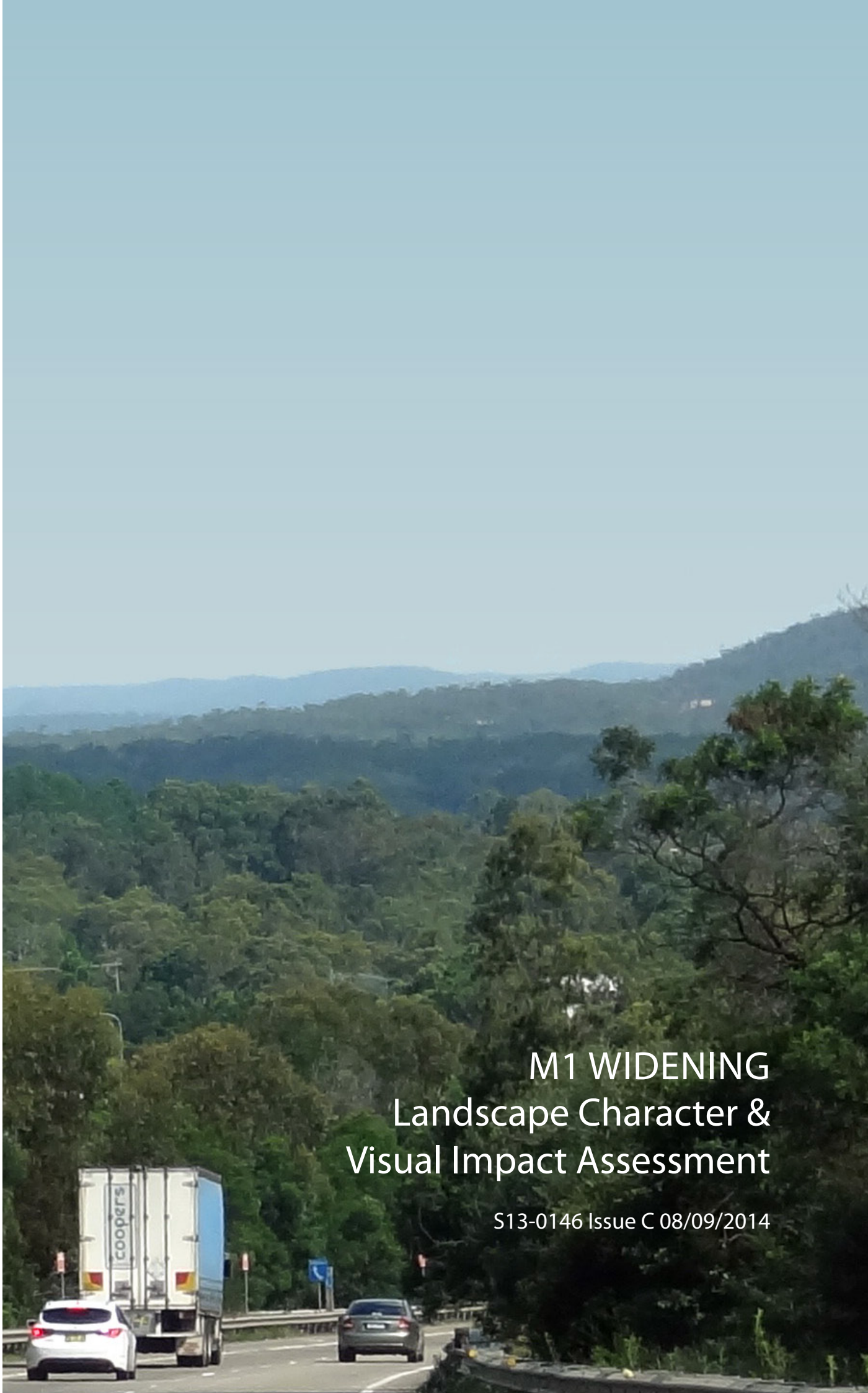
Appendix H

Landscape and visual assessment

CLOUSTON associates



M1 WIDENING
Landscape Character & Visual Impact Assessment

S13-0146 Issue C 08/09/2014

Cover page: M1 motorway from vehicle

M1 WIDENING LANDSCAPE CHARACTER AND VISUAL IMPACT ASSESSMENT

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Note: This document is Preliminary unless Validated.

Northbound lane on the M1 near Kariong

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Introduction

EXECUTIVE SUMMARY

INTRODUCTION

This Landscape Character and Visual Impact Assessment (LCVIA) report identifies and evaluates the landscape and visual impacts of the proposed M1 widening by the Roads & Maritime Authority between Kariong and Somersby Interchange - the Proposal. This assessment includes an analysis of views from key vantage points and proposed mitigation measures to address these impacts.

THE PROPOSAL

RMS proposes to widen the M1 to 3 lanes in north and south travelling directions between the Kariong interchange and the Somersby Interchange (with the exception of a small section the southbound exit ramps at Kariong). The widening and associated works are to include:

- Lane widening
- Repair of existing damaged concrete pavement
- Safety barrier upgrades
- Exit/entry ramp widening
- Bridge widening
- Rock excavation

THE STUDY AREA

The M1 Pacific Motorway (formerly the F3 Freeway and road number 6003) is a critical part of the National Land Transport Network. The Motorway is part of one of the busiest routes in NSW. The Motorway between the Central Coast Highway (Kariong Interchange) and Peats Ridge Road (Somersby Interchange) provides for both long distance through traffic and local traffic from the north of Gosford accessing the Central Coast. The length of Motorway Upgrade proposed is approximately 8km.

LANDSCAPE CHARACTER IMPACTS

The study area and surrounds have been assessed and four landscape character zones have been established:

1. Road corridor
2. Disturbed Vegetation
3. Native bushland
4. Commercial/Industrial Development

The landscape character surrounding the M1 road corridor is found to be typical of the Somersby district with undulating hillsides, large swathes of native vegetation, creek lines, ridges and a low density of commercial and industrial development. The overall impact of the Proposal on landscape character is rated as negligible on disturbed vegetation and native bushland, low on commercial/industrial and moderate/low within the road corridor itself.

A quantum of vegetation will be permanently cleared from the median and areas surrounding the proposed interchange ramp upgrades to make room for the widening works. This vegetation forms an important part of the M1's acknowledged scenic quality. The remaining median is likely to be replanted, assisting in reducing the Proposals impact on landscape character.

EXECUTIVE SUMMARY

VISUAL IMPACT ASSESSMENT

During a site visit, six key receptor sites with the potential to be visually impacted by some element of the Proposal were identified and selected for further analysis. All receptors related to motorists travelling either northbound or southbound on the Motorway.

The visual impacts of the Proposal on the studied viewpoints range from negligible to moderate/low. This is due to the surrounding topography, depressed elevation of the road corridor, dense roadside vegetation and limited number of commercial/residential receptors. For the majority of viewpoints studied, the most visible elements of the Proposal will be the temporary removal of median vegetation during construction, increasing visibility of the opposite carriageway and oncoming traffic for road users. Post-construction, the median will be narrower although re-panting of a similar height, scale and character to the existing median will ensure visual impacts of the Proposal are minimised.

CONCLUSION AND MITIGATION

As the proposed works will take place within the existing road corridor, the overall appearance of the Motorway is unlikely to be significantly changed and therefore the potential for long-term visual impacts is considered to be moderate/low before mitigation measures are implemented.

Effective mitigation measures for any form of potential visual impact are those that entail:

- Avoidance
- Reduction
- Alleviation

Mitigation - Reduction

The principal forms of reduction are associated with refinements and modifications that address the siting and scale of built form. Measures include:

- Locating storage areas and associated works in cleared or otherwise disturbed areas away from native vegetation.
- Restricting vegetation clearing to those areas where it is necessary. Opportunities to minimise clearing should be part of the detailed design
- Rehabilitating vegetated areas where ground is disturbed.

Mitigation - Alleviation

Options to alleviate impacts are usually associated with detailed design features such as materials, finishes, reflectivity, planting character and the like. Measures include:

- Trimming of rock cuttings to be carefully considered to alleviate visual impact. Shotcrete to be used sparingly and only where necessary. Shotcrete colour to be matched to natural rock at location to be used. Alternatively, stonework infill (preferably recovered on site) will provide a higher aesthetic finish.
- A median re-vegetation strategy should be implemented to replace the lost median planting with vegetation of a similar character, scale and height. The preference is for a fully vegetated median with a mix of suitable native vegetation species at a range of heights.

INTRODUCTION

PURPOSE OF THE REPORT

The key purpose of the LCVIA is to inform and improve the concept design and to assess the visual and landscape character impacts of the Proposal having regard for Part 5 of the Environmental Planning and Assessment Act. This specialist study will form part of the Review of Environmental Factors (REF) for the Proposal.

Landscape Character and Visual Impact Assessment aims to ensure that all possible effects of change and development in the landscape, views and visual amenity are taken into account. It is concerned with how the surroundings of individuals or groups of people may be specifically affected by change in the landscape, both quantitatively and qualitatively.

Judgement as to the significance of the effects is arrived at by a process of reasoning, based upon analysis of the baseline conditions, identification of receptors and assessment of their sensitivity, as well as the magnitude and nature of the changes that may result from any development.

This assessment is an independent report and is based on a professional analysis of the landscape and the Proposal at the time of writing. The current and potential future viewers (visual receptors) themselves have not been consulted about their perceptions. The analysis and conclusions are therefore based solely on a professional assessment of the anticipated impacts, based on a best practice methodology.

CONTEXT

Landscape Character and Visual Impact Assessment (LCVIA) is by its nature not an exact science and consequently is subject to varied methodologies both in Australia and overseas. Potentially subjective assessment material and differences of opinion about how to best assess visual characteristics, qualities, degrees of alteration and viewer sensitivity often arise. As a consequence, and as identified by the NSW Land and Environment Court, the key to a robust process is to explain clearly the criteria upon which an assessment is made.

LCVIA methodologies are often inconsistent and while various governments have generated specific methodologies, no Australian national framework exists. This report has adopted the Guidelines for Landscape Character and Visual Impact Assessment as published by the Roads and Maritime Service, RMS.

Key components of the LCVIA methodology include:

- Site analysis - Based on desk top and field analysis, the natural environment is identified and described as well as the human intervention and shaping of that environment, including settlements and the interaction between place and community.
- Assessment of Landscape Character Impacts - the Proposals likely impacts on the surrounding natural environment are analysed.
- Assessment of the visibility of the Proposal - Based on desk top and site analysis, the extent of the development that is visible is defined.
- Identification of key viewpoints - Based on desktop and field analysis, a schedule of key viewpoints is developed.
- Assessment of visual impacts - The unmitigated impact of the Proposal on each representative viewpoint is assessed. Impacts are based on a composite of the sensitivity of the view and magnitude of the Proposal in that view, before any mitigation strategy has been put in place.
- Development of mitigation strategy - Principles and strategies are developed to mitigate landscape character and visual impacts in the ongoing development of the design.

METHODOLOGY

REPORT STRUCTURE

Part 01 - Introduction
An introduction section that describes the planning and methodology context for the Visual Impact Assessment as well a description of the study area and of the Proposal.

Part 02 - Landscape Character Assessment
An overview of the existing landscape character of the study area including land use, vegetation, built form and topography. The study area is then described under distinct landscape character zones before the impact of the Proposal on each is zone is assessed.

Part 03 -Visual Impact Assessment
An overview of the existing visual environment of the study area and the subsequent visual impacts of the Proposal. Selected viewpoints are assessed on a range of qualitative and quantitative criteria.

Part 04 - Mitigation Measures and Conclusion
A discussion as to the means by which the visual impacts identified can be precluded, reduced or offset. Conclusions are drawn on the overall visual impact of the Proposal within the study area.

SUPPORTING DOCUMENTS

- - 'Upgrade of Kariong Interchange ramps, and Kariong to Somersby widening, M1 Pacific Motorway', Preliminary Environmental Investigation, November 2013, Parsons Brinkerhoff Australia.
- - 'M1 Pacific Motorway - Widening between Kariong and Somersby and Kariong Interchange Upgrade', Strategic Design Report #DS2013/01613, December 2013, Roads & Maritime Services.
- - 'M1 Pacific Motorway', Strategic Plans, November 2013, Roads & Maritime Services.

THE STUDY AREA

The M1 Pacific Motorway (formerly the F3 Freeway and road number 6003) is a critical part of the National Land Transport Network and is part of one of the busiest routes in NSW. The section of the M1 between the Central Coast Highway (Kariong Interchange) and Peats Ridge Road (Somersby Interchange) provides for both long distance through traffic and local traffic from the north of Gosford accessing the Central Coast. The length of this section is approximately 8km (refer Figure 01 and 02).

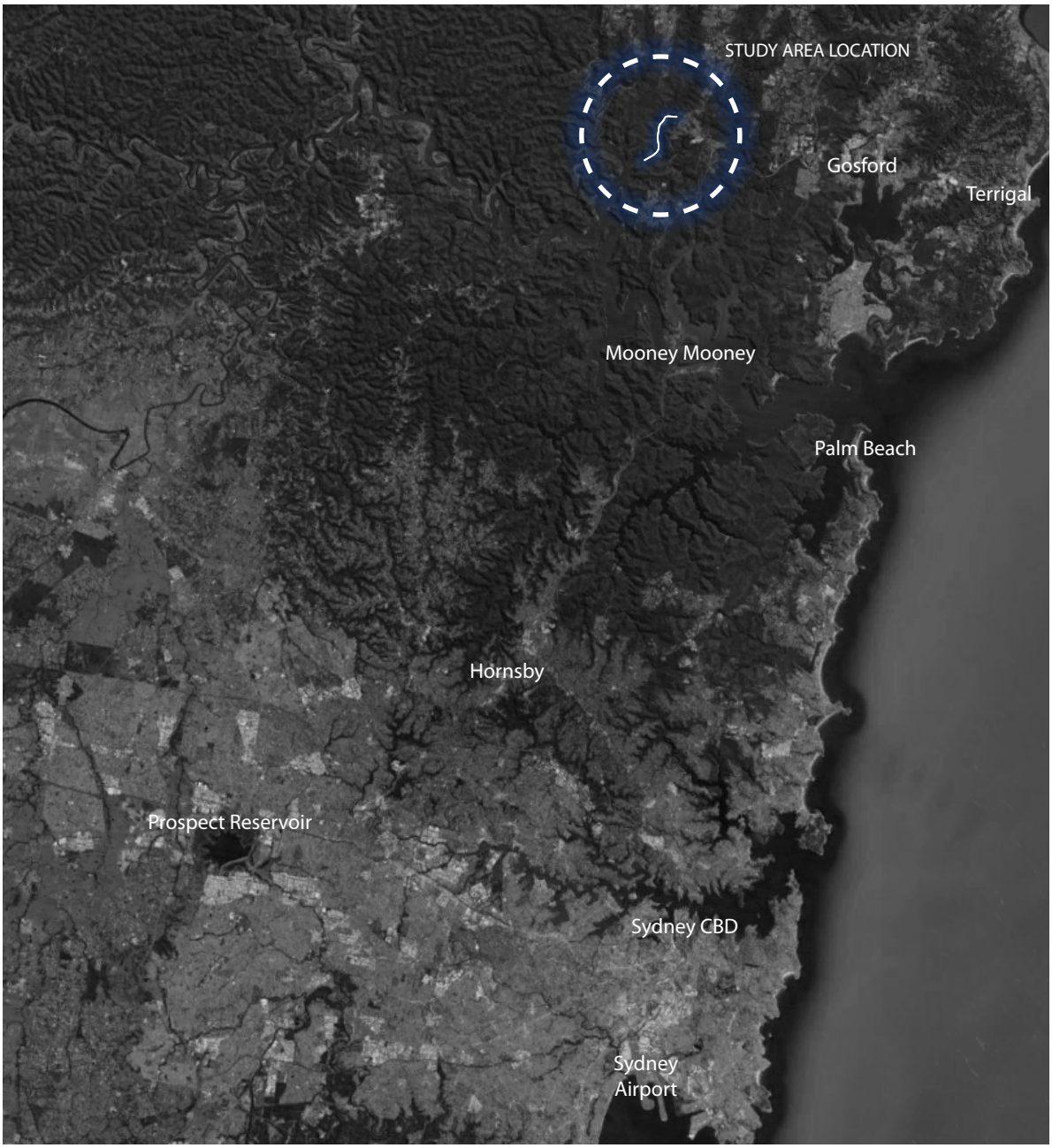

Figure 01 - Regional context (not to scale)

THE STUDY AREA

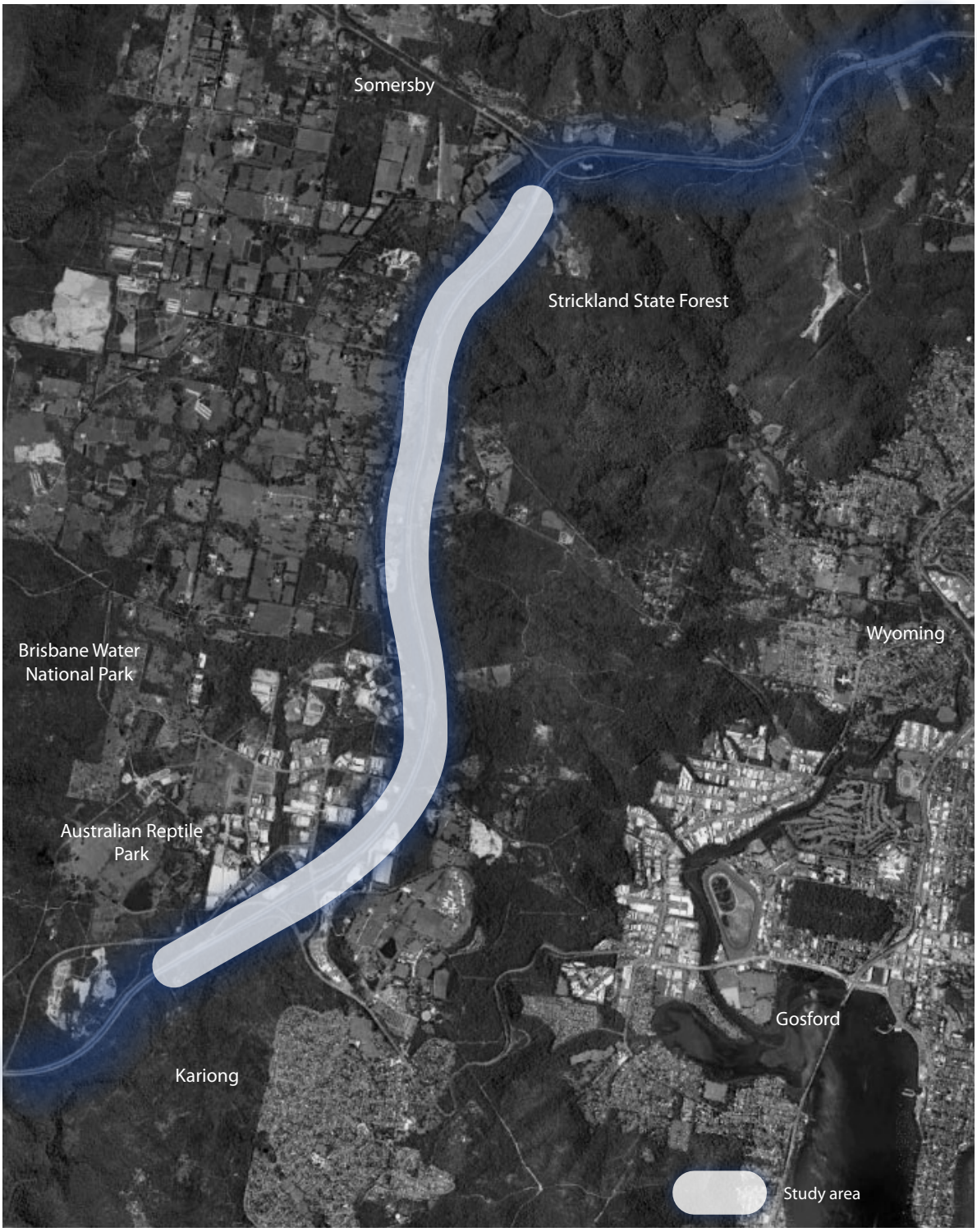

Figure 02 - Site context (not to scale)

THE PROPOSAL

The primary objective of the Proposal is to upgrade the M1 Pacific Motorway between Kariong and Somersby, including three ramps at Kariong interchange (refer Figure 03). The Proposal aims to:

- Improve freight efficiency and commuter movement by widening the motorway to match where required the lane configuration that is north of Somersby and south of Kariong
- improve safety for current road users, including cyclists and motorists by reducing offroad crash rates and rear-end crash rates
- provide best value for money over life-cycle
- reduce travel times and reduce traffic speed variability.

The proposed development is to include (refer Figure 03):

1. The addition of a third lane (concrete pavement) on central median side of Motorway between the Kariong Interchange and the Somersby Interchange. Where required, upgrades of safety barriers and drainage
2. the repair and rehabilitation of existing Motorway concrete pavement (the southbound carriageway between the Kariong Ramps is to remain 2 lanes)

Kariong Interchange

3. upgrading of the southbound entry ramp; widening the ramp to two lanes from Piles Creek Bridge and continuing the inner acceleration lane to become the outer left carriageway
4. upgrading of the northbound exit ramp; providing a dual lane exit and balanced interchange at the northbound diverge. The deceleration lane develops in the existing left lane with the carriageway widening to a fourth lane on the central median side
5. upgrading of the northbound entry ramp; providing an acceleration lane to permit safe acceleration of traffic prior to merge. The acceleration lane continues in the existing left carriageway lane with the third lane replaced on the central median side.
6. widening of the existing three lane northbound bridge at Gindurra Road to facilitate the provision of an acceleration lane, therefore adding a fourth lane arrangement to Ch 67,700.

Vegetated median
It has been assumed within this report that the vegetated median along the widened road corridor will be removed during construction works and re-vegetated once works are complete. The nature of this re-planting (height, species, character) is yet to be established and will be investigated during the concept design process.

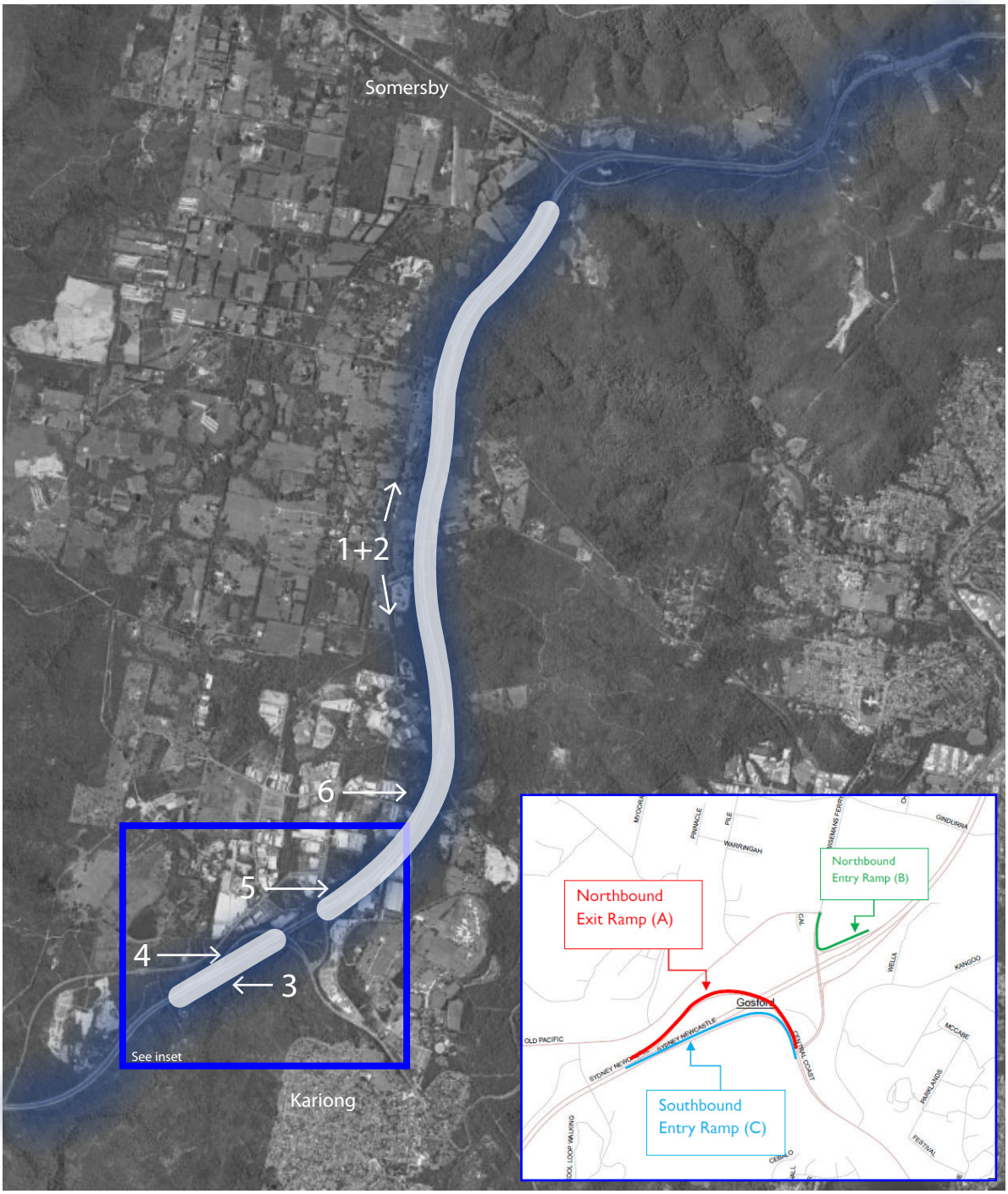

Figure 03 - The Proposal (not to scale)

02

Landscape Characater Assessment

LANDSCAPE CHARACTER ASSESSMENT

This section of the LCVIA provides an overview of the existing landscape character of the study area including land use, vegetation, built form and topography. The study area is then described under distinct landscape character zones before the impact of the proposal on each is assessed.

Study area
The study area specific to the landscape character assessment comprises a linear corridor of 8 kilometres between the Kariong and Somersby Interchanges, including the interchange entry/exit ramps and land either side of the road (refer Figure 05).

Vegetation
The study area occurs in the Sydney Basin Bioregion on the Somersby Plateau between Somersby and Kariong. The existing local environment consists of native vegetation, cleared vegetation and disturbed remnant and regrowth native vegetation. The vegetation contained within the existing road corridor is disturbed from previous road development although still provides an important contribution to the road's scenic quality.

Desktop assessment of the broad scale vegetation mapping of the Gosford and Wyong LGAs identified that vegetation within the proposed road corridor and wider study area is comprised of ten vegetation communities (refer Figure 04). Of the ten listed vegetation communities, two (Sandstone Hanging Swamp and Somersby Plateau Forest) are listed as endangered ecological communities under the Threatened Species Conservation Act 1995 (TSC).

The area to the west of the existing Motorway is largely cleared land with scattered trees, commensurate with rural, residential and industrial developments.

Topography
The study area is situated west of a ridgeline on a broad plateau of deeply weathered sandstone surrounded by gently undulating rises. This sandstone contributes a unique quality to the road and is evident through cuttings and excavations along the corridor. In several places, remnant sandstone has been left within the road median and provides dramatic visual interest. The landform drops away on steeply vegetated escarpments in the south and south-east of the study area and gently inclines to the rural and industrial areas of Somersby in the north and west.

The landform and topography within and adjacent to the Motorway is generally undulating with broad and rounded crests and ridges grading into concave lower slopes. This provides a scenic road alignment and an interesting driving experience. The existing Motorway traverses the landform in a general north-east to south-west direction, and comprises cut and fill batters at various locations along the road edge, pavement and a depressed vegetated median.

European & Aboriginal Heritage
There are areas of remnant uncleared bushland surrounding the survey area which contain items of Aboriginal heritage and cultural values. A desktop study identified 35 items of Aboriginal cultural heritage significance and 3 items of non-Aboriginal heritage within close proximity to the road corridor.

LANDSCAPE CHARACTER ASSESSMENT

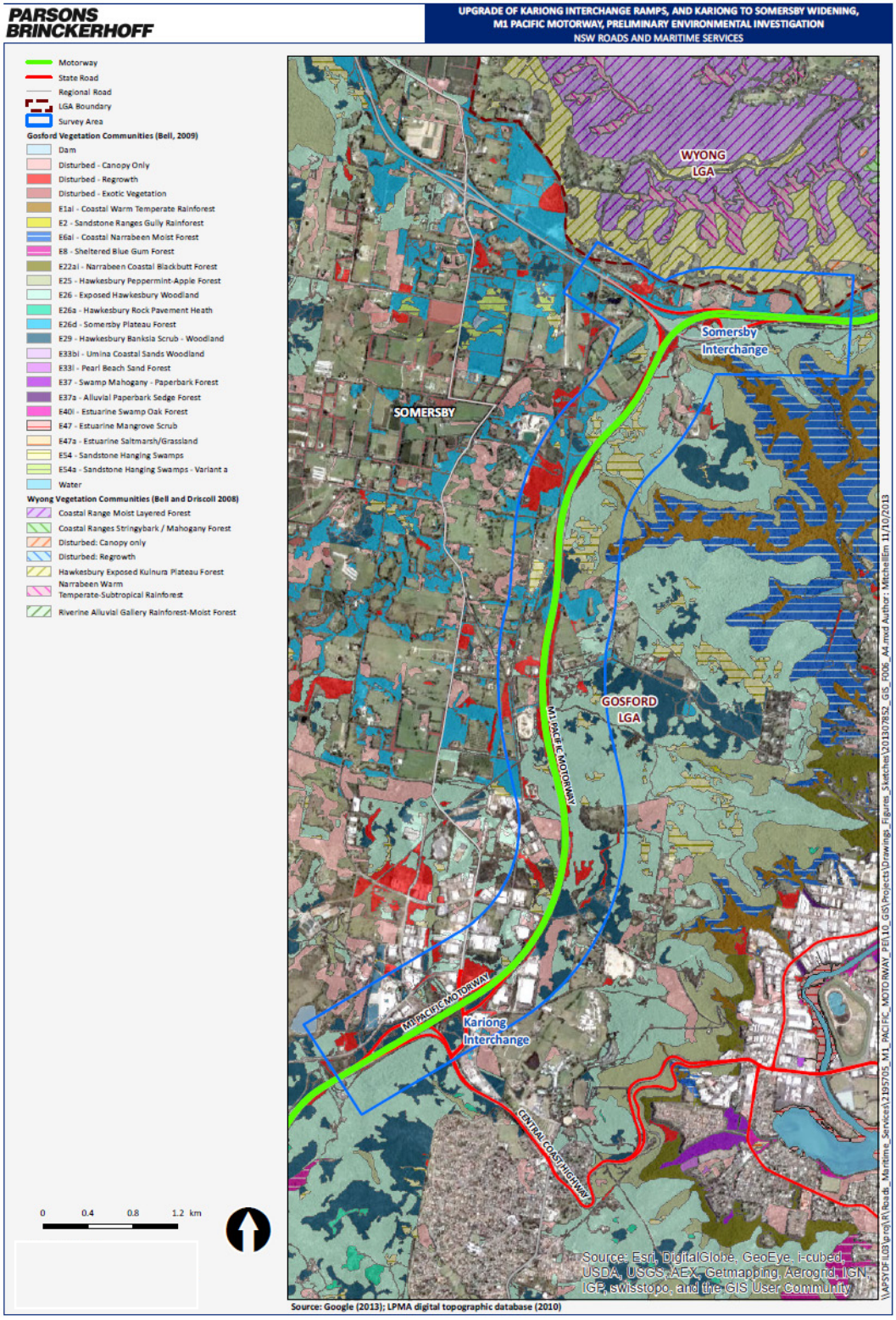

Figure 04 - Vegetation communities either side of the study area (Source: Upgrade of Kariong Interchange ramps, and Kariong to Somersby widening, M1 Pacific Motorway', Preliminary Environmental Investigation, November 2013, Parsons Brinkerhoff Australia))

LANDSCAPE CHARACTER ASSESSMENT

Land Use

The Motorway is owned by the NSW Government and managed by RMS. A number of adjacent land parcels are privately owned, National Parks, bushland reserves or land owned by the Darkinjung Aboriginal people. Several commercial and light industrial units are located alongside the Motorway. The majority of these buildings are concentrated in the Somersby Industrial Park to the west and commercial/retail buildings to the east on Kangoo Road and Wella Way. Somersby Industrial Park has a range of industrial and commercial businesses whilst the Somersby Airstrip, Rindean Quarry and Gosford Quarries are located nearby. These businesses are not generally visible from the survey area due to intervening topography and vegetation.

Other development within and adjacent to the survey area includes a BMW car dealership and a prefabricated home developer on the northern side of the Kangoo Road and Central Coast Highway intersection. There are no buildings located on Peats Ridge Road/Somersby Interchange that are likely to be affected by the Proposal.

Other significant cultural and recreational features within or in close proximity to the study area include the Brisbane Water National Park, Australian Reptile Park, Somersby Recreational Reserve and Somersby Falls. South of the Central Coast Highway sporting facilities at Kariong include fields for soccer, baseball, cricket and rugby league.

Somersby Industrial Park, Kariong Interchange

LANDSCAPE CHARACTER ASSESSMENT

METHODOLOGY

To enable the assessment of impacts on landscape character, landscape character zones have been determined for the study area. Landscape character zones are defined as areas having a distinct, recognisable and consistent pattern of elements, be they natural (soil, vegetation, landform) and/or human built form, making one landscape different from another. The study area and surrounds have been assessed and four landscape character zones have been established:

1. Road corridor
2. Disturbed Vegetation
3. Native bushland
4. Commercial/Industrial Development

Further description of these zones and their properties is provided under 'Landscape Character Zones' and shown in Figure 05. The overall impact rating of the proposal on any given landscape character zone is based on themes of magnitude and sensitivity.

Sensitivity

The degree to which a particular landscape type can accommodate change arising from a development, without detrimental effects on its character. This includes factors such as:

- existing land use
- the pattern and scale of the landscape
- visual enclosure, openness of views and distribution of visual receptors
- the value placed on the landscape.

Magnitude

The magnitude of the effects of the development within the landscape. Consideration is given to existing built form in the landscape and how closely the development matches this in bulk, scale and form. Magnitude is a study of the scale or degree of change to the landscape resource, the nature of the effect and its duration including whether it is permanent or temporary.

Overall Impact Rating

The severity of these impacts are calculated using Table 01 - based on a combination of magnitude and sensitivity.

		MAGNITUDE			
		HIGH	MODERATE	LOW	NEGLIGIBLE
SENSITIVITY	HIGH	HIGH	HIGH - MODERATE	MODERATE	NEGLIGIBLE
	MODERATE	HIGH - MODERATE	MODERATE	MODERATE/LOW	NEGLIGIBLE
	LOW	MODERATE	MODERATE/LOW	LOW	NEGLIGIBLE
	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

Table 01: Landscape Character Impact Rating as a combination of Sensitivity and Magnitude.
Source: RMS Guidelines for Landscape Character and Visual Impact Assessment

LANDSCAPE CHARACTER ZONES

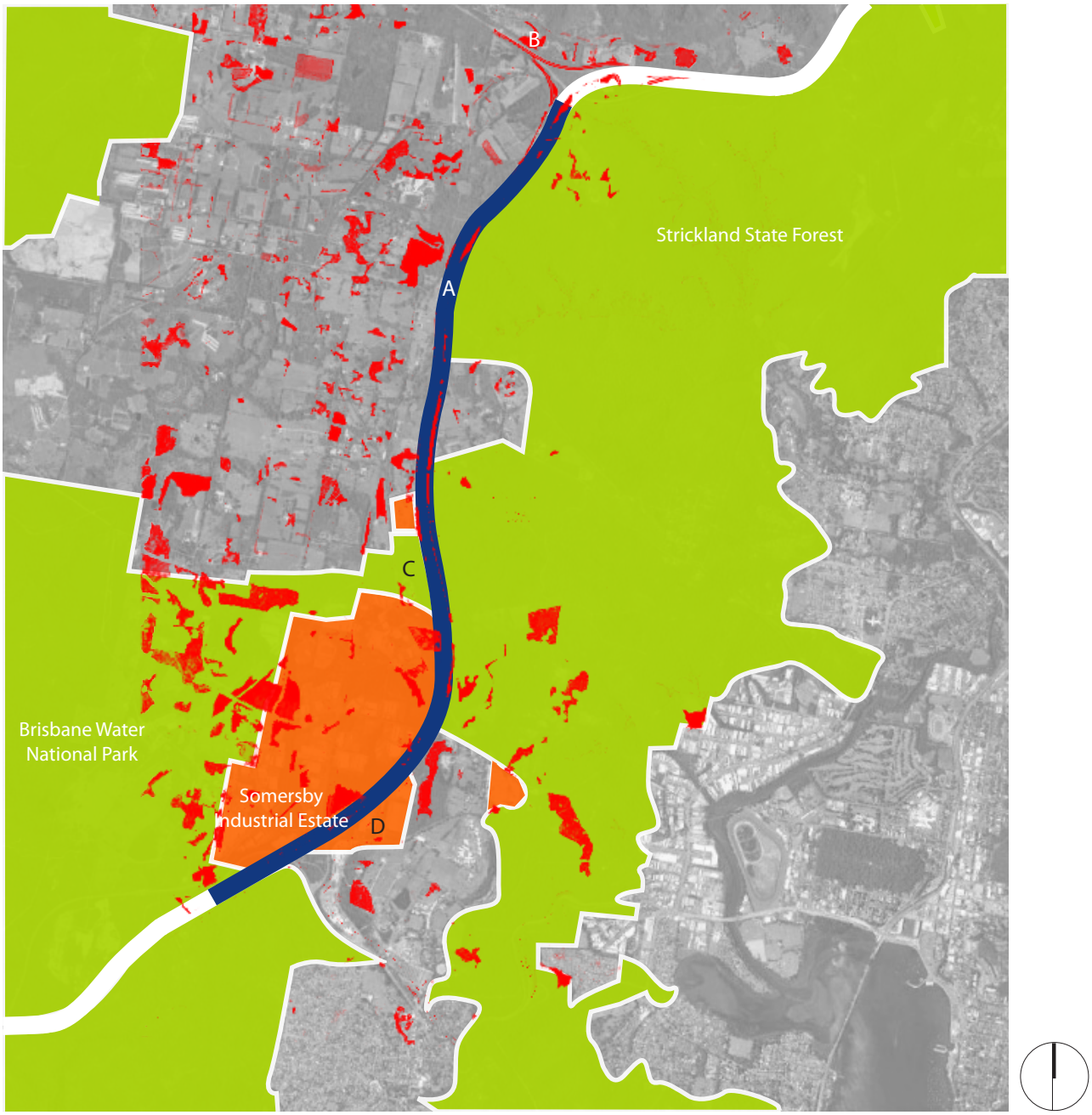

Figure 05: Landscape Character Zones

- Landscape Character Zone 1 - Road Corridor
- Landscape Character Zone 2 - Disturbed vegetation
- Landscape Character Zone 3 - Native bushland
- Landscape Character Zone 4 - Commercial/Industrial Development
- A Landscape Character photo location

LANDSCAPE CHARACTER ZONES

LANDSCAPE CHARACTER ZONE 1 - ROAD CORRIDOR

Photo A - Typical Road corridor median conditions

This landscape character zone covers the M1 corridor which traverses north/south across the study area. The corridor includes kerbs, safety barriers, road lanes, signage and a planted median. The road travels through several sandstone rock cuttings which form dramatic features alongside of the main carriageway and on exit and entry ramps.

The median is planted along the length of the study area, except for occasional crossovers that are paved for emergency and police vehicle access. The median width varies with lane configuration from 10 - 20m wide with a dense growth of disturbed, rehabilitated/replanted vegetation. This vegetation has the effect of blocking or screening the majority of views towards the opposite carriageway for motorists, reducing the perceived scale of the Motorway.

The road is bounded by dense native vegetation on either side, blocking most mid and long distance views.

Element	Description
Topography	The road carriageway traverses through a modified landscape of undulating landform
Hydrology	Rainfall drainage varies, however in most situations drains from a central pitch in the road toward the median and road edge.
Geology	The M1 travels through various sandstone cuttings of varying heights.
Ecology/vegetation	Undisturbed native bushland is evident throughout the 8km journey along the perimeter of the road corridor. The Median strip is characterised by disturbed, rehabillitated/replanted vegetation.
Land use	Transport Corridor
Built form	Road infrastructure
Spatial	Linear and enclosed with views blocked by dense vegetation either side of the road corridor.

LANDSCAPE CHARACTER ZONES

LANDSCAPE CHARACTER ZONE 1 - ROAD CORRIDOR

Description of Sensitivity
This landscape zone features a wide road corridor with extensive road infrastructure of between 4 and 5 lanes. Motorways generally have a low sensitivity to change due to their significant scale and urban form. The M1, however, is distinct from other similar road corridors. It is highly scenic due to the presence of large sandstone rock cuttings, a wide vegetated median and dense bushland either side of the road. The vegetated median assists in screening or, in some cases, blocking views of the opposite carriageway, reducing the perceived scale of the road for motorists.

Description of Magnitude
The Proposal is not at odds with the scale of the current road infrastructure, although there will be a noticeable reduction in the width of the vegetated median. The median is likely to be cleared during the construction period, with views opened up to the opposite carriageway. Post-construction, the median will be re-vegetated with native vegetation at a range of heights and species. This will ensure the current enclosed nature of the road is maintained and there is not a perceived increase in road scale.

The landscape character impact is rated as moderate/low with a re-planting strategy that is similar in height scale and character to the existing median vegetation.

Sensitivity	MODERATE
Magnitude	LOW
Overall Landscape Character Impact Rating	MODERATE/LOW

From Table 01, using a combination of sensitivity and magnitude ratings.

LANDSCAPE CHARACTER ZONES

LANDSCAPE CHARACTER ZONE 2 - DISTURBED VEGETATION

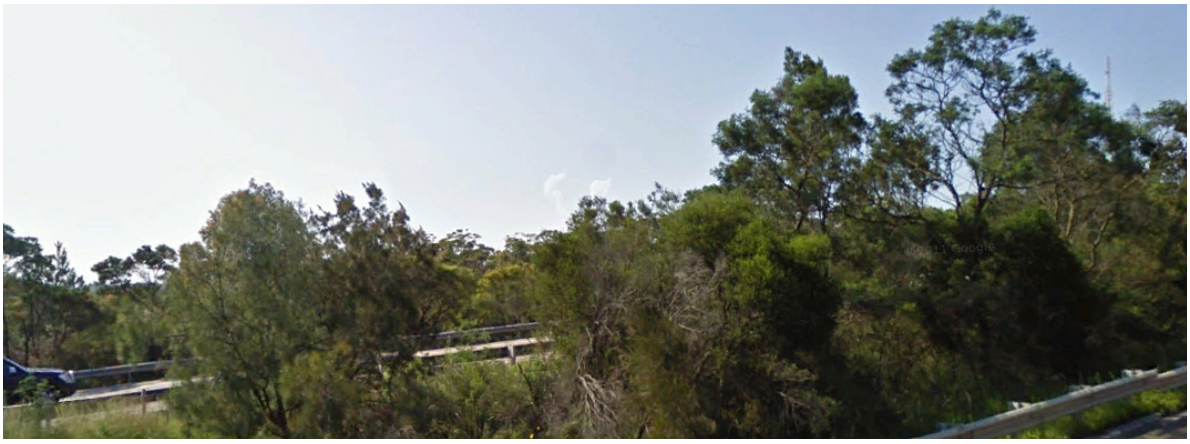

Photo B - Typical disturbed vegetation along the road corridor

This fragmented character zone can be found in sections either side of the road corridor where the ground has been previously disturbed for construction or farming purposes. Land use around this character zone includes areas of commercial, industrial and residential development.

The environment within the zone consists of cleared, disturbed remnant and regrowth native and exotic vegetation. Whilst not ecologically significant, the vegetation assists in breaking up and screening built form.

Element	Description
Topography	Undulating landform with areas levelled for development
Hydrology	The undulating landscape forms part of the Macquarie - Tuggerah Lakes Catchment and Hawkesbury – Nepean River Catchment
Geology	Characterised by Hawksbury Sandstone
Ecology/vegetation	Cleared, disturbed remanet and regrowth native and exotic vegetation.
Land use	Commercial, industrial, farming and rural residential
Built form	Commercial, industrial, farming and rural residential properties
Spatial	Primarily enclosed in character with views filtered by vegetation. Where conditions allow views are offered to open farmland and surrounding hills.

LANDSCAPE CHARACTER ZONES

LANDSCAPE CHARACTER ZONE 2 - DISTURBED VEGETATION

Description of Sensitivity
This landscape character zone forms fragmented clusters in proximity to the road corridor. This previously disturbed exotic and native vegetation has low ecological value although may provide fauna habitat. It helps to contribute to the scenic quality of the landscape surrounding the road corridor.

Description of Magnitude
The magnitude of the Proposal within this landscape zone is limited as the widening is unlikely to impact on a significant quantity of the disturbed vegetation outside the road corridor.

Sensitivity	MODERATE
Magnitude	NEGLIGIBLE
Overall Landscape Character Impact Rating	NEGLIGIBLE

From Table 01, using a combination of sensitivity and magnitude ratings.

LANDSCAPE CHARACTER ZONES

LANDSCAPE CHARACTER ZONE 3 - NATIVE BUSHLAND

Photo C - Typical native bushland conditions adjacent to the road corridor.

This landscape character zone covers large swathes of land surrounding the M1 corridor and includes the Strickland State Forest and Brisbane Water National Park.

The bushland consists of dense native tree and shrub canopies and is generally in good condition with potentially important fauna habitats and important wildlife linkages. The topography is undulating with drainage gullies and sandstone outcrops.

Vegetation communities include:

- Hawkesbury Peppermint Apple Forest
- Exposed Hawkesbury Wodland
- Coastal Narrabeen Moist Forest

Element	Description
Topography	Undulating landform
Hydrology	The undulating landscape forms part of the Macquarie - Tuggerah Lakes Catchment and Hawkesbury – Nepean River Catchment
Geology	Characterised by Hawksbury Sandstone
Ecology/vegetation	Dense native vegetation
Land use	National Park, informal recreation
Built form	None
Spatial	Primarily enclosed in character with views filtered by vegetation. Where conditions allow views are offered to elevated ridgelines.

LANDSCAPE CHARACTER ZONES

LANDSCAPE CHARACTER ZONE 3 - NATIVE BUSHLAND

Description of Sensitivity
This landscape character is located to the east and west of the road corridor and consists of high value native vegetation. The Strickland State Forest provides recreational opportunities for bushwalking as well as valuable fauna habitat. The bushland has a high sensitivity to change and contains several EEC communities.

Description of Magnitude
The magnitude of the Proposal within this landscape zone is negligible as the widening is unlikely to impact any of the vegetation outside the road corridor.

Sensitivity	HIGH
Magnitude	NEGLIGIBLE
Overall Landscape Character Impact Rating	NEGLIGIBLE

From Table 01, using a combination of sensitivity and magnitude ratings.

LANDSCAPE CHARACTER ZONES

LANDSCAPE CHARACTER ZONE 4 - COMMERCIAL/INDUSTRIAL DEVELOPMENT

Photo D - Typical light industrial development along the M1 road corridor

Light industrial and commercial development is found in close proximity to the road corridor, concentrated within the Somersby Industrial Estate.

Development consists primarily of larger buildings including warehouses and storage facilities up to 15m in height. Sparse and fragmented vegetation is scattered through this character zone.

Element	Description
Typography	Undulating with areas levelled for development
Hydrology	The undulating landscape forms part of the Macquarie - Tuggerah Lakes Catchment and Hawkesbury – Nepean River Catchment
Geology	Characterised by Hawksbury Sandstone
Ecology/vegetation	Fragmented native and exotic vegetation
Land use	Commercial and light industrial development
Built form	Low rise warehousing

LANDSCAPE CHARACTER ZONES

LANDSCAPE CHARACTER ZONE 4 - COMMERCIAL/INDUSTRIAL DEVELOPMENT

Description of Sensitivity
This landscape zone constitutes a medium density urban development with associated infrastructure and large commercial and industrial buildings. This landscape character has few sensitive receptors and a high ability to absorb change, leading to a low sensitivity rating.

Description of Magnitude
The scale of the road widening will not negatively impact this character zone.

Sensitivity	LOW
Magnitude	LOW
Overall Landscape Character Impact Rating	LOW

From Table 01, using a combination of sensitivity and magnitude ratings.

LANDSCAPE CHARACTER SUMMARY

The landscape character surrounding the M1 road corridor is typical of the Somersby district with undulating hillsides, large swathes of native vegetation, creek lines, ridges and a low density of commercial and industrial development. The overall impact of the Proposal on landscape character is rated as negligible across two character zones (disturbed and native bushland), low across one (commercial/industrial) and moderate/low within the road corridor itself - see summary Table 02.

The reduction in road median width will be the most noticeable change to the landscape. Although this vegetation is disturbed and of low ecological value, it importance is derived from its screening effect on the opposite carriageway for motorists travelling both north and south. Post-construction, the median is likely to be re-vegetated, although the scale and type of this re-planting is, as yet, unknown. If the current enclosed nature of the road is altered to a more open character, there will be an increase in the perceived scale of the road and adversely impact the road's landscape character. The re-planting strategy should be similar in height, scale and character to the existing median vegetation to avoid adverse impacts.

Summary of Landscape Character impacts

	Road Corridor	Disturbed Vegetation	Native Bushland	Commercial/Industrial
Sensitivity	MODERATE	MODERATE	HIGH	LOW
Magnitude	LOW	NEGLIGIBLE	NEGLIGIBLE	LOW
Overall Rating	MODERATE/LOW	NEGLIGIBLE	NEGLIGIBLE	LOW

Table 02 Summary of Landscape Character Impacts

03

Visual Impact Assessment


EXIT
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EXISTING VISUAL ENVIRONMENT

This section of the LCVIA provides an overview of the existing visual environment and the related visual impacts of the Proposal.

Study area
The study area specific to the visual assessment comprises a linear corridor of 8 kilometers between the Kariong and Somersby Interchanges, including the interchange entry/exit ramps and land either side of the road (refer Figure 02). The visual accessibility of the road corridor is highly limited due to the nature of the topography and the dense vegetation that is found either side of the Motorway in this location (refer Figure 07).

Public Domain
The public domain within the study area with visibility of the Motorway and associated ramps comprises the road corridor itself. Views extend along the road corridor for motorists travelling in both north and southbound directions. The densely vegetated median filters or blocks views of the opposite carriageway. Views out from the road corridor are limited due to the topography and dense bushland alongside the road.

Public cultural and recreational features within close proximity to the study area include the Brisbane Water National Park, Australian Reptile Park, Somersby Recreational Reserve and Somersby Falls, all of which have no views of the Proposal.

Private Domain
There are a very limited number of residential receptors within the study area. Approximately eight properties can be found within 200m of the road corridor, however screening vegetation and the lowered elevation of the road ensure that it is not visible from these premises.

There are a small number of commercial properties within and in close proximity to the study area, concentrated in the Somersby Industrial Park to the west and commercial/retail buildings to the east on KangooRoad and Wella Way. Somersby Industrial Park has a range of industrial and commercial businesses including a concrete manufacturing plant, aluminium manufacturing facility and provides a range of materials including glass, metal and concrete products, whilst the Somersby Airstrip, Rindean Quarry and Gosford Quarries are located nearby. The majority of these businesses do not have views to the road corridor due to intervening topography and vegetation.

EXISTING VISUAL ENVIRONMENT

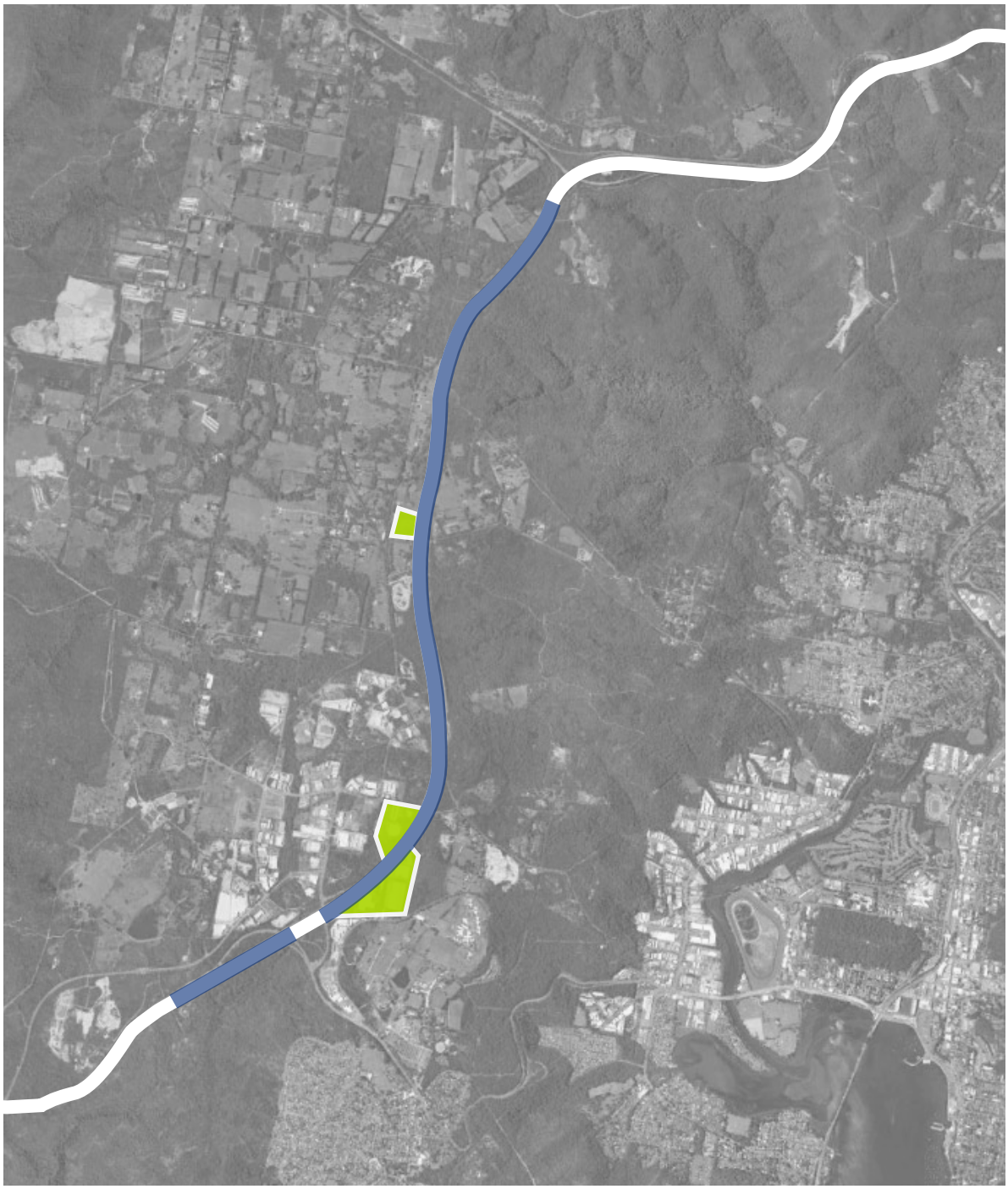


Figure 07 - Visual Catchment of the Proposal along the M1 corridor (source Google Maps)

Direct Views

Filtered views

VISUAL CATCHMENT ANALYSIS

KEY VISUAL RECEPTORS
During a site visit, six key receptor sites with the potential to be visually impacted by some element of the Proposal were identified and selected for further analysis (refer Figure 08).

The locations identified are:

1. Exit lane at Kariong interchange - looking north
2. Piles Creek Bridge - looking north on the southbound lane
3. Gindurra Road Bridge - looking south on the southbound lane
4. Typical sandstone cutting and densely planted median - looking south on the southbound lane
5. Reeves Road overpass - looking north in the northbound lane
6. Peats Ridge entry ramp - looking south in the southbound lane

VISUAL CATCHMENT ANALYSIS

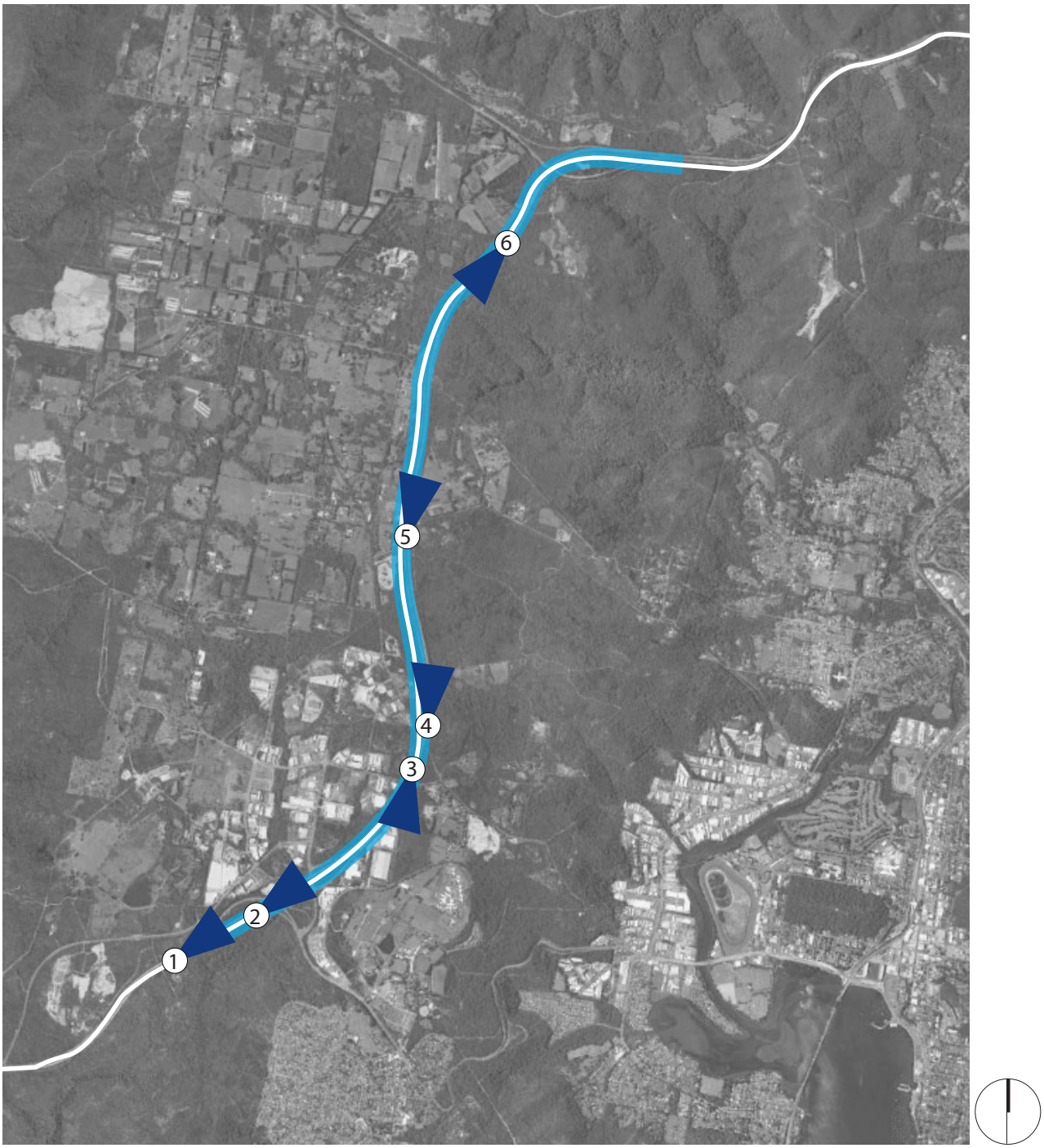


Figure 08 - Viewpoint locations along the M1 corridor (source Google Maps)

View Point

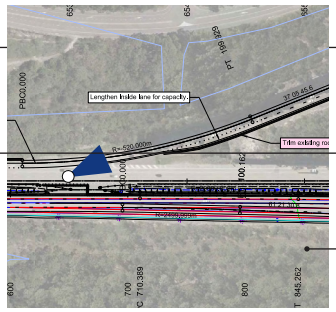
VIEWPOINT ANALYSIS

VIEWPOINT ANALYSIS

The following section assesses the visual impact of the Proposal on each of the selected viewpoints shown in Figure 08. This includes a description of the current view from each viewpoint followed by a discussion of the potential visual impacts of the Proposal on that view. Each viewpoint is accompanied by a location map and photograph of the current view.

For a detailed description of the assessment factors and impact ratings used see Appendix A.

VIEWPOINT X — Viewpoint number



Location map

Photo location and direction marker

Proposed works

Location
Motorway 1 — Viewpoint location

Receptors
- — Description of the viewers

Current View
- — Description of current view

Visual Impact
xx

Description of expected visual impact

RECEPTOR TYPE	RECEPTOR IDENTIFICATION	RECEPTOR SENSITIVITY	MAGNITUDE				
			DISTANCE	QUANTUM OF VIEW	PERIOD OF VIEW	MAGNITUDE OF CHANGE	SUMMARY OF RATINGS
Public	1	L	H	L	L	L	L
	Visual Impact Rating				LOW		

VISIBLE
Refurbished dolphin wharf
Dolphin wharf pontoons
Berthed boats

Assessment matrix table

Overall visual impact rating

VIEWPOINT ANALYSIS

METHODOLOGY

The overall impact rating of the Proposal on any given receptor is based on factors of magnitude and sensitivity.

Sensitivity

Each visual receptor type has an inherent and varied sensitivity to change in the visual scene based on their personal context in which the view is being experienced. This will have a direct bearing on the perception of visual impact experienced by the receptor and qualifies the quantitative impacts. Appendix A describes the levels of sensitivity for each receptor type.

Magnitude

The magnitude of the visual effects of the development within the landscape. A series of quantitative assessments are studied, including distance from development, quantum of view, duration of view and magnitude of change. Appendix A describes the ratings assigned to these quantitative assessments.

Overall impact rating

The severity of these impacts is calculated using matrix Table 01 - based on a combination of magnitude and sensitivity.

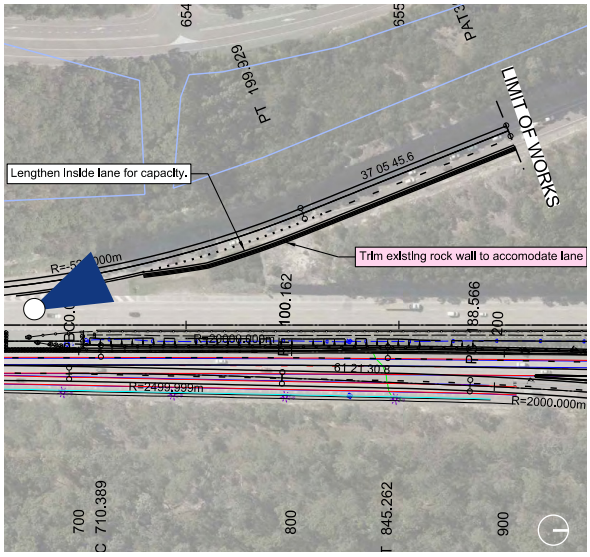
SENSITIVITY	MAGNITUDE: HIGH	MAGNITUDE: MODERATE	MAGNITUDE: LOW	MAGNITUDE: NEGLIGIBLE
HIGH	HIGH	HIGH - MODERATE	MODERATE	NEGLIGIBLE
MODERATE	HIGH - MODERATE	MODERATE	MODERATE/LOW	NEGLIGIBLE
LOW	MODERATE	MODERATE/LOW	LOW	NEGLIGIBLE
NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE	NEGLIGIBLE

Table 01: Landscape Character Impact Rating as a combination of Sensitivity and Magnitude. Source: RMS Guidelines for Landscape Character and Visual Impact Assessment

VIEWPOINT ANALYSIS

VIEWPOINT 1

Viewpoint location



Proposed works

Photo 1A - View looking north towards the northbound exit ramp at Kariong interchange

VIEWPOINT ANALYSIS

Location
M1 Motorway - northbound exit ramp at Kariong interchange

Distance to Proposal
0 metres

Receptors
The receptors in this viewpoint are users of the M1 motorway, travelling in a northbound direction.

Current View
As shown in Photo 1A, this viewpoint looks north towards the northbound exit ramp. The foreground view is dominated by the large sandstone cutting of the exit ramp with vegetation either side of the road.

VISUAL IMPACT

The northbound exit ramp will be upgraded, providing a dual lane exit. The deceleration lane develops in the existing left lane with the carriageway widening to a fourth lane on the central median side. The existing rock wall is likely to be trimmed to accommodate these changes.

Visual impacts during the construction stage will include major construction machinery, temporary signage, hoardings and storage areas.

Once construction is complete, the visual impact will be minimal as the changes will be accommodated within the current road corridor. The structural quality of the rock is currently unknown and shotcrete may be required on the rock cutting. This has a higher potential visual impact which can be mitigated through good design, as discussed in the 'Mitigation Measures' chapter of this report.

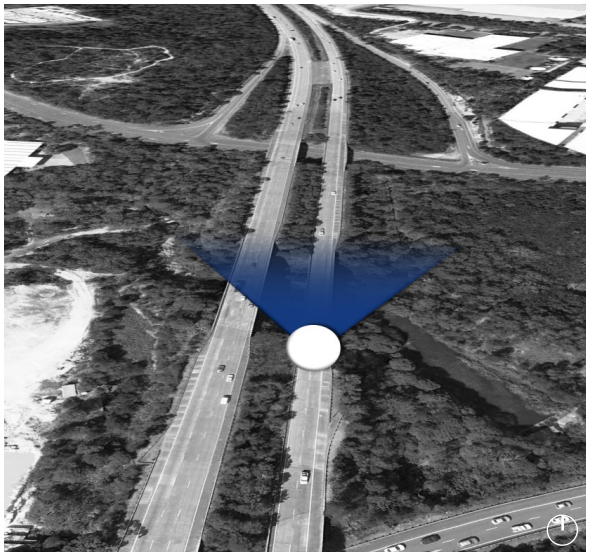
RECEPTOR TYPE	RECEPTOR IDENTIFICATION	RECEPTOR SENSITIVITY	MAGNITUDE				
			DISTANCE	QUANTUM OF VIEW	PERIOD OF VIEW	MAGNITUDE OF CHANGE	SUMMARY OF RATINGS
Public	1	L	H	L	L	L	L

Visual Impact Rating	LOW

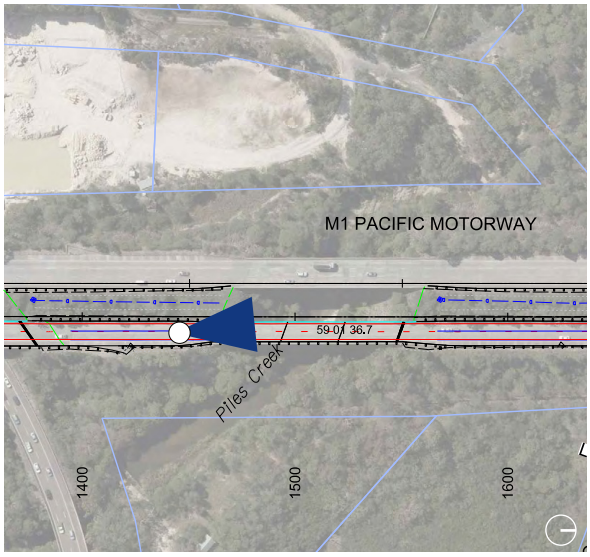
VISIBLE
Widened lane
Trimmed rock wall

VIEWPOINT ANALYSIS

VIEWPOINT 2



Viewpoint location



Proposed works

Photo 2A - Travelling in the southbound lane of the M1 looking north over the Piles Creek Bridge

VIEWPOINT ANALYSIS

Location
M1 Motorway - Piles Creek Bridge

Distance to Proposal
0 metres

Receptors
The receptors in this viewpoint are users of the M1 motorway, travelling in a northbound direction.

Current View
As shown in Photo 2A, this viewpoint looks over Piles Creek Bridge with a dense tree canopy visible in the stretching from the foreground to the far distance. Several warehouses are visible in the middle distance to the west of this viewpoint.

VISUAL IMPACT
This section of the road will not be widened and so no visual impact is expected.

RECEPTOR TYPE	RECEPTOR IDENTIFICATION	RECEPTOR SENSITIVITY	MAGNITUDE				
			DISTANCE	QUANTUM OF VIEW	PERIOD OF VIEW	MAGNITUDE OF CHANGE	SUMMARY OF RATINGS
Public	2	L	H	N	N	N	N

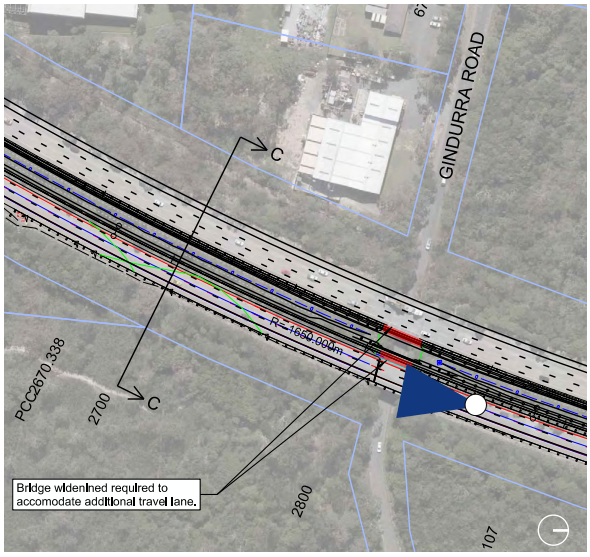
Visual Impact Rating	NEGLIGIBLE

VISIBLE
No change

VIEWPOINT ANALYSIS

VIEWPOINT 3

Viewpoint location



Proposed works

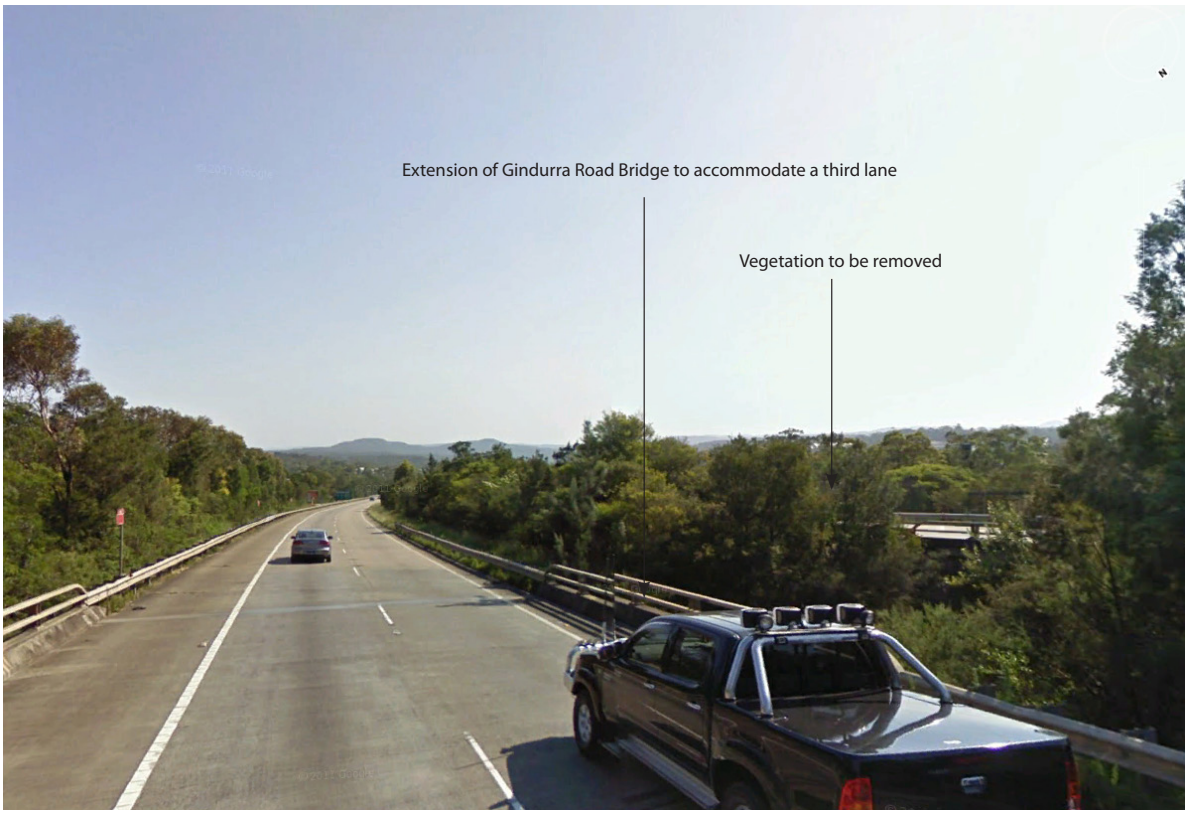


Photo 3A - Looking south travelling northbound lane at the Gindurra Road Bridge

VIEWPOINT ANALYSIS

Location
M1 Motorway - Gindurra Road Bridge

Distance to Proposal
0 metres

Receptors
The receptors in this viewpoint are users of the M1 motorway, travelling in both a south and northbound direction.

Current View
As shown in Photo 3A, this viewpoint looks over the Gindurra Road Bridge. Dense vegetation is visible either side of the road carriageway in the foreground, middle and far distance. Undulating ridge lines are visible on the horizon.

VISUAL IMPACT

Visual impacts during the construction stage will include major construction machinery, removal of vegetation within the median, temporary signage, hoardings and storage areas.

Once construction is complete, the bridge extension will be visible for both north and southbound motorists on the M1 at this location. The most visible element will be the requirement for vegetation removal on the inside of the bridge decks to accommodate the third lane. This will leave the opposite carriageway more visible to road users and increase the perceived scale of the road. At night, oncoming traffic headlights will be more visible on the opposite carriageway.

RECEPTOR TYPE	RECEPTOR IDENTIFICATION	RECEPTOR SENSITIVITY	MAGNITUDE				
			DISTANCE	QUANTUM OF VIEW	PERIOD OF VIEW	MAGNITUDE OF CHANGE	SUMMARY OF RATINGS
Public	3	M/L	H	M	L	M/L	M/L

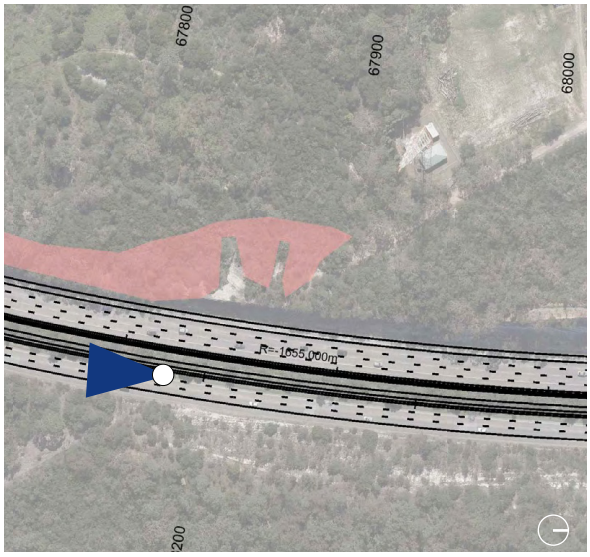
Visual Impact Rating	Moderate/Low

VISIBLE
Temporary removal of vegetation Widened bridge deck Temporary increased visibility of opposite carriageway Temporary increased visibility of oncoming vehicle headlights

VIEWPOINT ANALYSIS

VIEWPOINT 4

Viewpoint location



Proposed works

Photo 4A - Travelling southbound on the M1 looking south

VIEWPOINT ANALYSIS

Location
M1 Motorway

Distance to Proposal
0 metres

Receptors
The receptors in this viewpoint are users of the M1 motorway, travelling south.

Current View
As shown in Photo 4A, this viewpoint looks along the M1 road corridor. A densely planted median is visible extending along the corridor.

VISUAL IMPACT

Visual impacts during the construction stage will include major construction machinery, removal of vegetation within the median, temporary signage, hoardings and storage areas.

Once construction is complete, the third lane extension will be visible for both north and southbound motorists. The most visible element of the Proposal will be the requirement for vegetation removal within the median. This will leave the opposite carriageway more visible to road users and increase the perceived scale/width of the road. At night, oncoming traffic headlights will be more visible on the opposite carriageway.

Over time, the new, narrower median is likely to be re-planted and this visual impact will reduce. If implemented, replacement planting within the median at a similar character, scale and height to the existing vegetation will assist in reducing the visual impact to moderate/low.

RECEPTOR TYPE	RECEPTOR IDENTIFICATION	RECEPTOR SENSITIVITY	MAGNITUDE				
			DISTANCE	QUANTUM OF VIEW	PERIOD OF VIEW	MAGNITUDE OF CHANGE	SUMMARY OF RATINGS
Public	4	M/L	H	M	M	M/L	M/L

Visual Impact Rating	Moderate/Low

VISIBLE
Temporary removal of vegetation Third lane extension Temporary increased visibility of opposite carriageway Temporary increased visibility of oncoming vehicle headlights

VIEWPOINT ANALYSIS

VIEWPOINT 5

Viewpoint location

Proposed works

Photo 5 - Travelling in the North Bound M1 lane looking north toward the Reeves Road overpass.

VIEWPOINT ANALYSIS

Location
M1 Motorway near Reeves St road bridge

Distance to Proposal
0 metres

Receptors
The receptors in this viewpoint are users of the M1 motorway, travelling north.

Current View
As shown in Photo 4A, this viewpoint looks along the M1 road corridor with the Reeves St road bridge visible in the foreground. A densely planted median is visible extending along the corridor.

VISUAL IMPACT

Visual impacts during the construction stage will include major construction machinery, removal of vegetation within the median, temporary signage, hoardings and storage areas.

Once construction is complete, the third lane extension will be visible running underneath the bridge. The most visible element of the Proposal will be the requirement for vegetation removal within the median. This will leave the opposite carriageway more visible to road users and increase the perceived scale/width of the road. At night, oncoming traffic headlights will be more visible on the opposite carriageway.

Over time, the new, narrower median is likely to be re-planted and this visual impact will reduce. If implemented, replacement planting within the median at a similar character, scale and height to the existing vegetation will assist in reducing the visual impact to moderate/low.

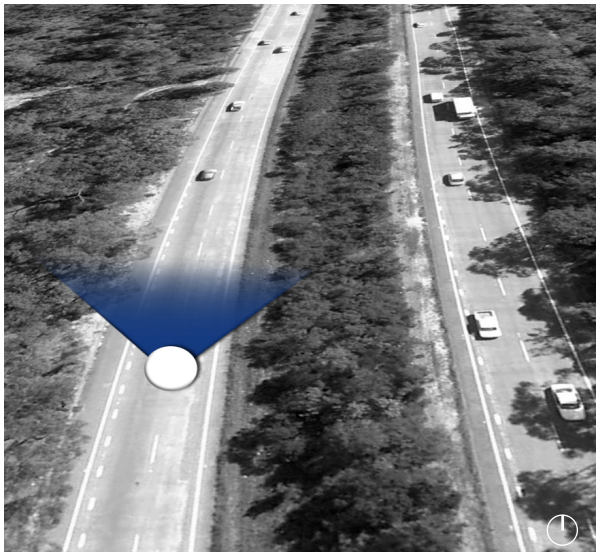
RECEPTOR TYPE	RECEPTOR IDENTIFICATION	RECEPTOR SENSITIVITY	MAGNITUDE				
			DISTANCE	QUANTUM OF VIEW	PERIOD OF VIEW	MAGNITUDE OF CHANGE	SUMMARY OF RATINGS
Public	5	M/L	H	M	L	M/L	M/L

Visual Impact Rating	Moderate/Low

VISIBLE
Temporary removal of vegetation Third lane extension Temporary increased visibility of opposite carriageway Temporary increased visibility of oncoming vehicle headlights

VIEWPOINT ANALYSIS

VIEWPOINT 6



Viewpoint location

Proposed works

Photo 6 - Travelling south in proximity to Peats Ridge Road on-ramp.

VIEWPOINT ANALYSIS

Location
M1 Motorway

Distance to Proposal
0 metres

Receptors
The receptors in this viewpoint are users of the M1 motorway, travelling south.

Current View
As shown in Photo 4A, this viewpoint looks along the M1 road corridor in a southerly direction. A densely planted median is visible extending along the corridor.

VISUAL IMPACT

Visual impacts during the construction stage will include major construction machinery, removal of vegetation within the median, temporary signage, hoardings and storage areas.

Once construction is complete, the third lane extension will be visible for both north and southbound motorists. The most visible element of the Proposal will be the requirement for vegetation removal within the median. This will leave the opposite carriageway more visible to road users and increase the perceived scale/width of the road. At night, oncoming traffic headlights will be more visible on the opposite carriageway.

Over time, the new, narrower median is likely to be re-planted and this visual impact will reduce. If implemented, replacement planting within the median at a similar character, scale and height to the existing vegetation will assist in reducing the visual impact to moderate/low.

RECEPTOR TYPE	RECEPTOR IDENTIFICATION	RECEPTOR SENSITIVITY	MAGNITUDE				
			DISTANCE	QUANTUM OF VIEW	PERIOD OF VIEW	MAGNITUDE OF CHANGE	SUMMARY OF RATINGS
Public	6	M/L	H	M	M	M/L	M/L

Visual Impact Rating	Moderate/Low

VISIBLE
Temporary removal of vegetation Third lane extension Temporary increased visibility of opposite carriageway Temporary increased visibility of oncoming vehicle headlights

VISUAL IMPACT SUMMARY

SUMMARY OF VISUAL IMPACTS

From the analysis of visual receptors in the foregoing section, the summary of qualitative and quantitative visual impacts of the proposal are:

RECEPTOR TYPE	Receptor Identification	Receptor Sensitivity	MAGNITUDE					
			Distance	Quantum of View	Period of View	Magnitiude of Change	Summary of Ratings	Impact Ratings
Road User view	1	L	H	L	L	L	L	Low
Road User view	2	L	H	N	N	N	N	Negligible
Road User view	3	M/L	H	M	L	M/L	M/L	Moderate/Low
Road User view	4	M/L	H	M	M	M/L	M/L	Moderate/Low
Road User view	5	M/L	H	M	L	M/L	M/L	Moderate/Low
Road User view	6	M/L	H	M	M	M/L	M/L	Moderate/Low

Table 03 - Summary of visual impacts of the Proposal across the study area

VISUAL IMPACT SUMMARY

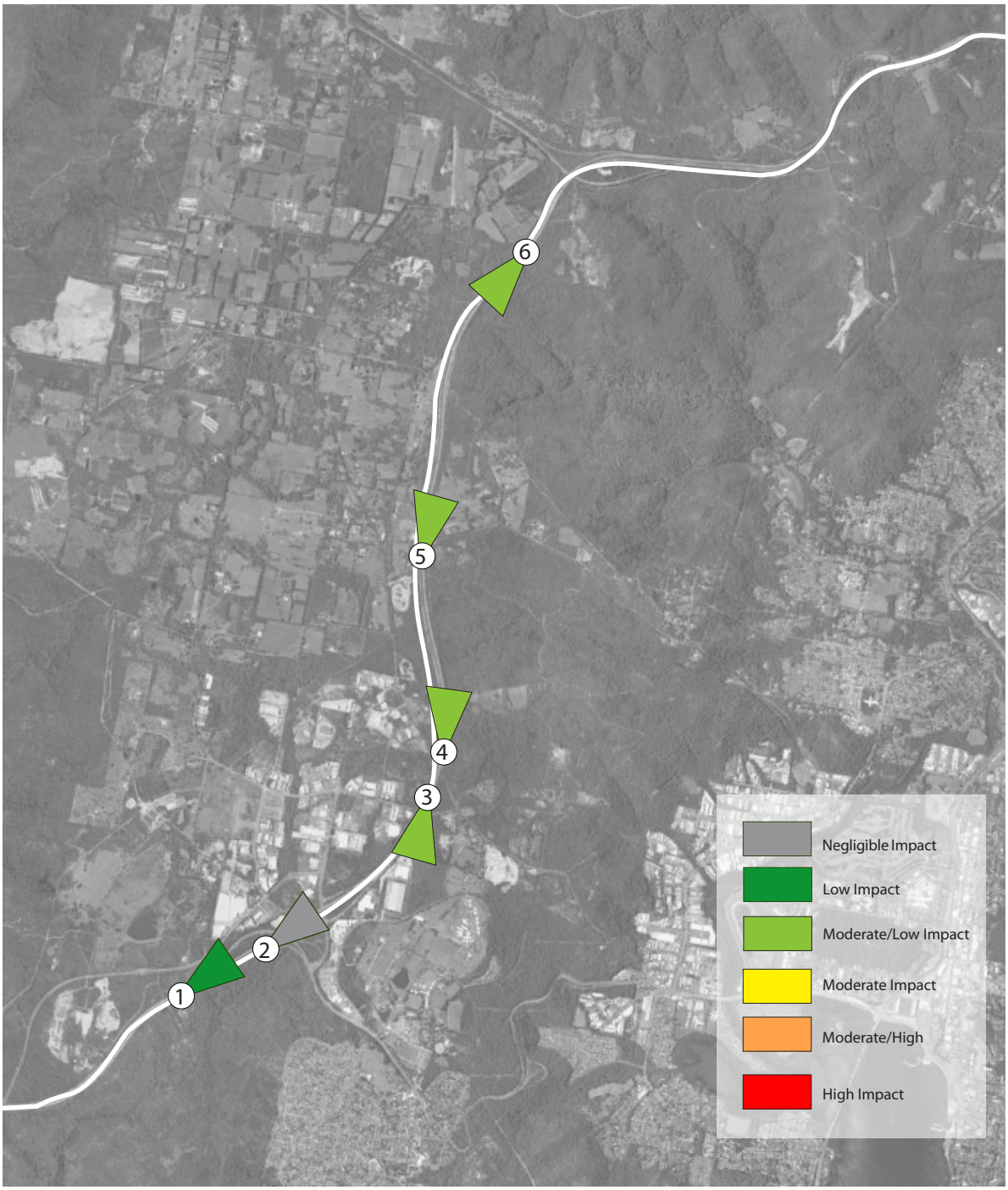


Figure - Visual impacts of the Proposal along the M1 corridor (source Google Maps)

View Point

VISUAL IMPACT SUMMARY

VISUAL IMPACT SUMMARY
The visual impacts of the Proposal on the studied viewpoints range from negligible to moderate/low (refer Table 03 and Figure 09). One viewpoint received an impact rating score of low (Kariong exit ramp), four moderate/low and one negligible (Piles Creek Bridge).

All receptors related to motorists travelling either northbound or southbound on the Motorway.

The four viewpoints that received a score of moderate/low were most impacted during the construction and immediate post construction phase by the removal of vegetation within the densely planted central median. This removal takes away the visual barrier to the opposite carriageway and will have the effect of increasing the perceived width and scale of the road, perceived traffic levels and increase the visibility of oncoming traffic headlights at night.

It is expected that this vegetation will be replaced through a median replanting strategy. The M1 is well known for its scenic character and the planted median is part of this quality. The replacement vegetation should be a similar height and scale to existing median planting to ensure no further visual impacts to visual amenity occur.

Construction impacts
The Proposal would create temporary visual impacts during the construction period. These would be associated with construction machinary, signage, hoardings, storage areas and vegetation removal.

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04

Mitigation Measures and Conclusion

MITIGATION MEASURES

Effective mitigation measures for any form of potential visual impact are those that entail:

- Avoidance
- Reduction
- Alleviation

Avoidance
The proposal has been subject to significant analysis and location is key to the functioning of the Motorway upgrade to improve traffic efficiency. Avoidance measures have not been considered applicable in this report.

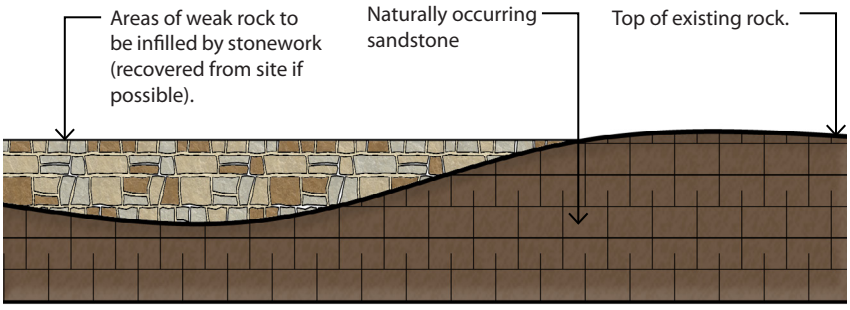
Reduction
The principal forms of reduction are associated with refinements and modifications that address the siting and scale of built form. Measures include:

- Locating storage areas and associated works in cleared or otherwise disturbed areas away from native vegetation.
- Avoiding stockpiling materials in areas supporting native vegetation where possible.
- Restricting vegetation clearing to those areas where it is necessary. Opportunities to minimise clearing should be part of the detailed design, further to any being considered currently.
- Trimming rather than removal of trees to be undertaken where possible and to be conducted by a qualified arborist.
- Rehabilitating vegetated areas where ground is disturbed.

Alleviation
Options to alleviate impacts are usually associated with detailed design features such as materials, finishes, reflectivity, planting character and the like. Measures include:

- Trimming of rock cuttings to be carefully considered to alleviate visual and landscape impacts. Shotcrete to be used sparingly and only where necessary. Shotcrete colour to be matched to natural rock at location to be used and masked off to prevent overspray. Alternatively, stonework infill (preferably recovered on site) will provide a higher aesthetic finish.

Shotcrete colour matched with natural stone (M1)



Treatment of rock cuttings with stone infill

MITIGATION MEASURES

- A median re-vegetation strategy should be implemented to replace the lost median planting with vegetation of a similar character, scale and height. The preference is for a fully vegetated median with a mix of suitable native vegetation species at a range of heights (Photo E). Secondary to this will would be a median planted with grasses (Photo F). A concrete median is not preferable and will provide a low visual amenity for motorists (Photo G).

Residual Impacts

As noted previously, the most notable impact of the Proposal will be the removal of vegetation within the median, altering the character of the road and increasing its perceived scale. The recommended mitigation measures would see a level of median re-planting if the median is cleared during construction. Whilst low grass planting will be a visually superior outcome to a concrete median, the visual impact ratings will only be reduced to low or negligible if a fully planted median is implemented, screening views of the opposite carriageway.

Photo E - M1 median treatment - Trees and shrubs (typical road corridor median conditions on M1 between Kariong and Somersby)

Photo F - M1 median treatment - grasses

Photo G - M1 median treatment - concrete and crash barrier

CONCLUSION

KEY FINDINGS

A comprehensive landscape character and visual impact assessment of the Proposal and the surrounding area has been conducted. The assessment has identified and evaluated key viewpoints, distance zones, viewer sensitivity and landscape character zones.

As the proposed works will take place within the existing road corridor, the overall appearance of the Motorway is unlikely to be significantly changed and therefore the potential for long-term visual impacts is considered to be moderate/low.

Landscape Character

A quantum of vegetation is likely to be permanently cleared from the median and areas surrounding the proposed interchange ramp upgrades. This vegetation forms an important part of the M1's acknowledged scenic quality. The remaining median is likely to be replanted which will assist in reducing the impact on landscape character for this stretch of the M1.

Visual Impact

Due to the surrounding topography, depressed elevation of the road corridor, dense roadside vegetation and limited number of commercial/residential receptors, the visual impact of the Proposal is considered to be low. For the majority of viewpoints studied, the most visible elements of the Proposal will be the temporary removal of median vegetation during construction, increasing visibility of the opposite carriageway and oncoming traffic for road users. Post-construction, the median will be narrower although re-panting of a similar height, scale and character to the existing median will ensure visual impacts of the Proposal are minimised.

APPENDIX A

An explanation of the rating categories used within this report to determine the level of visual impact on each viewpoint/receptor studied. These rating categories have been developed by CLOUSTON Associates and follow national and international best practice.

SENSITIVITY Qualitative Assessment Definitions		
Receptor sensitivity		Each visual receptor type has an inherent and varied sensitivity to change in the visual scene based on their personal context in which the view is being experienced. This will have a direct bearing on the perception of visual impact experienced by the receptor and qualifies the quantitative impacts:
	H	Residential: view from dwelling or garden may be experienced regularly over extended periods of time; residents may have chosen the location specifically for the view and/or develop a strong familiarity and association with the view and have high sensitivity to change
	M/H	Public Reserve, Parks, Reserves, Public walkways: the purpose of visiting and using reserves largely relates to an enhanced sense of wellbeing. Receptor is more sensitive to both positive and negative visual experiences, especially where the reserve is the destination for leisure and relaxation.
	M	Public Roads/Transport: the view experienced can be important to the driver/passenger but is sometimes a brief experience and the driver is usually focused on the road.
	M/L	Commercial Property - Work: view can enhance the work or education experience but focus of activity is not principally on the view.
	L	Semi-Private property - Work/Education/Service provider: view can enhance the work or education experience but focus of activity is not principally on the view.

MAGNITUDE Quantitative assessment definitions		
Distance		The effect the Proposal has on the view relating to the distance between the Proposal and the visual receptor. The distances are from the approximate centre of the site and categorised as:
	H	Within 0 - 100 metres- high impact.
	M	100 to 500 metres - high to moderate impact.
	L	Further than 500 metres - low impact.
Quantum of view		The Quantum of view relates to the openness of the view and the angle of the view to the visual receptor. A development located in the direct line of sight has a higher impact than if it were located obliquely at the edge of the view. Whether the view of the Proposal is filtered by vegetation etc. also affects the impact, as does the nature of the view (panoramic, restricted etc.). A small element within a panoramic view has less impact than the same element within a restricted or narrow view. The effects can be categorised as:
	H	A direct view of the Proposal or its presence (sometimes in a very narrow or highly framed view), where the Proposal occupies the greater proportion of the view cone.
	M/H	A direct view of the Proposal within a panoramic view where the Proposal occupies a large proportion of the view cone.
	M	A direct view of the Proposal or its presence in a broader view where the Proposal occupies a moderate proportion of the view cone.
	M/L	A direct or slightly oblique view of the Proposal within a broad or panoramic view cone
	L	An oblique, highly filtered or largely obscured view of the Proposal.
	N	No view of the Proposal from this location.
Period of view		The length of time the visual receptor is exposed to the view. The duration of view affects the impact of the Proposal on the viewer - the longer the exposure the more detailed the impression of the proposed change in terms of visual impact:
	H	Significant part of the day - high impact: usually residential property.
	M/H	5 minutes to several hours - high to moderate impact: often from a garden or park or commercial property and work places.
	M	10 seconds to 1 minute - moderate impact: usually from a road/driveway entrance, walking past or entrance to commercial property.
	M/L	5 to 10 seconds - moderate to low impact: often from a road or walking past.
	L	1 to 5 seconds - low impact: usually from a road or railway

Magnitude of change		Magnitude of change is a quantitative assessment of the change in compositional elements of the view. If the proposed development is largely similar in nature and scale to that of existing elements in the vicinity, the magnitude of change is low. If the development radically changes the nature or composition of the elements in the view, the magnitude of change is high. Distance from the development will accentuate or moderate the scale and variety of visible elements in the overall view and hence influence this rating:
	H	Elements within the view will be greatly at odds with existing features in the landscape
	M/H	Elements within the view will be largely at odds with existing features in the landscape
	M	Elements within the view will be at odds with existing features in the landscape
	M/L	Elements within the view will be partly at odds with existing features in the landscape
	L	Elements and composition of the view will remain largely unaltered .
	N	No view of the Proposal from this location.
Summary of Magnitude Ratings	From H to N	A summary rating that combines all of the quantitative ratings. This is rated either high, moderate to high, moderate, moderate to low, low or none, where none implies no visible change based on the above criteria and high implies significant visible change in terms of the combined quantitative criteria

SUMMARY		
Combined Rating		The nature of the visual impact may be beneficial or adverse, based on a transparent professional assessment of the combined totals of qualitative and quantitative ratings and comments as outlined above. The final rating is derived using the RTA (2009) matrix table - 01:
	H	Highly adverse.
	M/H	Moderately to Highly adverse.
	M	Moderately adverse.
	M/L	Slightly adverse.
	L	Neutral or Beneficial.

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