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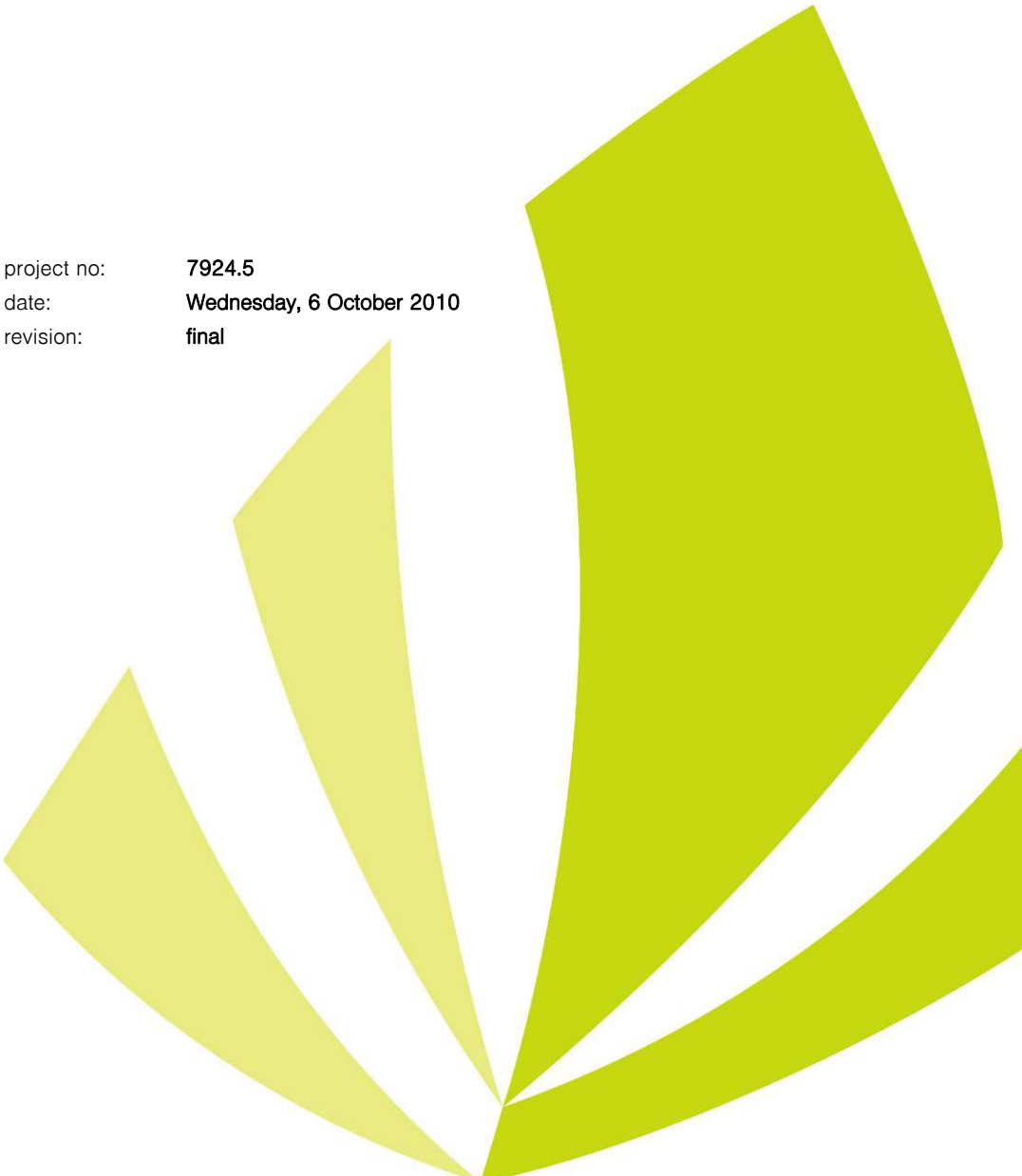
visual impact assessment

sawtell park estate – stage two

project no: 7924.5
date: Wednesday, 6 October 2010
revision: final



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date: WEDNESDAY, 6 OCTOBER 2010
project no: 7924.5
site LOT 112 DP1073791
location LYONS ROAD, NORTH BONVILLE
client UTILA PTY LTD
council: COFFS HARBOUR CITY COUNCIL
proposal: STAGE 2 OF AN EXISTING SUBDIVISION

visual impact assessment

sawtell park estate – stage two

table of contents

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1 executive summary

- This Visual Impact Assessment has been prepared as part of a Project Application being submitted to the NSW Department of Planning for Lot 112, DP 1073791 Lyons Road, North Bonville in response to the updated Director-General's Environmental Assessment Requirements (2010-07-08).
- The proposal is to develop a residential subdivision as Stage 2 of the Sawtell Park Estate. It is to be comprised of approximately 151 low density lots, 42 small lot building lots, kerb and sealed roads, associated infrastructure, stormwater collection basins, improvements to a riparian corridor, street landscaping and provision for a future park. Areas of the subject property not being developed are proposed to be handed over to the NSW Department of Environment, Climate Change and Water.
- The study area is comprised of three main landscape types: forest (including Bongil Bongil National Park); low closed grassland (the pastures of the subject site); and, suburban development.
- The visual catchment containing the site is relatively small. Views into the site are restricted to small sections of Lyons Road, approximately 300m in combined length and those lots and streets that adjoin the subject site. Other views from within the nearby residential areas are to the upper canopies of trees occurring on the site and adjoining properties. Views of this vegetation add to the visual amenity of the residential areas. Generally, these trees will not be affected by the proposal.
- The proposed subdivision will have a low to moderate impact within its visual catchment, however, it will have a very low impact on the broader coastal town of Sawtell. The main reasons for this are as follows:
    - the visual catchment is relatively small;
    - views into the subject site and of the proposed development are limited mainly to a small section of Lyons Road and will be seen primarily by the occupants of passing vehicles;
    - views of the site from the adjoining residential development will be restricted to lots immediately adjoining the proposed development and a few locations towards its western end;
    - the proposed development will be seen as an extension to the existing suburban development;
    - the proposed development will not require the removal of existing trees, apart from some isolated specimens, resulting in the retention of vegetation that acts as borrowed landscape to the existing development meaning that the visual amenity of these areas will not be compromised;
    - the required revegetation work proposed for the riparian area will assist in screening the development that is to occur to the southern parts of the subject site; and,
    - the approved development occurring as Stage 1, located between Miniwali Drive and Lyons Road, will have a more significant impact on the visual quality of the area and will assist in screening the Stage 2 works, further reducing the visual impact of development occurring on the subject site.

2. introduction

2.1 Preamble

Utila Pty Ltd has commissioned Terras Landscape Architects [Terras] to prepare a visual impact assessment for the proposed Stage 2 of Sawtell Park Estate located off Lyons Road, North Bonville. This work is to complement and influence the preparation of landscape plans that have also been prepared by Terras.

Fieldwork for the assessment was conducted in late April 2010.

2.2 Objectives

The objectives of this report are as follows:

- To identify and describe the existing visual/landscape environment and to evaluate its current qualities.
- To describe the proposal and its contextual setting from selected viewpoints based on commonly used criteria for the assessment of visual quality.
- To determine the likely impacts that the proposed development will have on the visual/landscape quality of the area and to determine compliance with the scenic quality guidelines.
- To propose methods, if required, to reduce the scenic impact of the proposed development or methods to increase the existing scenic quality.

2.3 Terminology

The below meanings for the following terms shall apply to this report:

- The **subject site** (referred to also as the site) is defined as the land area directly affected by the proposal (i.e. subdivision) located within the subject property.
- The **subject property** is the area referred to as Lot 112, DP1073791.
- The **study area** consists of the subject property plus the immediate surrounding land potentially affected by the proposal during its construction and operation phase and includes the established suburban areas located north-east of the site and abutting areas of Bongil Bongil National Park.
- The **study locality** is the area of land within the regional visual catchments whereby the proposal can be readily recognised. For this study the locality has been limited to its visual catchments, which is defined in Section 5. Normally the study locality is broader (up to a 5km radius), however, on this occasion as views of the site are restricted by the topography and vegetation the study locality has been limited to the visual catchment..

2.4 Authorship

This report has been prepared by Phil Williams who is a Registered Landscape Architect and Director of Terras with assistance from Kelly Short [Landscape Assistant].

3 existing visual environment

3.1 Site Location, Zoning & Ownership

The site is located approximately one kilometre from the Pacific Highway turnoff leading towards Sawtell which is a further 4 kilometres east. It is accessed off Lyons Road via Bambara Drive, North Bonville past two previously approved residential subdivisions: the one to the east is almost complete with the second, Stage 1 of Sawtell Park Estate, under development with houses currently being constructed.

The site is located within the local government area of Coffs Harbour City Council.

The subject property is predominantly zoned 2A Residential Low Density with areas of 6A Open Space and Public Recreation associated with an east-west running drainage line and 7A Environmental Protection Habitat and Catchment. (Coffs Harbour City Local Environmental Plan 2000).

The land is owned by the client, Utila Pty Ltd.

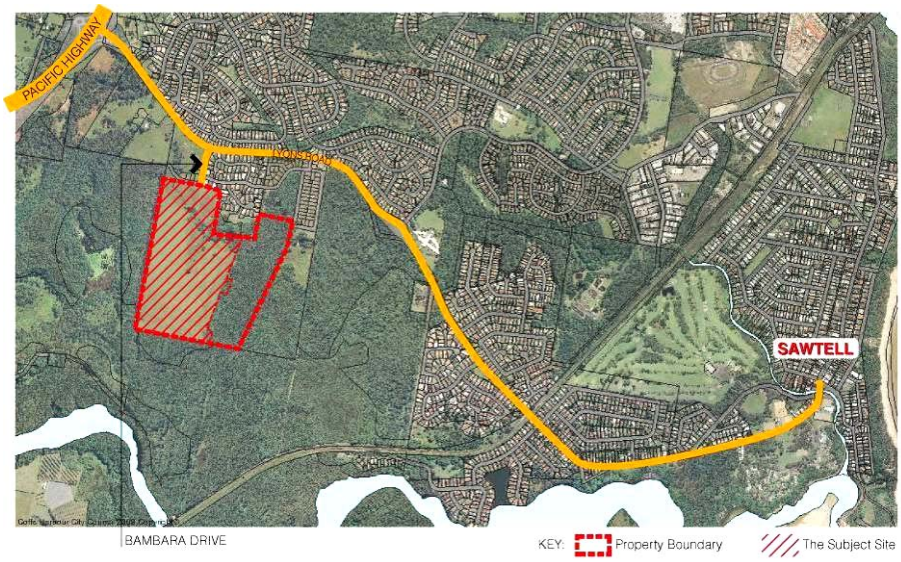


FIGURE 1:
SITE LOCATION PLAN [BASE IMAGE SOURCE: WWW.COFFSHARBOUR.NSW.GOV.AU]

3.2 Site Description

The site is currently cleared with some scattered trees and shrubs associated with drainage lines located on the northern half of the site. The main vegetation type present on the site is pasture grasses, although swamp sclerophyll forest and dry sclerophyll forest occurs elsewhere on the subject property. The site is fenced and contains a rudimentary stockyard located on the western boundary, 200m south of the north-west corner.

The subject property has an overall area of approximately 39ha with around a 35% dense and scattered tree cover. Only a small percentage of the proposed subdivision affects the existing tree cover, otherwise only cleared areas are being developed.

The site has a minor ridge that runs along a NW-SE axis occurring to its southern end. The highest point of the site, located on this ridge is 18m and falls to a low point of around 4m within the drainage line. Grades across the site are flat (<5°) around the drainage line and varying from moderate to moderately steep (8° to 25°) elsewhere. (Refer Figure 2)

The site's topography and existing tree cover means that only about 80% of the site has the potential to be seen from Lyons Road: the main road passing the site connecting Sawtell to the Pacific Highway. (Refer Figure 2)

FIGURE 2:
PROPERTY ATTRIBUTES [BASE IMAGE SOURCE: WWW.COFFSHARBOUR.NSW.GOV.AU]

3.3 Description of Local Visual Environment.

This section of the report describes the visual environment of the study locality as means of gaining an appreciation of the development's local context.

The visual environment of the study locality can be broken up into three main landscape types;

- forest
- low closed grassland (pastures)
- suburban

Forest

Forest vegetation belonging to Bongil Bongil National Park and environmental conservation areas surround the site on three sides. Bongil Bongil National Park adjoins the western and southern boundaries of the site. The area was declared a National Park in 1999, prior to which it was used for dairying and forestry. The forests that are visible from within the site to the west, where planted in c.1971 with the aim providing timber for pulpwood. They are an even stand, dry sclerophyll forest with *Eucalyptus saligna* (Sydney Blue Gum) and *E. pilularis* (Blackbutt) being dominant. Plantings to the south and east of the site grade from dry sclerophyll in the south to swamp sclerophyll in the north coinciding with the drainage line that crosses the subject property.

These forests are strong visual elements and assist in defining the visual catchment of the site as well as contributing to its visual quality including acting as borrowed landscape for other residential subdivisions located in the nearby area.

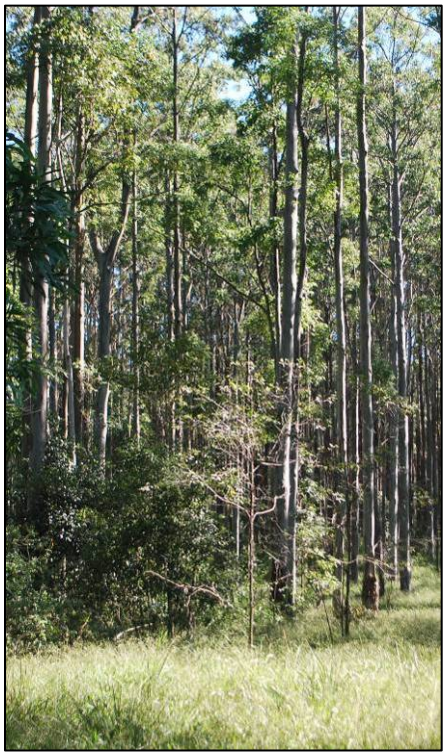


FIGURE 3:
REFFORESTATION, BONGIL BONGIL N.P.

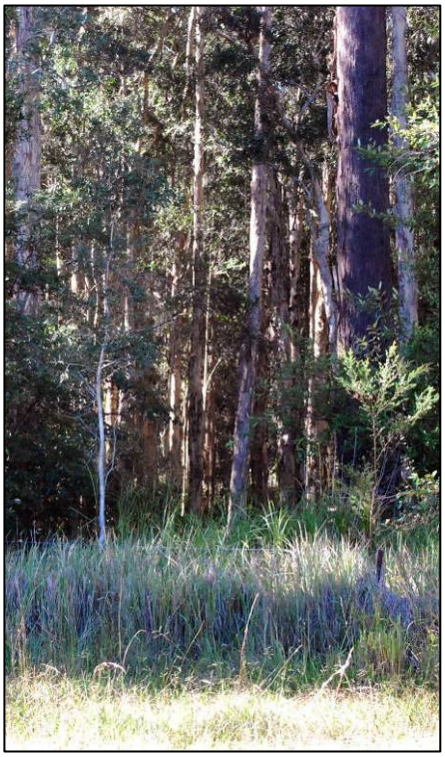


FIGURE 4:
SWAMP SCLEROPHYLL

Low Closed Grassland (Pastures)

Approximately 50% of the visual catchment is comprised of low, closed grassland with scattered trees retained in the vicinity of drainage lines. The main locations where the grasslands occur include: the subject site and the adjoining property located in the north-west corner of the visual catchment. Mostly these areas are grazed by cattle, although in some locations the grass has been allowed to grow unhindered.

Although essentially a disturbed landscape, visually, pastures and other rural lands are perceived as being natural and therefore tend to rate more highly in terms of visual quality (Williamson, 1978). Further, the grasslands add to the visual contrast of surrounding land uses creating diversity and heightening visual interest.

FIGURE 5:
GRASSLAND (EASTERN SITE)

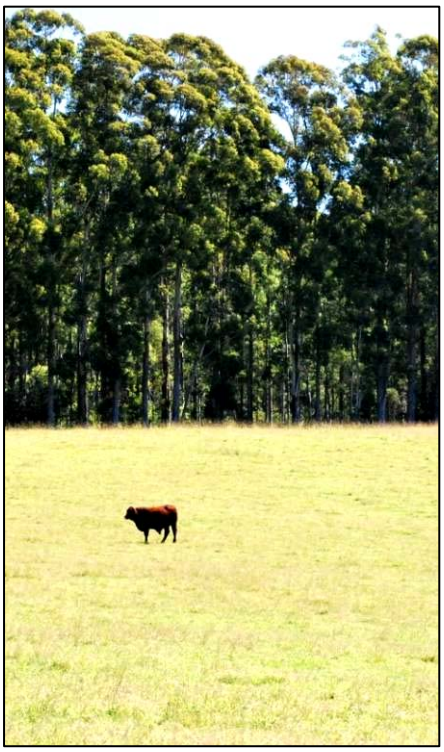


FIGURE 6:
GRASSLAND (WESTERN SITE)

Suburban

The remainder of the visual catchment is made up of suburban development comprised mainly of single-storey, brick and tile residences having been established within the last ten years. As can be seen in Figure 7, the majority of property owners have not planted significant trees on their lots as a means of improving the visual amenity of the area relying of the trees growing on nearby lots, acting as a borrowed landscape, to provide a pleasant setting for their houses.

The visual quality of the areas developed as residential subdivisions have a moderate scenic quality rating as the houses present well and possess well maintained gardens, although, as noted above, a portion of their scenic quality is derived from the presence of off-site vegetation forming an attractive back-drop.

FIGURE 7:
AREAL VIEW OF ADJOINING SUBDIVISION [BASE IMAGE SOURCE: WWW.COFFSHARBOUR.NSW.GOV.AU]

FIGURE 8:
PADDYMELON CIRCUIT (SAWTELL GARDENS)

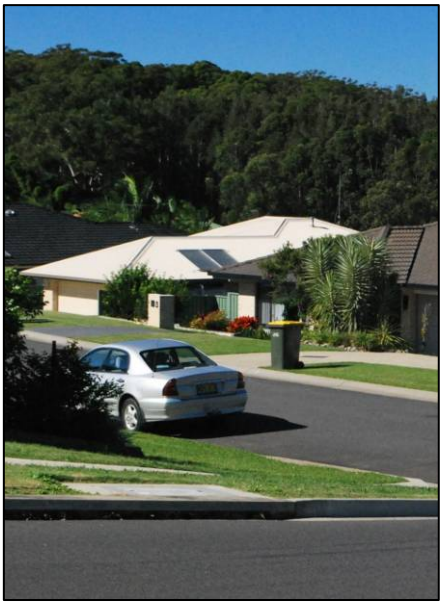


FIGURE 9:
RUTLAND STREET (ADJOINING SUBDIVISION)

4 the proposal

The proposal consists of a residential subdivision being Stage 2 of the Sawtell Park Estate with Stage 1 occurring further north and being located between Mimiwali Drive and Lyons Road. [Refer Figure 10.]

The proposed subdivision is comprised of approximately 151 low density lots with a further 42 small lot building lots being located close to the northern boundary and separated from the other lots by a riparian zone. The riparian zone is to be revegetated as part of the development. Other aspects of the proposed subdivision include kerbed and sealed roads, associated infrastructure (electricity, water, communications etc.), stormwater collection basins, and provision for a future park.

All streets have street trees planted at a minimum rate of two trees per lot with native species selections made from the *Coffs Harbour Street Tree Masterplan* (Coffs Harbour City Council, 1999). The trees have been chosen based on size and scale to reflect the internal road hierarchy (e.g. *Lophostemon confertus* used within the main access road and the smaller *Buckinghamia celsissima* used for some cross roads).

The site's stormwater is managed by a system of bio-retention swales located within the main access road and six stormwater detention basins located around the outer perimeter of the subdivision and at the edge of the riparian corridor located south of the small allotment building lots. All basins will be well-landscaped with the aim of improving the amenity of the subdivision. Other areas such as the riparian corridor and bush interface areas will also be landscaped having regard to the requirements of the Vegetation Management Plan and Bushfire Assessment Report.

Other parts of the subject property not being developed are proposed to be handed over to the NSW Department of Environment, Climate Change and Water for addition to Bongil Bongil National Park.

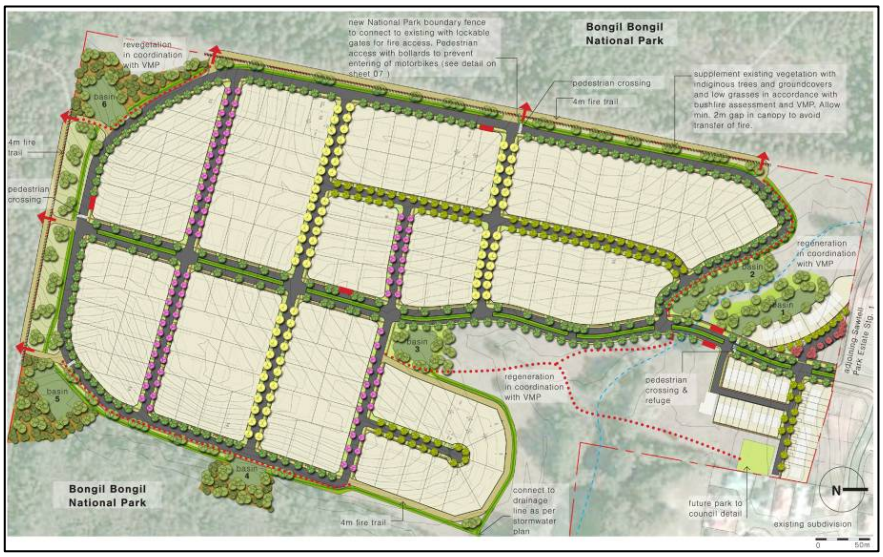


FIGURE 10
SAWTELL PARK ESTATE LANDSCAPE MASTER PLAN [TERRAS LANDSCAPE ARCHITECTS]

5 viewpoint analysis

This part of the scenic assessment considers what the likely impact that the proposed development may have on the local environment. This is done by selecting particular sites, referred to as viewpoints, conducting inspections and determining what part of the development will visible from the viewpoints.

The viewpoints, as shown in Figure 11, were selected on the basis of where the development would appear to be most prominent either based on degree of exposure or the number of people likely to be affected. On this occasion, however, the visual catchment is quite limited mainly due to topography and surrounding land use (i.e. forest) resulting in viewpoints being limited to the Lyons Road ridge and the adjoining residential subdivisions.

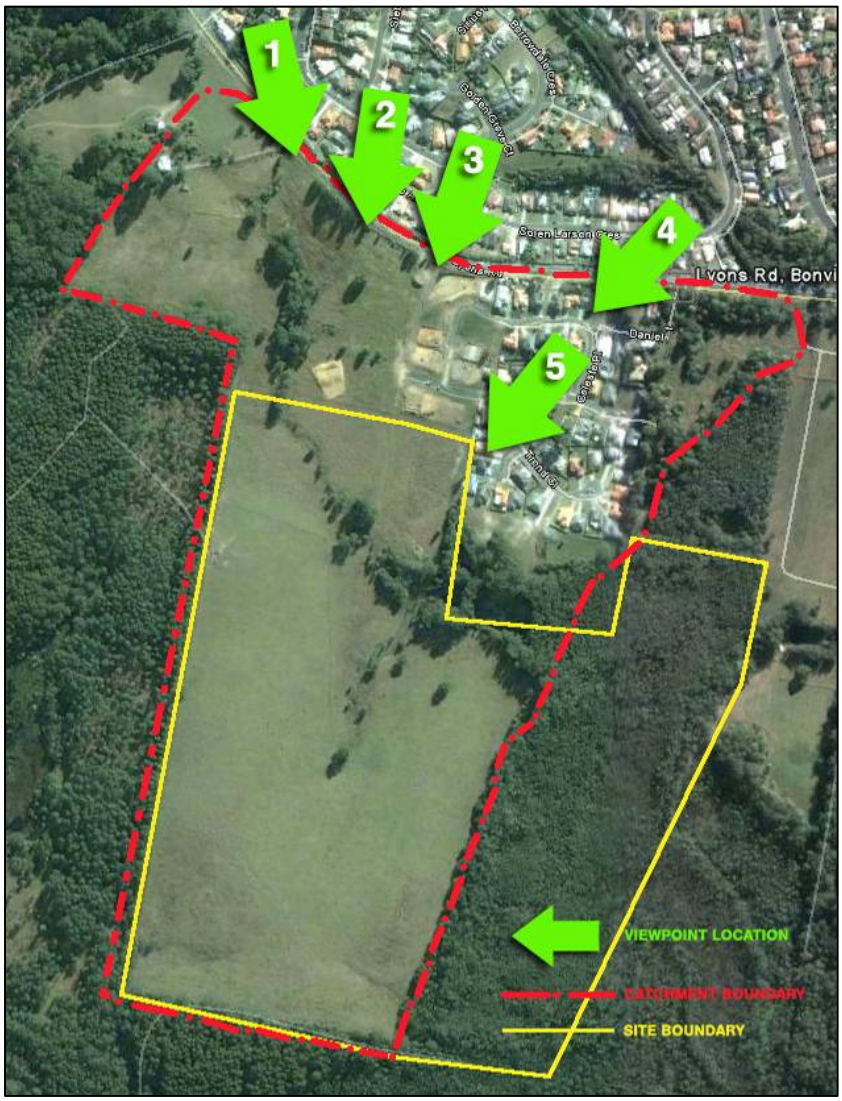


FIGURE 11
VIEWPOINTS LOCATIONS

VIEWPOINT No. 1			
			
LOCATION:	Lyons Road: approximately 300m from the northern boundary and 1000m from the southern boundary.		
DESCRIPTION:	The first unobstructed view of the site when travelling along Lyons Road heading east to Sawtell. The land in the foreground is currently being developed as Stage 1.		
LOCATION OF SITE	☐ Foreground	☑ Middleground	☐ Background
VIEWER POSITION:	☐ Inferior	☐ Neutral	☑ Superior
VIEWER ACCESS:	☐ Low	☐ Medium	☑ High
VISUAL SENSITIVITY:	☐ Low	☐ Medium	☑ High
VISUAL EFFECT:	☐ Low	☐ Medium	☑ High
VISUAL IMPACT:	☑ Low(long term)	☑ Moderate (long term)	☑ High
COMMENTS:	Lyons Road is the main road that links Sawtell to the Pacific Highway and therefore it carries a significant volume of traffic giving viewer access a high ranking. The other attributes are also given high ratings based on the current condition of surrounding land uses as the change from a rural setting to suburban results in a loss of visual quality. It should be noted that with the current approvals, the land between the site and Lyons Road will be developed as housing which will have a more significant impact on the scenic quality than the subject proposal of this VIA and hence generating a low-moderate impact in the long term.		

VIEWPOINT No. 2			
			
NOTE: COMPOSITE IMAGE TO SHOW FULL EXTENT OF VIEW			
LOCATION:	Lyons Road: approximately 230m from the northern boundary and 920m from the southern boundary.		
DESCRIPTION:	This viewpoint is located approximately 150m east of Viewpoint No. 1. It reveals the most open view of the site and its extents.		
LOCATION OF SITE	☐ Foreground	☑ Middleground	☐ Background
VIEWER POSITION:	☐ Inferior	☐ Neutral	☑ Superior
VIEWER ACCESS:	☐ Low	☐ Medium	☑ High
VISUAL SENSITIVITY:	☐ Low	☐ Medium	☑ High
VISUAL EFFECT:	☐ Low	☐ Medium	☑ High
VISUAL IMPACT:	☑ Low(long term)	☑ Moderate (long term)	☑ High
COMMENTS:	The comments made for Viewpoint No. 1 also apply to this viewpoint. It should also be mentioned that the blue dotted line represents the location of the riparian area that is required to be revegetated. The undertaking of the work as included in the Vegetation Management Plan (James Warren, 2009) should assist in screening development that occurs south of this area.		

VIEWPOINT No. 3			
			
LOCATION:	Lyons Road: approximately 230m from the northern boundary and 920m from the southern boundary.		
DESCRIPTION:	This viewpoint is located approximately 120m east of Viewpoint No. 2.		
LOCATION OF SITE	☐ Foreground	☑ Middleground	☐ Background
VIEWER POSITION:	☐ Inferior	☐ Neutral	☑ Superior
VIEWER ACCESS:	☐ Low	☐ Medium	☑ High
VISUAL SENSITIVITY:	☐ Low	☐ Medium	☑ High
VISUAL EFFECT:	☐ Low	☐ Medium	☑ High
VISUAL IMPACT:	☐ Low	☑ Moderate (long term)	☑ High
COMMENTS:	The comments made for Viewpoints Nos 1 and 2 also apply to this viewpoint. It should be further noted that the distance between this viewpoint and Viewpoint No. 1 is approximately 250m. The occupants of a car travelling at 60kph will have a view of the site for 15 seconds.		

VIEWPOINT No. 4			
			
LOCATION:	Lyons Road: approximately 290m from the northern boundary and 970m from the southern boundary.		
DESCRIPTION:	It is unlikely that motorists will have much of an opportunity to see this view as it occurs in a break between houses and so it would mainly be seen by pedestrians.		
LOCATION OF SITE	☐ Foreground	☑ Middleground	☐ Background
VIEWER POSITION:	☐ Inferior	☐ Neutral	☑ Superior
VIEWER ACCESS:	☑ Low	☐ Medium	☐ High
VISUAL SENSITIVITY:	☐ Low	☐ Medium	☑ High
VISUAL EFFECT:	☑ Low	☐ Medium	☐ High
VISUAL IMPACT:	☑ Low	☐ Moderate	☐ High
COMMENTS:	Although located along Lyons Road, viewer access is low as it is mainly restricted to pedestrians. Visual sensitivity is still high due to the change from rural to suburban is still pronounced. Visual Effect and Visual Impact are given low ratings as the site's location behind existing suburban development and vegetation, which is to be retained, works in favour of maintaining the current visual character from this location.		

VIEWPOINT No. 5			
			
LOCATION:	This viewpoint is located close to the intersection of Rutland Street and Trond Close: approximately 60m from the northern boundary and 800m from the southern boundary.		
DESCRIPTION:	This viewpoint is typical of views at the western end of the area of existing suburban development. The trees in the middle distance occur within the riparian area of the site and so they are to be retained. It is unlikely that the view will change much with the exception of the site of some additional roofs located between the existing houses and the retained vegetation.		
LOCATION OF SITE	☐ Foreground	☑ Middleground	☐ Background
VIEWER POSITION:	☐ Inferior	☑ Neutral	☐ Superior
VIEWER ACCESS:	☑ Low	☐ Medium	☐ High
VISUAL SENSITIVITY:	☑ Low	☐ Medium	☐ High
VISUAL EFFECT:	☑ Low	☐ Medium	☐ High
VISUAL IMPACT:	☑ Low	☐ Moderate	☐ High
COMMENTS:	This viewpoint has been selected as it is representative of views from within the existing residential subdivision occurring close to the site. As the viewer location moves further east then potential to see views of the proposed development decreases. The tree cover occurring on site that acts as borrowed landscape assisting in raising the visual amenity of the existing residential subdivisions, will be retained.		

Figure 12 shows the extent of the site that is visible from the surrounding area along projected view cones. It has been included in the report to further demonstrate how infrequently views into the site can be gained from surrounding areas. This has resulted in only five viewpoints being selected, four of which occur along Lyons Road. In total, less than 300m of Lyons Roads affords views of the site, 250m of which is available to occupants of vehicles travelling between Sawtell and the Pacific Highway.

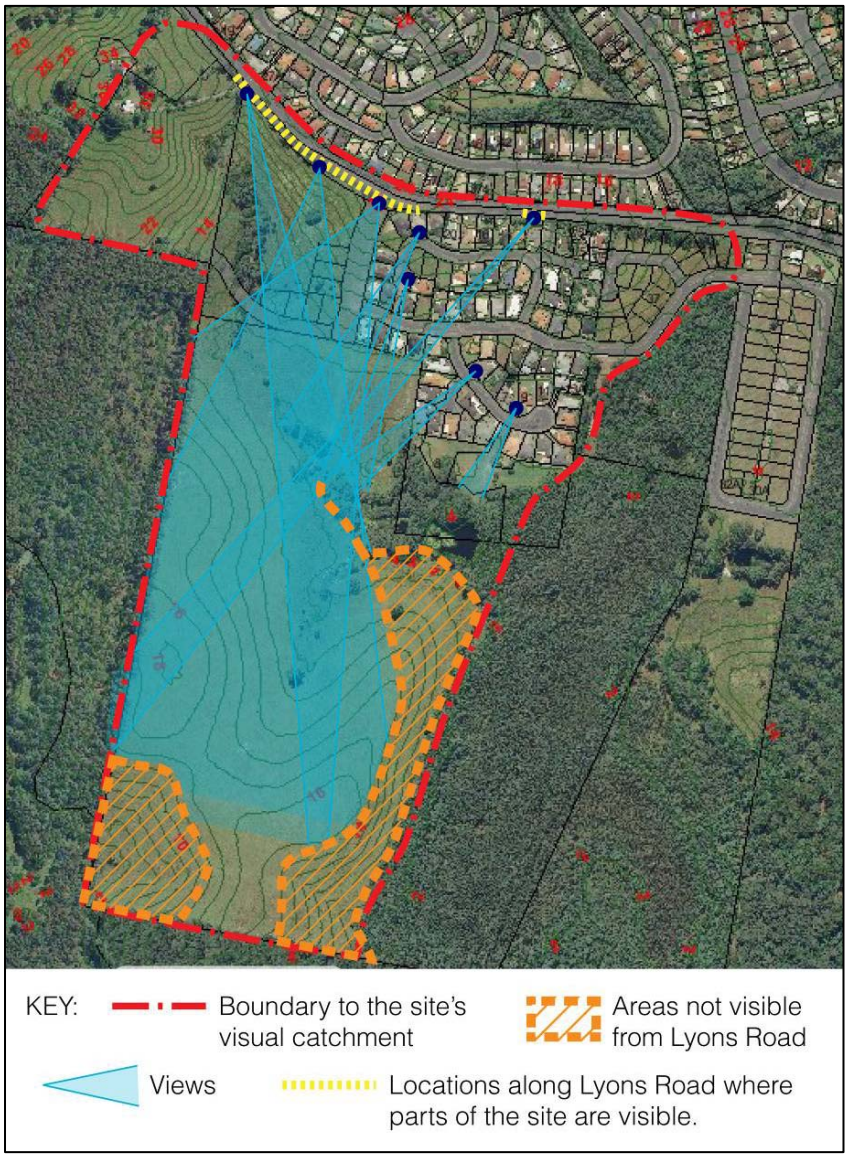


FIGURE 12
VISUAL ACCESS TO THE SITE

It should be noted that the site is approximately 3.2 kms from the nearest coastline located in a contained visual catchment. It is confirmed that it is not possible to see any part of the site from the coastline nor is it possible to obtain views of the coastline from any part of the site.

6 review of relevant reports

This section of the report reviews key studies and planning documents that affect proposed development either directly or indirectly with respect to scenic assessment/visual impact issues. As the site falls within the coastal zone as indicated on the *NSW Coastal Zone 1997* map and as defined by the *Coastal Protection Act 1979*, a number of state and local planning documents have relevance to development on the site including the following: *NSW Coastal Policy 1997*, *Coastal Protection Act 1979, SEPP71 – Coastal Protection, Coastal Design Guidelines for NSW* and *North Bonville Development Control Plan.* The documents that contain specific requirements relating to visual quality/scenic protection are considered below.

6.1 SEPP 71 – Coastal Protection

Origins and Objectives

This planning document issued by the NSW State Government seeks to control development within the coastal zone as defined by the *Coastal Protection Act 1979*. Its aim is to protect and manage the natural, cultural, recreational and economic attributes of the New South Wales Coast giving consideration to such items as: public access; Aboriginal cultural heritage; beach environments; beach amenity; native coastal vegetation; marine environments; rock platforms; and, coastal management.

Two specific aims relate to visual quality:

- to ensure that the visual amenity of the coast is protected
- to ensure that the type, bulk, scale and size of development is appropriate for the location and protects and improves the natural scenic quality of the surrounding area.

Comment

The application of this policy ensures that development along the New South Wales coast is carried out in a manner that respects the key attributes of its environment and so preventing any further degradation of this sensitive and highly desirable part of the state. The fact that the proposed development is confined to land that has been affected by previous development and is currently cleared, means that natural areas are not being directly affected. As noted in the previous section, the visual catchment containing the subject is small with opportunities to view the proposed subdivision being limited and hence its impact on the visual amenity of the coast will not be significant. Further, once beyond the edges of the surrounding forest, including the Bongil Bongil National Park, the proposed subdivision will be difficult to see.

6.2 *Coastal Design Guidelines for NSW* (2003)

Origins and Objectives

This report is a strategic vision to; protect the character of coastal areas and develop a sensitive relationship between human habitat and the coastal environment. As stated; "This document illustrates how an urban design approach informs developments

sensitive to the unique natural and urban characteristics of coastal places in NSW" (Page ii). This plan looks at sustainable management of water, dunes, urban planning. With built form it provides objectives for; density, scale, materiality, street access and screening. The report delineates development communities into four categories consisting of; coastal cities, coastal towns, coastal villages and coastal hamlets. Based on the population size of the Urban Centre of Sawtell which includes North Bonville, the area would be classified as a Coastal Town.

Each category looks at a number of issues such as environmental planing, buildings, scale and streetscapes. Under the heading of "Visual Sensitivity", the guidelines make note of the need to provide "clear boundaries between each town and adjacent rural and natural land uses." (Page 16).

Under the section, "Design Guidelines for Defining the Settlement Footprint: Expanding the Boundary of a Settlement", the guidelines comment that it essential to:

a. *enhance natural and heritage features and views*
b. *retain existing vegetation and ecology*
c. *reinforce and continue existing open space and green belts, through and between settlements* (Page 46)

Comment

While the above are broad parameters, the guidelines offer a reference point for development within a coastal typology aiming to create a high quality coastal urban environment balancing the need for development and protection of the fragile coastal environment. The guidelines are based on *SEPP 71* and offer a physical approach to planning that *SEPP 71* defines in theory.

While the development may propose expanding the town area the guidelines recommend that towns remain well defined with development preferably occurring on previously altered and significantly degraded land allowing the protection of natural areas.

The proposed development is restricted to a single visual catchment. It is well-defined and enables the retention of existing vegetation with supplementary enhancement to occur within the riparian area. Therefore, it is considered that the proposed development is consistent with the intent of the guidelines allowing sensible expansion of the extended urban area of Sawtell without significant impact on the desirable qualities of the Coastal Zone.

6.3 North Bonville Development Control Plan (2001)

Origins and Objectives

This appears to be the most pertinent document prepared by Coffs Harbour City Council as it applies to land located at North Bonville zoned Residential 2A Low Density under the Coffs Harbour LEP 2000 including the subject site.

An objective of the DCP is to "maintain water quality, scenic amenity, habitat and recreational potential of the natural environment." (Page 1)

The only other relevant clause within the DCP occurs as part of the *Landscape, Open Space and Recreation Strategy* where its only objective is to "enhance the local streetscape, provide for neighbourhood recreation requirements and to complement the adjoining Bongil Bongil National Park." (Page 7)

Comments

It would seem that the proposed development complies with the North Bonville DCP in terms of scenic amenity as the proposed development occurs on previously disturbed land and does not affect the natural environment.

The second aspect is also addressed as the streets are to be planted with street trees that comply with the *Coffs Harbour Street Tree Masterplan*.

It could be argued that the proposed subdivision does not complement the adjoining Bongil Bongil National Park as it is desirable for National Parks to have a buffer between natural and built-up areas such as rural/pasture lands, although the proposed development could still be considered as acceptable for the following reasons:

- is particularly difficult to achieve adequate buffering in locations where National Parks are located close to established centres of population;
- the forest adjoining the site and belonging to the Bongil Bongil National Park is substantially regrowth planted in c.1971; and,
- it is assumed that Council has already taken this into consideration when it rezoned the land to 2A Residential Low Density.

7 impact assessment and recommendations

Based on the above findings, it is determined that the proposed subdivision will have a low to moderate impact within its visual catchment, however, it will have a very low impact on the broader town area of Sawtell. The main reasons for this are as follows:

- the visual catchment is relatively small;
- views into the subject site and of the proposed development are limited mainly to a small section of Lyons Road (less than 300m) and will be seen primarily by the occupants of passing vehicles;
- views of the site from the adjoining residential development will be restricted to lots immediately adjoining the proposed development and a few locations towards the western end;
- the proposed development will be seen as an extension to the existing suburban development;
- the proposed development will not require the removal of existing trees, apart from some isolated specimens meaning that the visual amenity of these areas will not be compromised;
- the required revegetation work proposed for the riparian area will assist in screening the development that is to occur to the southern parts of the subject site; and,
- the approved development occurring as Stage 1, located between Miniwali Drive and Lyons Road, will have a more significant impact on the visual quality of the area and will assist in screening the Stage 2 works, further reducing the visual impact of development occurring on the subject site.

It is important that the landscape plan and vegetation management plan be properly implemented to ensure that screening is provided and that the visual amenity of the subdivision itself is enhanced.

It is recommended that consideration be given to providing planting along Lyons Road so that views of Stages 1 and 2 can screened and that the drive into Sawtell can be enhanced.

It is further recommended that Council extend this planting east of Bambara Drive to screen the rear fences of the existing subdivisions that front Lyons Road.

8 conclusion

The subject site has been previously cleared of native vegetation to form pastures for grazing and to enable other rural pursuits.

It is proposed that the subject site be developed as a residential subdivision being the second stage with the first stage currently under construction. Although rural land is seen as more visually appealing, the proposed subdivision will be viewed as an extension of existing suburban development and so will not appear visually out of place. The majority of tree cover occurring on site, which currently benefits the adjoining subdivisions, will be retained and so maintaining the visual amenity to these areas.

Opportunities to view into the subject site are restricted to a few locations including a small section of Lyons Road.

This VIA, therefore, considers that the proposed development will have an acceptably low impact on the overall scenic quality of the surrounding areas.

9 references

9.1 Publications and Reports

Clouston — *Lake Macquarie Recreation and Open Space Plan: Scenic Quality Plan* [Draft], prepared for Lake Macquarie City Council, August 1995.

Coastal Council of NSW — *Coastal Design Guidelines for NSW*, State Government of NSW, 2003.

Coffs Harbour City Council — *Coffs Harbour Street Tree Masterplan,* Coffs Harbour City Council, April 1999.

Coffs Harbour City Council — *Local Environmental Plan,* Coffs Harbour City Council, 2000.

Coffs Harbour City Council — *North Bonville Development Control Plan,* Coffs Harbour City Council, December 2001.

James Warren & Associates Pty Ltd — *Vegetation Management Plan, Lot 112, DP 1073791, 2000.*

NSW Department Planning — Rural Land Evaluation, Government Printer (Dept. of Planning), of 1988.

NSW Department of Planning — *SEPP 71 (State Environmental Planning Policy No. 71 – Coastal Protection),* State Government of NSW, 2005.

NSW DUAP — *NSW Coastal Policy 1997,* NSW Government, 1997

Williamson D. — "Scenic Perceptions of Australian Landscapes", Landscape Australia, Vol 2, pp 94-100, 1978.

9.2 Maps/Site Images/Web Sites

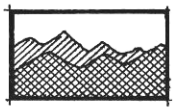
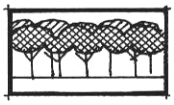
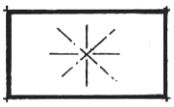
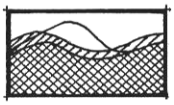
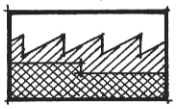
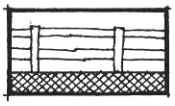
www.coffsharbour.nsw.gov.au — Aerial Images/Zoning Maps/Cadastral Information

Google Earth — Aerial Images

10 appendices

10.1 appendix A - visual quality reference table

APPENDIX A: VISUAL QUALITY REFERNCE TABLE[1]

	LOW	MEDIUM	HIGH
RELIEF/LANDFORM Diversity & Contrast 	Flat terrain dominant. Ridgelines not often seen.	Undulating terrain dominant. Little contrast or ruggedness. Ridgelines prominent in only half or less of landscape unit.	High hills in foreground and middleground. Presence of cliffs, rocks and other geological features. High relief (eg steep slopes rising from water or plain). Ridgelines prominent in most of landscape unit.
VEGETATION Diversity & Contrast 	One or two vegetation types present in foreground. Uniformity along skyline.	Patterning in only one or two areas. 3 or 4 vegetation types in foreground. Few emergent or feature trees.	High degree of patterning in vegetation. 4 or more distinct vegetation types. Emergent trees prominent and distinctive to region. Stands of specimen or accent vegetation (eg palms, pines etc.)
NATURALNESS 	Dominence of development within many parts of a landscape unit.	Some evidence of development but not dominant. Traditional built character. Development in background and/or partially concealed.	Absence of development or minimal dominance within landscape unit. Presence of parkland or other open space including beach, lakeside etc.
WATER Presence, Extent & Character 	Little or no view of water. Water in background without prominence. Presence of polluted water or stagnant water.	Moderate extent of water. Presence of calm water. No islands, channels meandering water. Intermittent streams, lakes, rivers etc.	Dominance of water in foreground and middleground. Presence of flowing water, turbulence and permanent water. Intricate shapes and river edges.
DEVELOPMENT Form & Identity 	Presence of commercial and industrial structures. Presence of large scale devlopment (eg mining, infrastructure etc.) Newer residential development prominent.	Presence of established residential development. Small scale industrial etc in middleground. Presence of sports and recreational facilities.	Presence of rural structures (eg farm buildings, fences etc.) Heritage buildings and other structures apparent. Isolated domestic scale structures.
CULTURAL 	No evidence present. Area free of cultural landmarks. Presence of new development.	Presence of established, well-landscaped development esp. in middleground and background.	Presence of established, maintained landscapes (eg farmlands, forests, gardens etc), old towns and buildings etc.

[1] After Clouston and Brouwer, 1995.

10.2 appendix B - visual assessment principles

Visual Quality

Visual quality of an area is essentially an assessment of how viewers may respond to designated scenery. Scenes of high visual quality are those that are valued by a community for the enjoyment and improved amenity that they can create. Conversely, scenes of low visual quality are of little scenic value to the community with a preference that they be changed and improved, often through the introduction of landscape treatments (eg screen planting).

As visual quality relates to aesthetics, its assessment is largely subjective. There is evidence to suggest that certain landscapes are continually preferred over others with preferences related to the presence or absence of certain elements.

The rating of visual quality of this study has been based on the following generally accepted conclusions arising from scientific research (DOP, 1988).

- Visual quality increases as relative relief and topographic ruggedness increases.
- Visual quality increases as vegetation pattern variations increase.
- Visual quality increases due to the presence of natural and/or agricultural landscapes.
- Visual quality increases owing to the presence of waterforms (without becoming common) and related to water quality and associated activity.
- Visual quality increases with increases in land use compatibility.

Appendix A contains a visual quality preference table that has a more detailed breakdown of the above elements and their impact on visual quality.

Visual Sensitivity

Another aspect affecting visual assessments is visual sensitivity. This is the estimate of the significance that a change will have on a landscape and to those viewing it. For example, a significant change that is not frequently seen may result in a low visual sensitivity although its impact on a landscape may be high. Its assessment is based on a number of variables such as the number of people affected, viewer location including distance from the source, viewer position (i.e. inferior, neutral, superior), the surrounding land use and degree of change. Generally the following principles apply:

- Visual sensitivity decreases and the viewer distance increases.
- Visual sensitivity decreases as the viewing time decreases.
- Visual sensitivity can also be related to viewer activity (e.g. a person viewing an affected site while engaged in recreational activities will be more strongly affected by change than someone passing a scene in a car travelling to a desired destination).

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The table on the following page is a guide to visual sensitivity based on the above criteria (EDAW, 2000). It generally describes general ratings, however, consideration also must be given to particular conditions that may modify the results for particular sites.

VISUAL SENSITIVITY TABLE			
	distance zones		
land use	**Foreground (0-1km)**	**Middleground (1-3km)**	**Background (>3km)**
Residential: Rural or Urban	High Sensitivity	High Sensitivity	Moderate Sensitivity
Tourist or Passive Recreation	High Sensitivity	High Sensitivity	Moderate Sensitivity
Major Travel Corridors	Moderate Sensitivity	Moderate Sensitivity	Low Sensitivity
Tourist Roads	High Sensitivity	Moderate Sensitivity	Low Sensitivity
Minor Roads	Moderate Sensitivity	Low Sensitivity	Low Sensitivity
Agricultural Areas	Moderate Sensitivity	Low Sensitivity	Low Sensitivity
Industrial Areas	Low Sensitivity	Low Sensitivity	Low Sensitivity

With respect to this proposal, the applicable land use is residential.

Visual Effect

Visual effect is the interaction between a proposal and the existing visual environment. It is often expressed as the level of visual contrast of the proposal against its setting or background in which it is viewed. This is particularly important should any proposed develop extend above the skyline unless, once again, there are particular circumstances that may influence viewer perception and/or visual impact.

Low visual effect occurs when a proposal blends in with its existing viewed landscape due to a high level of integration of one or several of the following: form, shape, pattern, line, texture or colour. It can also result from the use of effective screening often using a combination of landform and landscaping.

Moderate visual effect results where a proposal noticeably contrasts with its viewed landscape, however, there has been some degree of integration (e.g. good siting principles employed, retention of significant existing vegetation, provision of screen landscaping, careful colour selection and/or appropriately scaled development.)

High visual effect results when a proposal presents itself with high visual contrast to its viewed landscape with little or no integration and/or screening.

Visual Impact

The following table illustrates how visual effect and visual sensitivity levels combine to produce varying degrees of visual impact.

VISUAL IMPACTS TABLE				
		visual effect levels		
visual sensitivity levels		**High**	**Moderate**	**Low**
	High	High Impact	High Impact	Moderate Impact
	Moderate	High Impact	Moderate Impact	Low Impact
	Low	Moderate Impact	Low Impact	Low Impact

It should be noted that a high visual impact does not necessarily equate with a reduction in scenic quality, and the degree of visual impact has to be understood and assessed in relation to both the existing scenic quality of an area and the design merits of the proposal itself. For example, a well-designed proposal with a high visual impact may help to improve the visual environment of an area with low scenic quality.

10.3 methodology

The method applied to this study involved systematically evaluating the visual environment pertaining to the site and using value judgements based on community responses to scenery as outlined in the previous sections and Appendix A (Visual Quality Preference Table).

The assessment was undertaken in three stages as noted below:

1. A description of the existing visual environment
2. The undertaking of a viewpoint analysis to identify sites likely to be affected by development of the site. Viewpoints are chosen that represent those locations where impacts will affect significant groups within the population (e.g. major roads, community halls, settlements etc.)
3. An assessment of visual impacts.

The purpose of the above methodology is to reduce the amount of subjectivity entering into the impact assessment and to provide sufficient data to allow for third party verification of results as well as compliance with the requirements of the scenic quality guidelines.