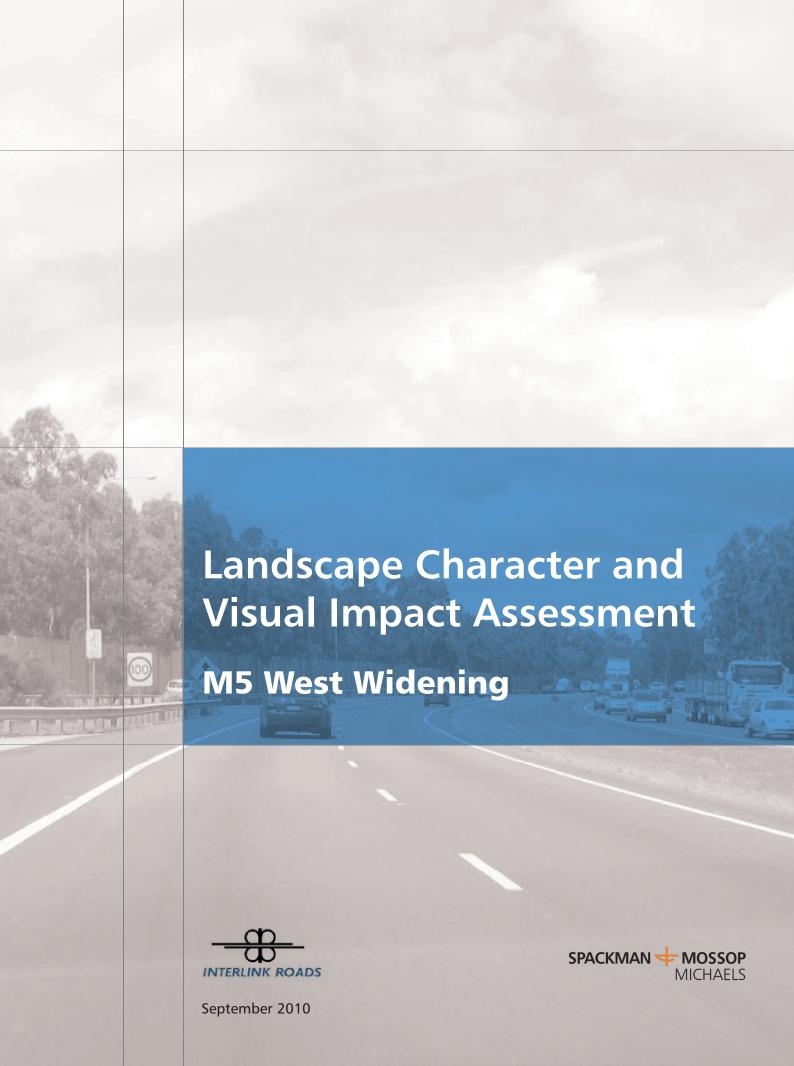


Appendix H

Working paper: Visual impact, urban design and landscaping



M5 West Widening

Landscape Character and Visual Impact Assessment

September 2010

Prepared for

Interlink Roads

Ву



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INTRODUCTION 1.0

This Landscape Character and Visual Impact Assessment Report has been prepared for Interlink Roads by Spackman Mossop Michaels as part of the Environmental Assessment of the proposed widening of the M5 South West Motorway between King Georges Road and Camden Valley Way in the Canterbury, Bankstown and Liverpool Local Government area.

The report has been prepared in accordance with the RTA's Guidelines for Landscape Character and Visual Impact Assessment. It describes:

- The landscape character and the qualities of the existing site and its surrounds;
- The sensitivity of the landscape character to the proposed upgrade;
- The significance and sensitivity of existing views into and out of the site;
- Urban design recommendations to be addressed as the design is developed to improve the design outcome for motorway users and those outside of the motorway, as well as avoiding and mitigating visual impacts.

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INTRODUCTION 1.0

1.1 STUDY METHOD

The undertaking of the impact assessment and the landscape and urban design concept has been an iterative process in which preliminary information was provided to highlight key issues and constraints of the proposed upgrade. Concepts have continued to be developed by HBO+EMTB, in parallel with this assessment, avoiding or minimising potential impacts where possible.

The method used to undertake this study is summarised as follows:

- Undertaking a number of site visits and field investigations, reviewing relevant literature, analysing aerial photographs, topographic maps and Google Maps® to understand the study area;
- Reviewing the initial engineering concept design and supporting material to gain an appreciation of the project;
- Defining the study areas landscape character through a contextual analysis;
- Identifying and describing landscape character precincts and evaluating the proposal's impact on them;
- Identifying the visual catchment of the motorway and proposed works;
- Selecting sensitive viewpoints withing the visual catchment representing a range of different landuses;
- Evaluating the proposals visual impact by comparing the sensitivity of viewpoints and the magnitude of the impact of the upgrade upon them;
- Identifying urban design and landscape opportunities and methods of mitigating adverse visual impacts for consideration in the detail design phase of the project.

The method used to assess the impact of the proposed upgrade is described in the following section.

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INTRODUCTION 1.0

1.2 IMPACT ASSESSMENT METHOD

1.2.1 Landscape Character Impact Assessment

Due to the length of the motorway, the first step has been to identify different landscape character precincts. These have generally been chosen to reflect the motorways surrounding landuse, but also the existing conditions of the motorway, for example, from King Georges Road to the Salt Pan Creek, the carriageways are divided by a wire rope barrier, whereas as the majority of the motorway contains a grassed median. The purpose of dividing the study area into character precincts is to make the assessment process easier to undertake and understand.

The impact of the proposal on each character precinct has been assessed, based on the sensitivity of the precinct and the magnitude of the proposal in that particular precinct.

In this case, sensitivity refers to how sensitive the character of the setting is to the proposed works. For example, a pristine natural environment will be more sensitive to change than an industrial area, however, if the proposed works are relatively minor, then the overall sensitivity will be low.

Magnitude refers to the nature of the project. For example, a large interchange will have a very different impact on landscape character than a localised road widening.

The combination of sensitivity and magnitude provides the rating of the landscape character impact for the precinct (refer to Illustration 1).

1.2.2 Visual Impact Assessment

The extent of the area that the existing M5 South West Motorway is visible has been defined. Within this, the estimated extent of the visibility of the proposed upgrade works has been mapped. As the works are an upgrade of an existing motorway, rather than a new piece of road infrastructure, the visibility of the works is limited to the motorway corridor itself, and a few immediately adjacent locations. Within these areas, a number of viewpoints have been identified at key public locations (refer Illustration 64).

The impact of the proposed upgrade has been assessed by considering both the sensitivity of the view and the magnitude of the proposed works within that view.

In this case, sensitivity refers to the quality of the view and how sensitive it is to the proposed upgrade. Sensitivity is related to the direction of the view, composition of the view and may include more than one character precinct.

Magnitude refers to the nature of the change and its proximity to the viewer. For example, a development situated one kilometre from the viewpoint will have a much reduced visual impact than one 100 metres away.

The combination of sensitivity and magnitude provides the rating of the visual impact (refer to Illustration 1).

For the purposes of this environmental assessment, existing landscape character and the likely magnitude and sensitivity of viewers have been described in a qualitative manner. This has been based on the authors' experience in the field of landscape character and visual assessment and work on projects of a similar nature. While these methods aim to provide

1.0 INTRODUCTION

1.1 ASSESSMENT METHOD

MAGNITUDE High to Moderate High Moderate Negligible Low Moderate to Low High to Moderate High High High to Negligible Moderate Moderate impact impact impact High High to High to Moderate Moderate Negligible Moderate impact Moderate impact impact Moderate High to High to Moderate Moderate Negligible Moderate Moderate to Low impact impact Moderate to Low High to Moderate Moderate Moderate Moderate Negligible Moderate impact impact to Low to Low Moderate Moderate Moderate Moderate Low ٥ Negligible impact impact to Low to Low impact SENSITIVITY Vegligible Negligible Negligible Negligible Negligible Negligible Negligible

Illustration 1: Impact Assessment Grading Matrix

a consistent and unbiased approach to the impact assessment, the highly individualistic nature of landscape character and visual perception still often leads to differing opinions with regards to the impact of a proposed development

1.2.3 Mitigation Measures

Mitigation measures are visual treatments that are recommended to mitigate the visual impacts of a proposed development. They include ways to lessen the visual effect of the project itself and identify treatments near critical view areas to reduce the visual impacts of the project. Where the exact locations of features, such as noise barriers, sedimentation basins and retaining walls is not known, proposed treatments for consideration during detailed design are provided.

Mitigation measures are outlined in Section 7.0.

CONTEXTUAL ANALYSIS 2.0

2.1 REGIONAL CONTEXT

The study area for this Landscape Character and Visual Impact Assessment Report is for the 22 kilometre section of the M5 South West Motorway between King Georges Road and Camden Valley Way. Interlink Roads is the concessionaire for the M5 South West Motorway under a build, own, operate and transfer deed with the RTA.

The M5 South West Motorway was opened in 1992, and is a key section of Sydney's orbital road network, linking central Sydney to the expanding south-western suburbs, Southern Highlands, Canberra and Melbourne as part of the National Highway Network. It is part of the Sydney Orbital Network (refer Illustration 2), that provides over 160 kilometres of uninterupted motorways, freeways and other main roads around and through Greater Sydney. It adjoins the south-eastern boundary of the South West Growth Centre which, together with the North West Growth Centre, is earmarked to accommodate the majority of Sydney's urban growth over the next 25 years. As part of the overall M5 corridor, it links to Sydney Airport and Port Botany that now accounts for 70% of Sydney Ports trade.

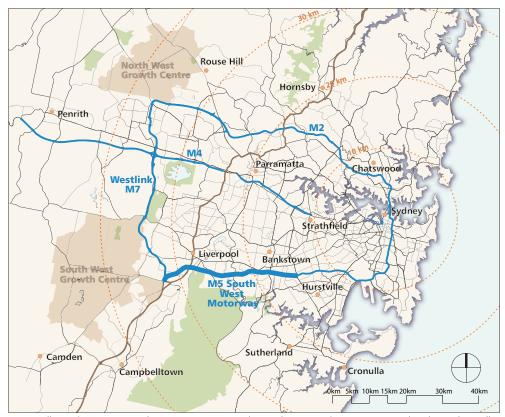


Illustration 2: M5 South West Motorway study area between King Georges Road and Camden Valley Way, shown within the context of the Sydney Orbital Network and the Sydney Metropolitan Region