. Principle 1 (c) recommends utilizing a neutral colour, such as pale grey, where the telecommunications structure protrudes into the skyline. The proposal complies with this recommendation, as a neutral pale grey colour is proposed. This can be suitably addressed by way of a consent condition.

50. Principle 1(d) recommends that where possible and practical, screen or house ancillary facilities using the same colour as the prevailing background and consider using existing vegetation or new landscaping. The equipment shelter, compound fence and ancillary facilities at ground level should also be a neutral colour, such as pale grey or a tone and colour that matches vegetation in the locality. This can be suitably addressed by way of a consent condition.

51. The proposed location near the rear northwest corner of the subject land in combination with separation distance and existing tree screening, avoids the need for additional screen planting to mitigate visual impact as viewed from Sycamore Road or neighbouring properties to the south, north and east, including Sycamore Road. As noted above, provision of new tree planting in the westernmost corner of the subject land will suitably mitigate visual to residential properties to the west.

52. The compound fence to the facility is proposed to be located adjacent to the southwest side boundary. The compound itself and supporting equipment will have a visual impact not materially greater than a typical rural outbuilding. Provision of some shrub planting along the southwest side of the compound would effectively eliminate any visual impact on No. 11 Sycamore Road, arising from the compound.

53. While locating the proposed facility with a substantial 100m setback to Sycamore Road will increase development costs, compared to a site closer to the road, it is unlikely to materially impact on the efficient use of the land for flower growing or other productive rural activity that could be accommodated on the land. The location at the rear has the added benefit of reduced visual impact, as viewed from Sycamore Road.

54. Subject to the visual impact mitigation measures outlined above, including some tree planting in the westmost corner of the site, and having regard to the overall modest visual quality of the locality the role of the proposal as an item of essential infrastructure, the proposed telecommunications facility in the location propopsed is considered to have an acceptable visual impact.

4. CONCLUSIONS

55. Telecommunications facilities such as mobile phone base stations are an essential item of infrastructure. While visual impact is an appropriate matter for consideration, visual impact must be balanced against the need for the facility, effective and efficient provision of the facility and the visual qualities of the environment within which it is proposed to be located.

56. The proposed location at 13 Sycamore Road, Lake Albert is a rural-residential area of moderate visual quality. It has not been possible to co-locate the proposed facility or obtain a site in an area of lower visual quality, capable of meeting service requirements.

57. The proposed facility does not result in visual clutter and is not located within an area of high visual quality, scenic protection area or heritage conservation area and is not located near any heritage items.

58. The proposal will not obstruct views from the public or private domain towards any iconic or landmark features, water bodies, or natural and cultural landscapes of high visual quality. Ample setback is provided to Sycamore Road and neighbouring dwellings.

59. Service level requirements preclude lowering the height of the facility. It is necessary to provide signal clearance above existing tree canopy. There is minimal visual impact at viewing distances of 500m or greater and mitigation measures would reduce visual impact at closer viewing distances.

60. Overall visual impact is considered satisfactory, subject to the visual impact mitigation measures recommend in this Visual Impact Assessment Report. These measures can be addressed by consent conditions and include:

    (a) Use of pale grey colour for the monopole and antennas, and either use of a pale grey colour, or a neutral colour and tone blending into the existing vegetation around the site, for the ground level compound fencing, equipment shelter, and associated supporting infrastructure.

    (b) Planting of at least 2 large canopy trees capable of reaching a mature height of at least 20m in the westernmost corner of the development site.

    (c) Provision of shrub planning capable of achieving a height of 3m along the southwest side boundary, adjacent to the compound fencing proposed for the southwest side of the compound.

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