

Appendix E – Landscape and Visual Assessment



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Waimakariri District Council: Rangiora Eastern Road Connection

Technical Assessment – Landscape and Visual

Project Description & Scope

The Waimakariri District Council (WDC) is preparing a Notice of Requirement (NOR) for a new road designation on the eastern side of Rangiora.

The designation connects Lineside Road and Northbrook Road. The area to which the NOR applies is referred to as 'Rangiora East Road Connection' and is shown in **Figure 1** on the following page.

The proposed designation will form part of a roading link that will ultimately connect Lineside Road through to Coldstream Road (referred to as the 'Rangiora Eastern Link'). Those parts of the Rangiora Eastern Link that do not form part of the proposed designation are:

- MacPhail Avenue, which is an existing road that connects Northbrook Road and Kippenberger Avenue; and
- The connection from the Kippenberger Avenue through to Coldstream Road.

The Rangiora Eastern Link (as well as southern and western routes) were originally proposed in the Rangiora Transport Study, Beca, September 2001 and a subsequent Scheme Assessment Report, Opus, February 2005, developed alignment options for study and provided preliminary details for the selected alignment.

WSP have been commissioned to prepare technical assessments to inform and support the proposed NOR. This Landscape and Visual Technical Assessment is one of those technical assessments.

These technical assessments and reports are at a high-level and are intended to provide:

- an awareness of the types of effects and their magnitude that may occur as a result of the designation; and
- identify potential measures that would avoid, remedy or mitigate adverse effects.

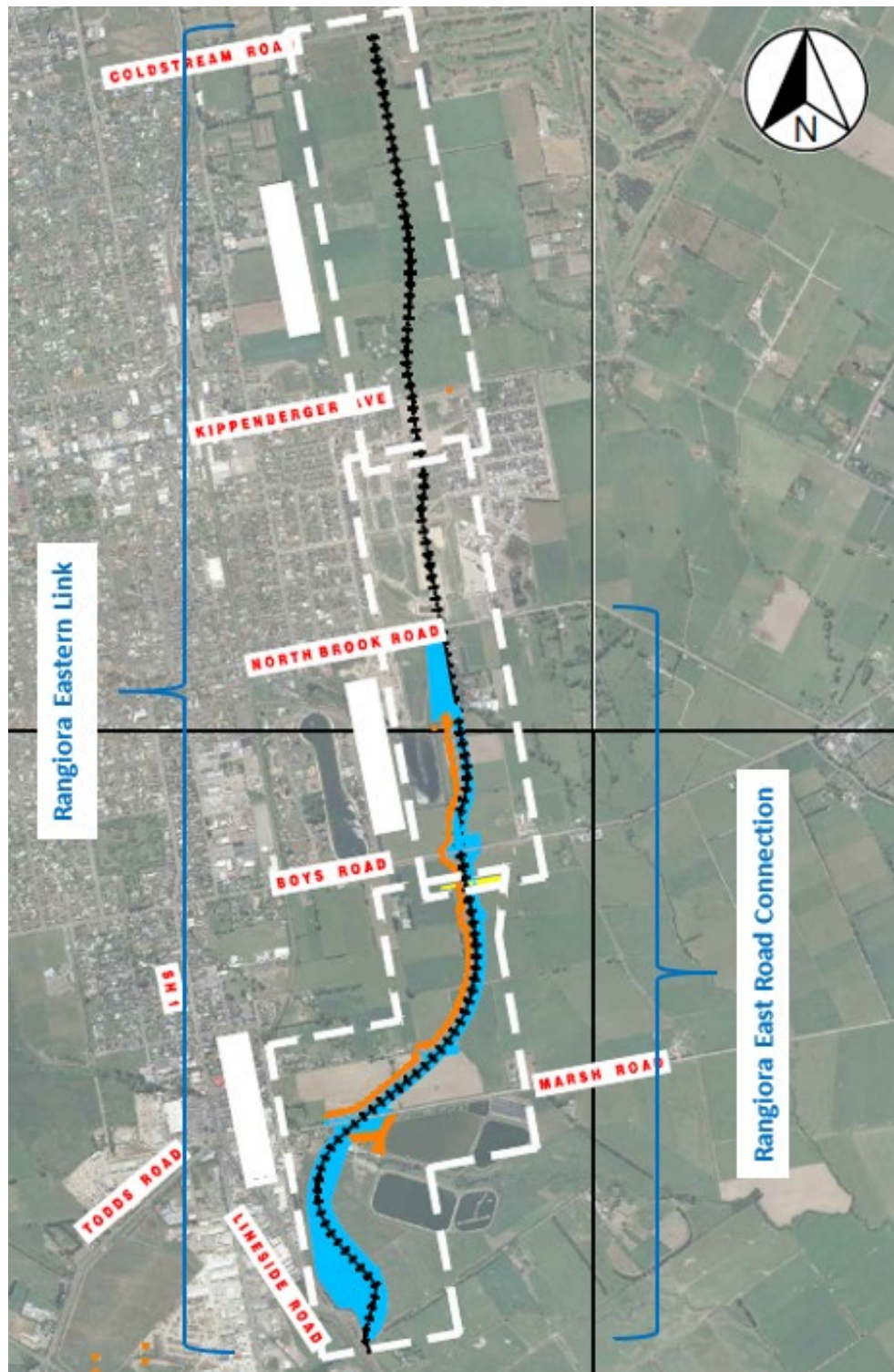


Figure 1: Layout Plan

Introduction

The following provides a description and scope of the necessary landscape and visual assessment inputs for the proposed Rangiora Eastern Road Connection. These include:

- A review of Rangiora Southern, Western & Eastern Link Roads Scheme Assessment Report (SAR); Appendix G: Resource Management Scoping Report¹
- A site visit on 9 December 2020 to view the route and take site photos; and
- The preparation of a high-level Landscape and Visual Assessment (LVA) – this report.

The LVA will cover:

- A Project description;
- Assessment methodology;
- Landscape context;
- A high-level assessment of the proposal's landscape and visual effects; and
- Landscape mitigation measures;

It is noted that the LVA will describe and assess landscape and visual effects at a high-level only. This relates to the NOR route being, at this early stage, a broad 'line on the map' and the final road design detail, other than an indicative cross section, has not been developed at this stage.

It is understood that all intersections with existing roads will be at grade, i.e. roundabouts or signalised intersections and that any water courses encountered along the route will be via culvert crossings or low bridges. It is understood from the Project's acoustic report that noise bunds or walls will not be required along the route.

It is noted that WDC District Plan maps do not indicate any outstanding natural features or landscapes associated with North Brook and South Brook streams or the general area of the proposed Eastern Link.

Assessment Methodology

This assessment relies on the current Eastern Link Land Plans and Typical Cross Section drawing prepared by WSP², aerial and site photos and a site visit to assess the likely landscape and visual effects that would result from constructing the proposed link road. The site visit was undertaken on 9 December 2020, under clear weather conditions, from driving the local public roads that the proposed link road will intersect or join, and from walking through the reserve area between North Brook and Northbrook Road.

As noted above, the assessment includes:

- The review of background information including the relevant provisions of the WDC District Plan;
- The identification and description of the existing landscape context and character including topography, landuse and the degree of cultural modification against which to assess the likely landscape and visual effects of the proposed link road;

¹ The 'Rangiora Link Roads' SAR was prepared for WDC by Opus in February 2005. David McKenzie prepared the 'Landscape Values' sections in the RM Scoping Report. This report also outlines amenity values as they were in 2004-5.

² Option P – Eastern Links Land Plan Sheets 1 & 2 + Typical Cross Section, WDC, Rangiora Link Roads – WSP, Christchurch 20 Nov 2020

- An assessment of the potential landscape and visual effects of the proposed link road, including identification of the potential viewing catchment and audience, the likely visual nature of the proposed link road and the landscape's capability for absorbing change; and
- Identification of measures that are appropriate to avoid or mitigate the identified effects taking into account that the area will transition to a more urbanised environment.

Landscape Context

Rangiora is located on the relatively flat topography of the northern Canterbury Plains, with the flood plains of the Waimakariri River to the south merging with the Ashley River floodplains to the north. The landscape is a Lower Plains Land Type³ and being at the 'downslope' extent of the outwash plains, the water table is relatively high, and the soils are fertile relative to the soils to the west of Rangiora.

Typically, the plains are highly modified by an extensive array of land uses. Much of the indigenous vegetation has been removed and replaced with high producing farmland including dryland sheep farming, and cropping, dairy farming, and lifestyle farm properties.

Natural science values within the plains are mainly associated with the rivers and coastline including estuarine areas where significant habitats for wildlife abound. Close to Rangiora, such values are confined to local streams and their immediate banks, though the vegetation cover on the latter has been highly modified by recent land use with very little evident indigenous vegetation.

Rangiora, the largest town in the Waimakariri District, being a rural service centre and also a dormitory town for Christchurch, has a mix of expanding light industrial, commercial and residential development, along with dairy and small farm holdings on its eastern margin. The Main North Railway line, the local wastewater treatment plant and overhead transmission lines are also features on this edge of the town.

Aesthetic values include expansive views to the north and east across farmland and stands of mature, evergreen and deciduous trees that surround various, long established farmhouses. Similar groups of trees also line the banks of the various local watercourses.

Viewing Catchment and Audience

The proposal's visual catchment and viewing audience will comprise:

- Local residents who can see parts of the proposed road corridor from their dwellings and properties;
- Road users on adjacent and intersecting local roads;
- Users of the surrounding industrial and commercial areas;
- Users of the proposed link road;
- Users of associated footpaths and cycle lanes; and
- Users of nearby reserves/open spaces.

³ Canterbury Regional Landscape Study Review, July 2010

The **Graphic Attachments** accompanying this technical assessment provide a set of representative photographs running from south to north and as seen from the Lineside Road area, Marsh Road, Boys Road and the Northbrook Reserve.

Landscape and Visual Effects

The potential landscape effects of the proposal will result from changes to the landscape character and its values. Landscape effects consist of changes to the local landform, land cover and landuse.

The landscape around Rangiora differs from that of the broader Canterbury Plains landscape in that it is influenced by a higher water table, numerous streams and watercourse and better quality soils. This is particularly evident to the east of the town where several spring-fed streams converge, and dairy farming is a dominant landuse. The vegetation pattern to the east of Rangiora consists of various farm shelterbelts and hedges, groups of taller trees and gardens around farmhouses and clumps of willows along the various watercourses.

The proposed Eastern Link would traverse a new alignment to the east of the town bisecting some shelterbelts. The proposed link road will also cross various streams and water courses by way of culverts and possibly small, low profile bridges. The latter may be required at North Brook as the stream is quite broad at the crossing point. The first part of the proposed link road will intersect with five local roads – Lineside, Marsh and Boys Roads, Sparks Lane and Northbrook Roads. In terms of the latter two, the proposed link road will ‘connect’ onto the south end of Sparks Lane and follow its alignment to intersect with Northbrook Road.

As the landscape is flat, the extent of earthworks required to build the road will be limited to the alignment itself. Large areas of cut and fill are not necessary. In response to the high water table, the road formation will be elevated with drainage swales formed on either side. During construction, a low bund will be placed along much of the western side of the alignment to divert any overland stormwater flow away from the exposed roading earthworks. Post-construction, the bund is likely to be retained within the road reserve and vegetated.

The potential visual effects of the proposal will result from the numerous visible changes – changes in visual elements such as form, colour and texture – that constructing the link road will bring about. Passing traffic will be a transient effect along the link road.

In this instance, the main visual change will be the creation of a linear ‘corridor’ of roading across a series of flat, open paddocks. This would also entail a further visual change of established trees being removed at the Lineside Road ‘end’ of the corridor and at the South Brook stream crossing/Marsh Road area, a section of trimmed shelterbelt being removed at Boys Road and riparian vegetation being removed at the North Brook stream crossing.

In its northern extent where the proposed link road ‘joins’ Sparks Lane, the proposal will be visible from the Northbrook reserve area and its walkways. However, the existing mixed native planting of flax and similar wetland species on the west side of Sparks Lane will be retained as a buffer between the road and the reserve.

Landscape Mitigation Measures

The potential landscape and visual effects created by changes to the local vegetation pattern and by the stream and road 'crossings' can be mitigated by landscape plantings.

At the stream crossings, wetland plantings could be included in the drainage swales and riparian plantings on the immediate stream banks. This would denote the stream crossings as specific features within the length of the proposed link road. Overall stormwater treatment measures such as detention/infiltration basins and drainage swales should be an integrated part of the overall landscape development. The planting around the existing stormwater treatment ponds at the southern/Lineside Road end of the proposal is an example of the integrated stormwater and landscape treatment that should be designed and implemented as part of the proposal.

At the roundabouts/intersections on the local road crossings, the layout of landscape planting could be used to define the intersections also as features along the route and also take into account the need for clear visibility of approaching traffic. This would also provide visual enhancement of the travelling experience to motorists.

As part of integrating the proposed link road, earthworks will entail the use of gentle grades and well-rounded profiles for all batters and swales, where such are required.

Should the need for noise mitigation measures such as earthen bunds or noise walls arise, then these will need to be integrated through planting as part of the overall landscape development of the proposal.

In terms of potential landscape treatment elsewhere along the length of the proposed link road, it is expected the proposal's designation will be in place and the link road built before future development of the adjoining land along the road corridor is defined. It is anticipated that as and when the development of adjoining properties is proposed and consented, the need for any landscape buffer; be it a bund, fence and/or a planted screen, can be an integrated part of the particular property's development.

The one adjoining 'property' where the land use is not likely to change is Northbrook Reserve where the proposed link road 'connects' to Sparks Lane. In this instance, it is recommended that the landscape planting of the type that is currently on the western margin of Sparks Lane be extended along the west margin of the short section of the proposed link road to meet the North Brook stream crossing and its proposed landscape planting.

A detailed landscape plan should be prepared during the detail design phase for the proposed link road that among other things, identifies the vegetation to be retained and the type, density and locations of proposed planting to be undertaken, a schedule of the species to be planted including botanical name, average plant size at time of planting, average mature height of each plant species and any required maintenance requirements. Once established, the type of planting should be such that it does not require specific on-going landscape maintenance.

All landscape planting should be designed and located to meet safety, sightline and long-term maintenance costs and requirements.

Document History and Status

Rev	Date	Author	Reviewed by	Approved by	Status
1	18/01/21	D. McKenzie -Technical Principal: Landscape Architecture	J Head – Senior Landscape Architect	G Larcombe – Senior Engineer	Draft issue for review
2	02/02/21	D. McKenzie	J Head	G. Larcombe	Draft update
3	26/02/21	D. McKenzie	J Head	G. Larcombe	Final
4	15/04/21	D. McKenzie	J Head	G. Larcombe	Final

Revision Details

Revision	Details
2	Revised to update additional technical guidance notes from project manager and initial review comments
3	Revised to update for alignment amendment between Boys and Northbrook Roads and additional area of designation north of Kippenberger Ave
4	Revised to remove area north of Kippenberger Ave

Appendix A – Graphic Attachments

Waimakariri District Council

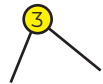
Technical Assessment - Landscape & Visual

RANGIORA LINK ROADS SOUTHERN, WESTERN AND EASTERN LINKS
OPTION P EASTERN LINKS

GRAPHIC ATTACHMENTS

April, 2021





RANGIORA LINK ROADS SOUTHERN, WESTERN AND EASTERN LINKS: **OPTION P EASTERN LINKS**

PHOTOGRAPHIC VIEWPOINT LOCATIONS - 2 / 4

PREPARED BY D. MCKENZIE APRIL 2021

 PHOTOGRAPHIC VIEWPOINT LOCATIONS





VIEWPOINT 1 LINESIDE ROAD NORTH (PHOTOGRAPH BY D. MCKENZIE, 9 DECEMBER 2020)



VIEWPOINT 2 MARSH ROAD NORTH (PHOTOGRAPH BY D. MCKENZIE, 9 DECEMBER 2020)

RANGIORA LINK ROADS SOUTHERN, WESTERN AND EASTERN LINKS: **OPTION P EASTERN LINKS**

SITE IMAGES - 3 / 4



VIEWPOINT 3 BOYS ROAD WEST (PHOTOGRAPH BY D. MCKENZIE, 9 DECEMBER 2020)



VIEWPOINT 4 NORTHBROOK RESERVE (PHOTOGRAPH BY D. MCKENZIE, 9 DECEMBER 2020)

RANGIORA LINK ROADS SOUTHERN, WESTERN AND EASTERN LINKS: **OPTION P EASTERN LINKS**

SITE IMAGES - 4 / 4