

# Landscape & Urban Design Report

## Bellgrove Development – Stage 1

52 and 76 Kippenberger Avenue, Rangiora



**03 February 2022**

rough & milne landscape architects

## Document Quality Assurance

Bibliographic reference for citation:

*Rough and Milne Landscape Architects Ltd. Landscape & Urban Design Report, Bellgrove Development – Stage 1.*

Date: 02 February 2022

Status: For Final Review

Prepared for:

Bellgrove Rangiora Limited

Prepared by:

Rough and Milne Landscape Architects Limited  
69 Cambridge Terrace  
Christchurch 8013  
PO Box 3764  
CHRISTCHURCH 8140  
Ph: 03 366 3268



.....  
Fraser Miller  
Senior Landscape Architect | NZILA Registered

Reviewed by:



.....  
Nikki Smetham  
Senior Landscape Architect | NZILA Registered

## Use and Reliance

This report has been prepared by Rough and Milne Landscape Architects Limited on the specific instructions of our client. It is solely for our client's use for the purpose for which it is intended in accordance with the agreed scope of work. Rough and Milne Landscape Architects does not accept any liability or responsibility in relation to the use of this report contrary to the above, or to any person other than the Client. Any use or reliance by a third party is at that party's own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate, without independent verification, unless otherwise indicated. No liability or responsibility is accepted by Rough and Milne Landscape Architects Limited for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>5</b>
1.1	Purpose and Scope .....	5
1.2	Methodology.....	5
<b>2.0</b>	<b>THE RECEIVING ENVIRONMENT.....</b>	<b>7</b>
2.1	The Wider Environment .....	7
2.2	The Receiving Environment .....	8
2.3	Description of Site .....	10
2.4	Landscape Values of the Receiving Environment.....	14
<b>3.0</b>	<b>THE PROPOSAL .....</b>	<b>17</b>
3.1	Description of the Proposal .....	17
<b>4.0</b>	<b>RELEVANT PLANNING PROVISIONS .....</b>	<b>25</b>
4.1	Operative Waimakariri District Plan (WDP) .....	25
4.2	Proposed Waimakariri District Plan (pWDP).....	26
4.3	Cam/Ruataniwha River Esplanade Width .....	29
<b>5.0</b>	<b>LANDSCAPE &amp; URBAN DESIGN ASSESSMENT .....</b>	<b>30</b>
5.1	Appropriateness of the (Stage 1) Allotment Layout.....	30
5.2	Appropriateness of Landscape Design .....	32
5.3	Urban Design Assessment .....	34
5.4	Assessment against landscape values including visual effects .....	39
<b>6.0</b>	<b>CONCLUSION .....</b>	<b>46</b>
6.1	Summary of Assessment .....	46
6.2	Conclusion.....	47
	<b>APPENDIX 1 .....</b>	<b>48</b>
	<b>APPENDIX 2 .....</b>	<b>52</b>

**Assessment Against Relevant Statutory Provisions .....52**

# 1.0 Introduction

## 1.1 Purpose and Scope

Rough and Milne Landscape Architects (**Rough and Milne**) have been engaged by Bellgrove Rangiora Limited (**the Applicant**) to prepare a Landscape and Urban Design Report (**the report**) to accompany the subdivision and resource consent applications for Stage 1 of the proposed Bellgrove Development to be lodged with the Environmental Protection Authority (EPA) under the under the COVID-19 Recovery (Fast-track Consenting) Act 2020 (FTCA). The Stage 1 proposal is located at 52 and 76 Kippenberger Avenue in Rangiora (**the site**).

The overall development site for the Bellgrove North occupies approximately 63 hectares of an anticipated urban growth area under the proposed district plan on the northeast outskirts of Rangiora, between Coldstream Road and Kippenberger Avenue. It will be developed in five stages, with the Stage 1 proposal, of some 20.7 hectares, being the largest development stage.

Aurecon has prepared the subdivision layout plan for the Stage 1 proposal, with Rough and Milne preparing the accompanying landscape design plans for the streetscape and reserve areas. The vision for Bellgrove is a master planned residential community nestled within a well-connected walkable neighbourhood.

It is noted that the applicant also owns a landholding, of approximately 37 hectares, on the southern side of Kippenberger Avenue. This will be developed separately and is referred to as Bellgrove South.

## 1.2 Methodology

The methodology and terminology used for the landscape assessment of this report has been informed by the Draft Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines<sup>1</sup>. The assessment is specifically tailored to the nature of the proposal, its assessed level of effects within the site, and the sites' context, including the framework of the governing legislation.

The New Zealand Urban Design Protocol has been used as a basis for the urban design component of the report. The Urban Design Protocol identifies seven essential design qualities that create quality urban design. These are known as the seven C's: Context, Character, Choice, Connections, Creativity, Custodianship and Collaboration. Essentially, they provide a checklist of key qualities that contribute to quality urban design.

A site visit was undertaken on 02 November 2021 to inform this assessment.

---

<sup>1</sup> 'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines'. [Final draft subject to final editing, graphic design, illustrations, approved by Tuia Pito Ora/NZILA]. 5 May 2021.

The statutory documents containing provisions relevant to the proposal are found in the Resource Management Act (**RMA**), the operative Waimakariri District Plan (**WDP**) and the proposed Waimakariri District Plan (**pWDP**). The Waimakariri District Council (**WDC**) have recently notified their **pWDP** and the site is identified within the North-East Rangiora Development Area (**NER-ODP**). This report assesses the Stage 1 proposal against the objectives and policies of both the WDP and pWDP.

The assessment methodology addresses the following matters:

- Description of receiving environment, including the site. The existing environment is described in terms of the current landscape's physical, perceptual, and associated factors.
- Identification of existing landscape, natural character, and visual amenity values. These are based on site observations, and a review of existing information.
- Relevant statutory provisions. The statutory provisions relevant are found within both the WDP and pWDP, including the NER-ODP. Those provisions directly relevant to landscape and urban design matters form the framework for the assessment.
- A description of the proposal, highlighting the aspects pertinent to understanding the potential landscape and urban design effects.
- Assessment of landscape effects, including effects on visual amenity.
- Assessment of the appropriateness of the proposed (Stage 1) allotment layout and the proposed landscape design.
- Assessment of urban design effects, as per the seven C's checklist under the NZ Urban Design Protocol.
- Summary and Conclusions.

The report is accompanied by an A3 format Graphic Attachment (**GA**), that contains:

- Site location and context plans;
- WDP and pWDP planning maps including the NER ODP;
- An allotment density plan;
- An open space network plan;
- A connectivity network plan;
- Landscape plans for the Stage 1 reserves (including the Cam/Ruataniwha River esplanade reserve) and streetscape;
- Elevations and sections illustrating the interface of the proposal with the eastern boundary;
- A boundary interface plan;
- A Bellgrove historic homestead landscape plan; and
- A viewpoint location plan and site photographs taken from representative viewpoints.

## 2.0 The Receiving Environment

### 2.1 The Wider Environment

#### Location

Rangiora is located approximately 1.7 km south of the Ashley/Rakahuri River, 9.0 km west of Pegasus Bay and 29 km north of Christchurch (refer to the Site Location Plan on page 3 in the **GA**). It is the largest township within the Waimakariri District and is considered a satellite town of Christchurch (refer to the Waimakariri District Context Plan on page 4 in the **GA**).

#### Landform

The Waimakariri District comprises two large rivers, the Waimakariri and the Ashley/Rakahuri, that rise in the Southern Alps and flow across the Canterbury Plains as braided rivers with wide shingle beds.

The Ashley/Rakahuri River is approximately 65 kilometres long. It emanates in the mountains in the Lees Valley and exits the foothills at Ashley Gorge near the Oxford township. It has tributaries of Duck Creek and watersheds from Lees Valley and Oxford. Stock banks have been built along the section of river immediately north of Rangiora township, and over the years these have been enlarged, with the most recent work undertaken in 2018. The Rakahuri / Ashley River lies approximately 1.5 km north of the site.

The topography of the Waimakariri District forms part of the Canterbury Plains, which is flat with a very slight taper from base of the mountains to the sea. The plains were formed from overlapping fans of glacier-fed rivers issuing from the Southern Alps. Most are derived from the greywacke of the mountains and from loess (fine sediment blown from the riverbeds). The soils vary in quality and age, with the most fertile soils forming from mud and peat accumulating in the hollows between the fans and rivers<sup>2</sup>.

#### Landcover, Land use and History

Rangiora is the largest town in the Waimakariri District, with other major towns including Kaiapoi, Oxford, Pegasus, and Woodend. The urban settlements are surrounded by pastoral farmland with large areas of rural-residential development at Ohoka, Mandeville and Fernside.

Originally, the land surrounding Rangiora, was flax and raupo swampland, fed into by the Cust and Eyre River. Most of the swampland was drained in the 1950's, and the Cust River was channelised, to make way for pastoral farming.

Rangiora started as a sawmilling town in 1852, and as industries evolved from forestry to flax harvesting, and then eventually to pastoral farming, it became a rural service town. Many of the pastoral lands are interspersed with mature trees, shelterbelts, and hedgerows along boundaries and fence lines to provide shelter from prevailing winds. As a result, the rural landscape has a patchwork pattern of expansive open pastoral areas divided by narrow bands of tall vegetation. In places, this

---

<sup>2</sup> John Wilson, 'Canterbury region – Landscapes', Te Ara – the Encyclopaedia of New Zealand, published 14 September 2006, reviewed & revised 6 July 2015.

pattern is interrupted by naturally meandering waterways and associated vegetation, such as the Cam/Ruataniwha River and its tributaries.

The Māori name Rangiora means “calm after the storm” or a “place of peace after a time of trouble”.

In the early 1670’s, Ngai Tahu migrated to the South Island and established themselves in North Canterbury, where they fought and defeated Ngati Mamoe who was living there at the time. Following this, the Kaiapoi Pa was built around 1700 by Ngai Tahu on a peninsula between modern-day Woodend and Waikuku<sup>3</sup>. The Pa was about two hectares and extended into a lagoon. The surrounding landscape including an isthmus to the peninsula made it easily defensible. It was a prosperous period for the Pa and Ngai Tahu. Mahinga Kai was gathered from surrounding environment and stored at the Pa.

### **Future**

The Waimakariri District is one of the fastest growing districts in New Zealand. The recently opened Christchurch Northern Motorway has significantly reduced the travel time between the district and Christchurch city, and this is expected to boost economic growth in the district. Existing land development areas, such as Pegasus and Ravenswood, are nearing their capacity and new land development is necessary to keep up with demand.

Rangiora has an estimated population of 18,000 and is the third largest urban area in greater Christchurch (behind Christchurch and Rolleston). It experienced unprecedented population growth following the Canterbury earthquakes, and this is expected to reach 30,000 by 2048.<sup>4</sup> Some 4,500 additional households are planned within the NER-ODP and Eastern and Western Rangiora Development Areas<sup>5</sup> (refer to the Rangiora Context Plan on page 5 in the **GA**).

Rangiora is often considered as a lifestyle alternative to city living. People that choose to relocate to Rangiora are often attracted by its semi-rural character and village feel, as well as its accessibility to surrounding recreational areas.

## **2.2 The Receiving Environment**

The receiving environment, or area surrounding the site that is potentially affected by the proposed Bellgrove Stage 1 development and its activities, is illustrated in Figure 1.

In general, this takes in Kippenberger Avenue to the south (and properties on the southern side of the road); neighbouring rural lifestyle properties to the east (along Golf Links Road); and a mix of surrounding properties to the west, including the Lamb & Hayward Wai Mana Chapel, a rural lifestyle property (78A Kippenberger Avenue) and a large landholding owned by the Ministry of Education (MOE); and Rangiora (Main Power) Stadium and Rangiora Golf Course to the north.

---

<sup>3</sup> History of the Kaiapoi Pa/Places of the Waimakariri/2015 Libraries Waimakariri District Council

<sup>4</sup> Rangiora Town Centre Strategy Blueprint to 3030+ (published July 2020)

<sup>5</sup> Rangiora Town Centre Strategy Blueprint to 3030+ (published July 2020)





Figure 1: Above is the Receiving Environment (in red) surrounding the site (in green).

### **Landform, Landcover and Land use**

The topography of the receiving environment is generally flat, and typical of the wider Canterbury Plains landscape.

It comprises a mix of large rural land holdings, Commercial Lots, and finer grain residential allotments on the northeast urban limits of Rangiora (on the southern side of Kippenberger Avenue).

The rural allotments are mostly in open pasture with shelterbelts and hedgerows following the lot boundaries and internal fence lines. The buildings are generally setback from property boundaries and nestled within surrounding vegetation.

The commercial allotments include the Lamb & Hayward site adjacent to the southwest corner of the site, and a pet supply store (Pet Plus) located on Kippenberger Avenue immediately south of the site. Both allotments are landscaped, specifically, the Lamb & Hayward allotment has a strong framework of clipped hedges and columnar conifers aligned in soldier formation.

The residential lots are landscaped and have a domesticated scale and appearance. Many of the residential properties facing the site, on the southern side of Kippenberger Avenue, have open frontages with the road.

Kippenberger Avenue has an avenue of mature street trees (Ash species).

## 2.3 Description of Site

### Location and Scope

The overall Bellgrove North site, of approximately 63 hectares, is located on the northeast outskirts of the Rangiora township, between Coldstream Road to the north and Kippenberger Avenue to the south. The site is legally described as Part RS 267 and Lot 2 DP 24808 (52 Kippenberger Avenue), and Part Lot 2 DP 9976 held within Record of Title CB8B/1429; and Lot 1 DP 22674 (76 Kippenberger Avenue). These allotments are collectively referred to herein as **Bellgrove North**.

Stage 1 (subject to this assessment) occupies approximately 20.7 hectares of the southern part of the property at 52 Kippenberger Avenue and includes 76 Kippenberger Avenue.

To the north, the site is bound by Stage 2 of the Bellgrove Development (land owned by the Applicant); to the east, it adjoins three rural lifestyle properties (8 Kippenberger Avenue, 7 Golf links Road and 19 Golf links Road); to the south, it is bound by Kippenberger Avenue; and to the west, it adjoins the Lamb & Hayward Wai Mana Chapel, a rural lifestyle property (78A Kippenberger Avenue) and a large landholding owned by the Ministry of Education (MOE).



**Figure 2:** Above is High Street extending to Kippenberger Avenue to the east. Bellgrove North is the undeveloped green area to the top left of the photograph.

The site is located on Kippenberger Avenue, a southwest to northeast aligned arterial road in the eastern part of the Rangiora. Kippenberger Avenue is approximately 1.3 km long, and is a continuation of, and located between Rangiora Woodend Road, and High Street and then Oxford Road. Together,



these roads provide a continuous connection between the townships of Woodend to the east, and Oxford to the west, while passing centrally through the Rangiora township (See Figure 2 above).

As illustrated in the Aerial Context Plan (refer to page 7 of the **GA**), the southern side of Kippenberger Avenue has been developed for residential living, whereas the northern side remains in rural farmland. From an aerial view of Rangiora, this rural farmland, extending from Kippenberger Avenue to Coldstream Road, is a logical urban expansion for the township, as it is the only remaining quadrant encircling the town centre that has not been developed, and it is near the existing railway line, where a future transport hub is planned (refer to The Rangiora Town Centre Strategy – Blueprint to 2030+).

An existing stock underpass, under Kippenberger Avenue, provides a connection under the road with rural land to the south also zoned for urban expansion (within the South-East Rangiora Development Area of the pWDP), which is also owned by the applicant.

### **Landform and Topographic Features**

The topography within the site is generally flat, except where the Cam/Ruataniwha River and northern overland flow channel (**Northern Flow Channel**) extend along their respective west to east alignments through the site.

The Cam/Ruataniwha River has a natural meandering incised channel, varying in width and depth, whereas the Northern Flow Channel is an overland flow path, which is more straight-lined (except for a short section north of the homestead) and shallower than the Cam/Ruataniwha River. The Northern Flow Channel, at its nearest point, is approximately 120m north of the Cam/Ruataniwha River.

### **Cam/Ruataniwha River**

The Cam/Ruataniwha River is a tributary of the Kaiapoi River. It originates in Rangiora and then flows south where it is joined by the North and South Brooks. It then continues southeast for approximately 5km before joining the Kaiapoi River, at the Kaiapoi township (refer to the Rangiora Context Plan on page 5 in the **GA**).

The upper portion of the Cam/Ruataniwha River is fed by the 'three Brooks' as well as from a spring just north of Kippenberger Avenue but downstream of the Bellgrove Site. The Cam/Ruataniwha River is approximately 12.8km long with its upper northern portion, approximately 560m in length, running through the centre of the site, some 225m north of Kippenberger Avenue. The rivers' cross-section at the site is approximately ~1m depth and 5-8m in width. The river drains to the south-eastern edge of the site and then south under Kippenberger Avenue.

Within the site, the Cam/Ruataniwha River is an overland flow path. Upstream of the Bellgrove homestead (to the west) the headwater swale is grazed. Further east (down-gradient) the channel is fenced from grazing stock, and introduced vegetation dominate, with areas of unkempt introduced grasses and shrubs. It is understood from the ecological report (prepared by **Aquatic Ecology Ltd**), that for the most part, the section of the river within the site is dry, except for occasional ponding in winter from rising ground water.

For much of its length, the Cam/Ruataniwha River has a natural pattern of tree vegetation on both sides, providing an ecological corridor for birds and other wildlife (refer to the Open Space Network Context Plan on page 6 in the **GA**).

The area immediately surrounding the Cam/Ruataniwha River is used for dairy farming. A stock fence follows the top of the riverbank on both sides of the Cam/Ruataniwha River. On the riverbanks, inside the stock fencing, mature trees provide a canopy for the central and eastern parts of the river within the site, while the western part is more open. The tree vegetation comprises exotic trees, such as oak, walnut and willow. Apart from the occasional specimen tree (with reasonable crown symmetry), most of the trees are growing in stands, and are poor in quality and amenity value.

Sedimentation, caused by bank erosion and excessive sediment in the riverbed, is a key issue affecting the health of the Cam/Ruataniwha River. While sedimentation levels are low west of the homestead (0-20%) and low to moderate opposite and east of the homestead (21 – 40%), there are visible signs of riverbank erosion along the section of the Cam/Ruataniwha River within the development site.<sup>6</sup> In addition to this, the riverbed is littered with large broken logs, branches, and some rubbish.

#### Northern Flow Channel

Within the site, the Northern Flow Channel appears as a depression across the grazed paddocks with no visible vegetation between the paddock and the swale cross-section, which is approximately 1.0m deep by 9.0m wide. The Northern Flow Channel serves as an overland flow path for flood waters.

It is understood from the ecological report, that the channel is an old fluvial channel from the Ashley/Rakahuri River when it flowed further south towards the sea.

#### Landcover and Land use

Over the years, the site has been extensively farmed and is currently a dairy farm. The landcover within the site is predominantly open pasture with tree vegetation restricted to the riverbanks of the Cam/Ruataniwha River and the immediate surroundings of an historic homestead called Belgrove. A clipped *Leyland cypress* shelterbelt, standing some 3m tall, delineates almost half of the site road frontage with Kippenberger Avenue.

#### Bellgrove Homestead

The homestead is located centrally within the site, approximately 215m north of Kippenberger Avenue and 30m south of the Cam/Ruataniwha River. It was first constructed in circa 1880's and is listed by Heritage New Zealand as a (Category 2) Historic Place.

The homestead is set within a large lawn surrounded by a mix of mature exotic and native trees, including oak, elm, weeping elm, cherry, weeping willow, poplar, pittosporum, beech, totara, sycamore, macrocarpa, and gum species. During an arboricultural assessment (by **Purearb Arboricultural Consultants**) three mature trees were identified as being worthy of protection for their arboricultural value (refer to the Existing Tree Plan on page 25 in the **GA**). These include the following:

- A totora, 15m+ tall, in the northeast corner of the lawn.
- A redwood, standing 35m+ tall, in the southwest corner near the driveway.

---

<sup>6</sup> Hudson, H.R. 2017. Scoping strategy for the Three Brooks and channel enhancements in the middle Cam River and Tuahiwi Stream. Environmental Management Associates Report 2017-04 for Waimakariri District Council.

- A weeping elm, 15m+ tall, centrally in the southern lawn near the front door to the homestead.

The arborist (Martin Andrews) believes the above trees were likely to have been planted around the same time that the homestead was constructed, and the redwood and weeping elm are exemplars of tree species and cultivars that were popular with early settlers establishing manors in that period. It is noted that a redwood can live for more than 3,000 years and are some of the tallest recorded trees in the world. The arborist advised that if the redwood were to be retained on site as part of the development, it would require a 15m protection zone around the base of the tree.

In terms of other buildings, there is standalone garage some 7.0m east of the homestead, and further to the northeast, on the northern side of the Cam/Ruataniwha River, are farm sheds and a private sewage treatment facility. There are also two landfills in this area (listed on the HAIL register).

A driveway with a line of pin oak trees on the western side, provides access to the homestead and dairy farm from Kippenberger Avenue. The pin oak trees are approximately 8m tall. A few farm tracks are also present on the property. A culvert crossing provides farm access across the Cam/Ruataniwha River channel within the site.

### **Landscape Character**

A distinctly rural character predominates on the site, comprising open pastureland with dividing mature tree vegetation surrounding the meandering Cam/Ruataniwha River, and central Bellgrove homestead, and dairy farm buildings. The large shelterbelt along the southern boundary provides enclosure and restricts views into the site from Kippenberger Avenue. The presence of the cattle underpass alludes to the site being a working farm interconnected to farmland south of Kippenberger Road.

The rural character is varying in different parts of the site. The rural character in the western and southern fringes diminishes to a peri-rural character the further one moves to the southwest, by the increased frequency of residential and commercial buildings on the outskirts of the Rangiora township. This part of the site has a **low** level of rural amenity.

In contrast to the above, the eastern and northern fringes of the site are more rural in character given the broad open pastureland to the north and buffering provided by tree vegetation and pockets of open space to the east. There is also a distinct absence of buildings. This part of the site possesses a **moderate** level of rural amenity.

Kippenberger Avenue, immediately south of the site, has a developed corridor character that becomes increasingly more urban from its intersection with Devlin Street heading west where the road becomes High Street.

## 2.4 Landscape Values of the Receiving Environment

As per the Draft Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines, the current professional practice for conceptualising landscape is through its overlap with physical, associative, and perceptual attributes that are reflected in case law including the recent decision<sup>7</sup>:

*“Landscape means the natural and physical attributes of land together with air and water which change over time and which is made known by people’s evolving perceptions and associations.”*

*“In keeping with the Act such a definition enables the development of landscape assessment which takes account of:*

- *natural and physical environment: and*
- *perceptual; and*
- *associative aspects (beliefs, uses, values and relationships)*

*which may change over time”*

### Physical

‘Physical’ refers to both natural and human-derived features and the interaction of natural and human processes overtime. The physical attributes within the immediate surroundings of the site and northeast of Rangiora include its topography, vegetation patterns, the braided river system, and the historic homestead:

As described above, the topography within the receiving environment is generally flat, except for the incised channels of the Cam/Ruataniwha River and Northern Flow Channel.

It is understood that the incised channel of the Cam/Ruataniwha River was formed naturally over a period when the river flows were higher than today. At present, the dry riverbed has a tight meandering alignment, and its steeply graded profile is badly eroded in places, where the steeper banks have collapsed. In contrast to this, the Northern Flow Channel has a shallower profile with a mostly straight-lined alignment because it is man-made for flood protection works. The Northern Flow Channel is only noticeable at close quarters, given it has no vegetation within its margins except for grass, and the grass assimilates with its surrounding pastoral context.

In the past, the Ashley River has burst its banks and flooded the area between breakout point and the confluence between the Kaiapoi and Waimakariri rivers which takes in the site. The Ashley Rivers dynamic presence directly influences the site’s topography and landform. Traces of greywacke, from past flood events, are present in the soil, and flood protection works are prominent and necessary elements. The overland flow paths, provided by the Cam/Ruataniwha River and the Northern Flow

---

<sup>7</sup> [2011] NZEnvC 384, Mainpower NZ Limited v Hurunui District Council, (**‘Mount Cass Wind Farm’**), paragraph 300-301

Channel, are essential landscape features, as secondary flood protection measures, within this landscape.

Overall, while landscape value of the flat topography is assessed as being *low to moderate*, the overland flow channels that are critical in this environment and consequently have *moderate* landscape value.

The main tree vegetation within the site is within the stock fenced banks of the Cam/Ruataniwha River, and tree vegetation surrounding the Bellgrove homestead. While there are a handful of good tree specimens, most of the tree vegetation is overgrown and scrappy in appearance, particularly trees with broken limbs possibly from wind damage. The tree vegetation in the Cam/Ruataniwha River corridor has *low to moderate* landscape value, particularly as the tree vegetation is not indigenous and possesses minimal biodiversity.

In terms of natural character, the exotic tree vegetation within the site, along the Cam/Ruataniwha River, and surrounding the Bellgrove homestead have been assessed against the 'Ecosystem Factors Relating to Natural Character Rating'<sup>8</sup> in Table 1 of Appendix 1, and the tree vegetation in its present state is considered to have *moderate to moderate-high* natural character value, mainly because it is considered to be semi-natural, with some naturally occurring layers beneath the exotic canopy, and the vegetation is not native, and its vegetation patterns are restricted by stock fencing.

The Bellgrove homestead, built in the 1880's, is the only building of significance within the site. Typical of New Zealand homesteads constructed in the Victorian period, the Bellgrove homestead is surrounded by an expansive lawn to the north and northwest, with a smaller feature lawn to the south near its main entrance. The lawns are contained by extensive plantings of large trees, using species that were popular at the time, such as the redwood, weeping elm and other exotic species that reference the settler's homeland in Great Britain. This garden style is influenced by picturesque landscapes of late 1700's, which reference an ideal type of landscape that has an artistic appeal, in that it is beautifully manicured, but contains elements of wilderness. This is the case within the Bellgrove heritage site, where the planting is predominantly exotic specimens, with indigenous planting mostly restricted to a distinct area in the garden. Also synonymous with homestead gardens are small groupings of fruit trees. A copse of half a dozen walnut trees is present to the east of the homestead. The Bellgrove homestead including its open setting and presence of mature trees has *high* landscape value.

### Associative

'Associative' means the intangible things that influence how places are perceived, such as history, identity, narratives, and activities specifically associated with landscape. The site and its immediate landscape have shared and recognised values for both Tāngata whenua and pakeha as follows:

---

<sup>8</sup> Ecosystem Factors in the assessment of naturalness (After Sukopp 1971 and van der Maarel (1975).

The existence of the Kaiapoi Pa and pre-European history is important to New Zealand's heritage. The Ashely/Rakahuri River is one of numerous rivers flowing into Te Tai o Maahunui (Pegasus Bay). The river and its associated tributaries, wetlands, and lagoons were traditionally well known for their mahinga kai values.

The Bellgrove homestead is listed as a Heritage New Zealand (HNZ) building (Category 2). Its design layout, and architectural features are iconic of the Victorian era, and early homesteads established in New Zealand. Evocative elements resonant of Victorian architecture, that are present in the Bellgrove homestead include: two story dwelling, complicated asymmetrical layout, decorative trim (particularly the gable barge boards), steep multi-faceted roof, and single-story porch. A separate heritage impact assessment report has been prepared by Dave Pearson (DPA Architects) considering the impacts of the proposed works on the homestead.

### **Perceptual**

Perceptual means both sensory experience and interpretations. Sensory appreciation typically occurs simultaneously with interpretation, knowledge, and memory. What we know, remember, and imagine influences how we perceive a place. The perceptual values within the site and immediate landscape northeast of Rangiora include the expressiveness of tree vegetation, as well as the prominence and memorability of the Bellgrove homestead.

The tree vegetation within the Cam/Ruataniwha River corridor expresses the extent of the naturally curving alignment of the dry channel. The tree vegetation is dense along most of river alignment (except the western end) and provides a coherent landscape pattern, given it is surrounded by open pasture. While as a grouping observed from a distance, the tree vegetation has aesthetic qualities, up close, it is apparent the vegetation comprises weedy exotic species, many of which have been damaged by strong winds, resulting in poor symmetrical form and apical dominance.

From Kippenberger Avenue, the distant view of Bellgrove homestead has a high degree of memorability. The building is nestled into an idealist setting of mature tree vegetation, accessed by a tree lined driveway surrounded by open pasture. It is noticeable it is a heritage building from Kippenberger Avenue with its steep gable, centralised windows, and decorative trim. The white gateway columns and picket fence at the driveway entrance in the foreground, also contribute to the legibility and expressiveness of this view. The redwood tree is also a prominent feature, standing as a sentinel at the end of the driveway, towering above the homestead and other tree vegetation.

The tree vegetation within the Cam/Ruataniwha River has a moderate degree of Natural Character value given its intactness and natural alignment (following the meandering river alignment), as well as its function as an ecological corridor across the site and its immediate surroundings.

Overall, the physical, associate, and perceptual attributes, within the receiving environment, with ***moderate to high*** values include the Northern Flow Path, the Bellgrove homestead, the openness and tree vegetation surrounding the homestead and the tree vegetation within the Cam/Ruataniwha River corridor.



## 3.0 The Proposal

### 3.1 Description of the Proposal

Bellgrove North is a significant greenfield residential development project, of approximately 63 hectares, located on the northeast extents of Rangiora township. The vision for Bellgrove is a comprehensively planned residential community nestled within a well-connected walkable neighbourhood.

As illustrated in Figure 3 below, the development will take place in five stages. The Stage 1 proposal of approximately 20.7 hectares (subject to this assessment), is the largest development stage.

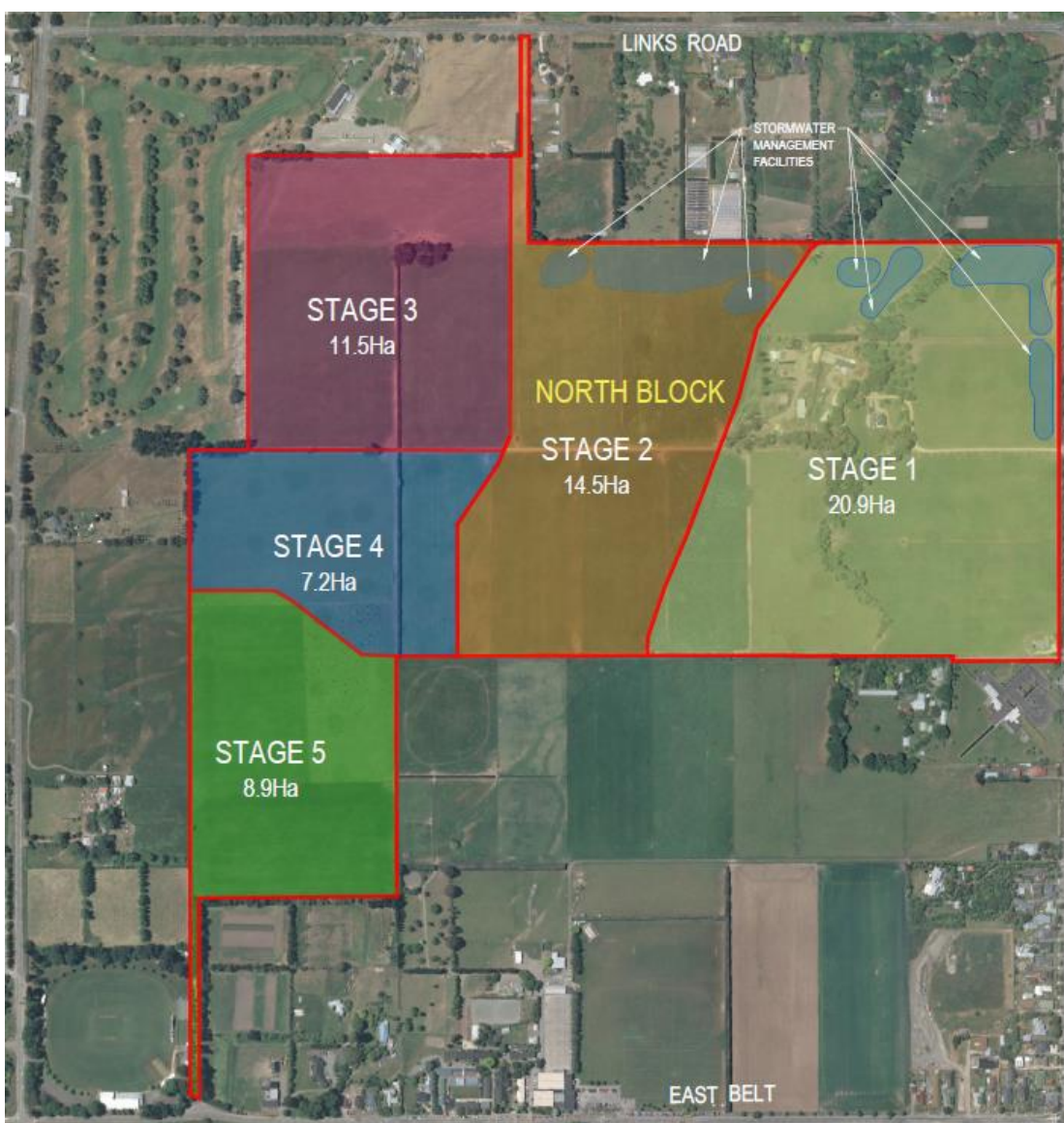


Figure 3: Bellgrove Development staging plan.

Its open space network will include the esplanade reserve of the Cam/Ruataniwha River, the local purpose (stormwater utility) reserve of the Northern Flow Channel and Western Bypass Channel, the medium density residential recreation reserve (Lot 2000) as well as a significant stormwater management reserve. The total area of green open space will be approximately 5.2 hectares and will make up some 25% of the Stage 1 development area.

It is noted, that while a large recreation reserve is not proposed within Stage 1 (except for the smaller recreation reserve located within the medium density housing area), there is a large recreation reserve planned for Stage 2. This future reserve will be located immediately adjacent to Stage 1 proposal. A footbridge across the Northern Flow Channel will provide a connection between the future Commercial Lot in Stage 1 and the recreation reserve in Stage 2.

As illustrated in the scheme plan in the Graphic Attachment (refer to page 12 in the **GA**) the Stage 1 proposal is made up of the following key components:

- Open Space Network (esplanade, stormwater, Lot 2000, and linkage reserves) – 5.2ha
- Medium Density Residential (200 to 499m<sup>2</sup>) – 140 Lots
- Residential allotments (500m<sup>2</sup> +) – 58 Lots
- Bellgrove Heritage Lot (2,950m<sup>2</sup>) - 1 Lot
- Commercial Lot – (5,355m<sup>2</sup>) – 1 Lot
- Residential Super Lot – (2,385m<sup>2</sup>) – 1 Lot

#### Cam/Ruataniwha River Realignment and Restoration

The Cam/Ruataniwha River alignment within the site will be retained primarily as an overland flow path for diverting floodwater, from localised flooding or a breakout from the Ashely River. The existing alignment will be straightened to remove its tight meandering loops, providing a more direct path for shifting floodwater expediently. The realignment of the river presents an opportunity to regrade badly eroded banks, reduce sedimentation into the river and remediate contamination (heavy metals) found. Much of the existing tree vegetation within the cross-section of the river will be removed to make way for the earth worked realignment. While the 12.5m wide cross-section within the new alignment will be planted with indigenous vegetation, including trees, shrubs, and riparian planting, the surrounding, flat areas within the esplanade will be planted with a mix of exotic and indigenous trees. A circle of exotic trees surrounding the homestead will extend into the esplanade (refer to the Heritage Lot below). The minimum esplanade reserve width between the crest of the bank and residential/ reserve boundary will be 7m. A new shared path, 2.5m wide, will follow the Cam/Ruataniwha River on its northern side, and this will include two footbridges providing a pedestrian and cyclist connection to the streets and stormwater management area to the south.

#### Northern Flow Channel Enhancement

The Northern Flow Channel will be reshaped within its current alignment and planted with mostly indigenous plantings along its length within the site. A new western channel (**Western Bypass Channel**) will connect the Northern Flow Channel to the Cam/Ruataniwha River, near the western

boundary of the site. This will enable them to function in tandem as overland flow paths during a flood event. A 2.5m wide shared path will follow the Northern Flow Channel along its northern side, whereas a meandering 1.8m wide path, within the immediately adjacent road corridor, will enable pedestrian movement along the western side of Western Bypass Channel. Two footbridges will provide a pedestrian connection across the Northern Flow Channel to the future recreation reserve areas in Stage 2, and a third footbridge across the Western Bypass Channel will provide a pedestrian connection to the primary collector roadway (Road 1).

An indicative plant list for proposed indigenous planting for the Cam/Ruataniwha River realignment and Northern Flow Channel enhancement has been prepared in collaboration with the project ecologist (refer to page 26 in the **GA**). The plant selection includes an emphasis on nectar-producing plants to encourage more macroinvertebrate to inhabit the upstream part of the Cam/Ruataniwha River.

#### Stormwater Management Area

A stormwater management area will occupy the eastern part of the development site, between the Northern Flow Channel to the north and Kippenberger Avenue to the south. The stormwater utility reserve will contain five large (dry) first flush basins surrounded by groupings of specimen trees. Ephemeral shrub planting will be used in places to conceal stormwater infrastructure (inlets, outlets, etc) within the basins and provide amenity.

The existing Leyland cypress shelterbelt along Kippenberger Avenue will be removed to open views into the stormwater reserve immediately fronting the road.

The shared paths, extending along the northern sides of both the Northern Flow Channel and Cam/Ruataniwha River, will connect into a shared path network meandering between the basins.

Immediately west of the existing stock underpass, a proposed pump station will be positioned centrally between two basins fronting Kippenberger Avenue. It is understood that Aurecon have considered a few different locations for the pump station, and this is the preferred position as it will service the future residential growth area south of Kippenberger Avenue. It is understood that the pump station will be mostly buried into the ground. Its final appearance above ground is yet to be determined. The pump station will be inside a compound, approximately 19 x 15m in size and fenced for security reasons. The compound will be able to be accessed from Kippenberger Avenue for maintenance and will be mostly screened by shrub planting around its periphery that assimilates with other planting within the stormwater reserve.

It is noted that the planned stormwater reserve in Stage 2 will adjoin the Stage 1 area on the northern side of the Northern Flow Channel. Together these utility reserves will provide a substantial area of open space along the eastern side of the Bellgrove North development.

#### Medium Density Residential Recreation Reserve (Lot 2000)

A triangular shaped reserve, of 1,038m<sup>2</sup>, is proposed surrounded by higher density housing (comprising duplexes, terraced housing etc.) in the northwest part of the site. The reserve will be directly bounded

by residential development on its southern side a proposed local road along its northern boundary, and right of way access along the western boundary. The reserve will be a grass area planted with groups of trees with some shrub planting along its interface with housing to the south. While not confirmed at the time of writing, it is understood this green space is proposed to be vested in WDC as a recreation reserve.

#### Walkway Linkage Reserves

A series of walkway reserves provide pedestrian and cycleway connections to the esplanade and utility reserves from the streetscape, expanding the movement network and enhancing accessibility throughout the development. The linkage reserves are 10m wide and will include low shrub gardens at their road frontage entrances as visual cues from the street.

#### Road Network

As illustrated in Figure 4 below, and the Reserve and Streetscape Plans (refer to pages 14 - 19 in the **GA**), the road network for the Stage 1 proposal will comprise two north/south orientated collector roads, and a series of intersecting local roads either side of the collector roads.

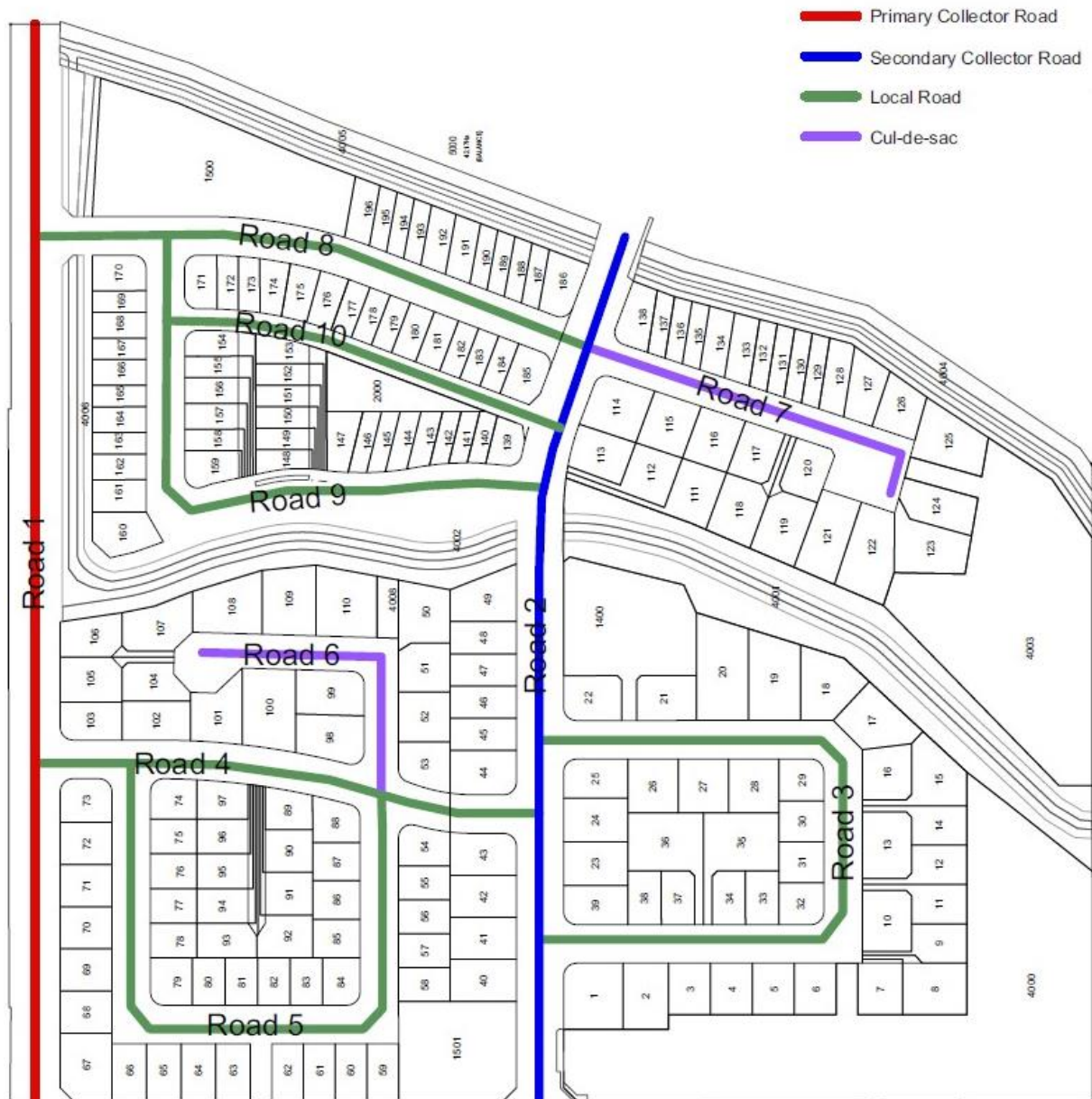


Figure 4: Above is the road type and name plan referred to in this report.

Road 1 is a primary collector road extending along the western periphery of the site. It is 23m wide and will include a central median with designated parking bays in select locations. This roadway will include a shared path on the western side and a 1.8m wide footpath on the eastern side. The median will be mostly grassed, with areas of low shrub planting to highlight pedestrian crossing points and main intersections. Road 1 will intersect with Kippenberger and MacPahil Avenues with a new roundabout.

Road 2 is a secondary collector road extending centrally through the site, approximately where the existing driveway to the Bellgrove homestead is aligned. It is 22m wide with footpaths on either side.

Both the Road 1 and 2 collector roads will be planted with street trees in grass berms 2.5m in width or within concrete kerb planters to maintain continuity of street tree planting within the parking bays.



Roads 3 to 5 and 8 & 9 are local roads comprising two hierarchies, catering for medium and low traffic volumes, ranging from 18 to 16m wide respectively. Each road type will have a footpath on both sides, and street trees planted in 2.0m wide grass berms.

Roads 6 & 7 are cul-de-sac roads catering for low traffic volumes. These will include a footpath on one side of the road with street trees planted in 2.0m wide grass berms on both sides. Road 7, which has a cul-de-sac head approximately 26m in diameter, will have a central planted island. Both Roads 6 & 7 included walkway linkage reserves providing a shared path connection into the esplanade and stormwater reserve.

Lastly, Road 10 is a low volume local road, which has a total width of 10m. It includes a parking bay along its southern side adjacent to the recreation reserve (Lot 2000) and a footpath along its northern side that connects into the wider footpath network.

#### Kippenberger Avenue Road Frontage Treatment

Two entrance walls will be constructed at each of the two intersections between the proposed new collector roads and Kippenberger Avenue. The walls will be located just inside the adjacent private allotments, and not on WDC land. Between the entrance walls and along the site's boundary with Kippenberger Avenue (adjacent to Lot 1501 (Residential Superlot) and Lots 59 to 67) an acoustic fence is proposed, along with a 0.9m wide strip of low planting (on Council land) between the boundary and shared path. The 1.8m high timber acoustic fence will be a well-articulated linear form, that potentially includes elements that provide visual interest and complement the entrance walls. This will be confirmed at detailed design stage. The base of the fence will be softened with low planting along its length, between the acoustic fence and new shared path along the Kippenberger Avenue frontage. While the planting design will also be confirmed at detailed design stage, it is likely this will comprise a single row of alternating shrub and grass planting, with a maximum height of 0.6m.

As part of the proposed development, the northern side of Kippenberger Avenue will also be upgraded to integrate with the new works. This will include removal of the existing mature street trees and overhead powerline (the powerlines will be undergrounded), and the formation of kerb & channel with interspersed parking bays and garden areas containing new street trees and shrub planting, as shown in the Indicative Reserves and Streetscape Plans (refer to pages 14 to 19 in the **GA**).

#### Residential Allotments

The residential allotments will comprise a combination of allotment sizes including medium density (200 to 499m<sup>2</sup>) and general residential density (> 500m<sup>2</sup>). In total, there are 140 low density allotments and 60 medium density allotments.

The medium density allotments are generally clustered in the northwest part of the site, between the Northern Flow Channel and Cam/Ruataniwha River, in proximity to the proposed Commercial Lot. Many of the narrow 10m wide allotments, will be accessed by a rear service lane with a legal width of 8m or 10m, depending on whether they have a footpath included.

Most of the general residential density allotments immediately adjoin the green network of esplanade and utility reserves and Road 2.

Residential design criteria conditions are proposed for the future residential lots to ensure appropriate built form on the allotments. In general, these will include standards relating to building height, site building coverage, recession planes, landscaped permeable surface areas, road and internal boundary

building setbacks, ensuring habitable rooms at ground level that interact with the street and/or reserve areas, outdoor living space areas and fencing.

As illustrated in the Fencing and Roding Plan in the Graphic Attachment (refer to page 13 of the **GA**), a range of fencing types are proposed for the Stage 1 proposal. In most cases, general residential density allotments with a boundary adjoining an esplanade or reserve will have a post and rail fence with a height of 1.2m. For southern boundaries, or boundaries adjacent to linkage reserves, a solid timber fence with a height of 1.8m will be erected. General density allotments with a rear boundary adjacent to, or some 40m across the stormwater area from, Kippenberger Avenue will have a solid acoustic fence with a height of 1.8m. Medium density residential allotments will have black aluminium pool fencing, with a height of 1.2m where they front reserves. This fencing type will also be used along the road frontages of some medium density allotments.

### Heritage Lot

The Bellgrove homestead will be retained within a large allotment (the **Heritage Lot**), approximately 2,950m<sup>2</sup> in area, fronting the Cam/Ruataniwha River Esplanade Reserve to the north and Road 2 (Collector Road) to the west. Vehicle access will be provided from Road 3 (local road), between two neighbouring residential properties to the south. The access way will have a legal width of 7m, and the driveway a formed width approximately 4m wide.

The Heritage Lot will have a bespoke landscape treatment that has been designed to be sympathetic to the homestead heritage item and setting. It has been developed in discussion with the projects' heritage architect (Dave Pearson) with The Heritage Plan prepared by **Rough and Milne** (refer to page 24 of the **GA**).

The Heritage Lot will include three boundary interface types:

- A post and rail fence, 1.2m in height, along the esplanade and street frontages. This will include either a clipped hedge or a band of low planting immediately behind.
- A solid timber fence, 1.8m in height, along the Heritage Lots boundaries with neighbouring residential allotments (Lots 21 & 22) to the south.
- A white picket fence will be erected either side of the formed driveway within the accessway. The two fence sections will be approximately 1.5m long and include feature posts refurbished from the existing Bellgrove picket fence located at the driveway entrance from Kippenberger Avenue.

Four existing trees surrounding the homestead will be retained if possible. Two of these trees are located inside the proposed Heritage Lot, while the other two trees are within the adjoining esplanade. Tree planting is proposed to somewhat reinstate the former circle of trees surrounding the homestead lawn, while also framing views of the homestead from the adjoining esplanade and street frontage. A selection of appropriate trees is included on the Heritage Plan.

In addition, the two allotments (Lots 21 and 22) immediately south of the historic homestead will have bespoke standards that will ensure their future development will not impede on the character and quality of the homestead and its setting.

### Other Allotments

The Stage 1 proposal will also include a commercial allotment (the **Commercial Lot**) and a residential super allotment (the **Residential Superlot**).

The Commercial Lot, of 5,355m<sup>2</sup>, will be developed as a local centre in the northwest part of the site, immediately adjoining the Northern Flow Channel and Western Bypass Channel. The design of the retail development will likely take advantage of its setting surrounded by the planted diversion channels on two sides. As described previously, a footbridge spanning the Northern Flow Channel, will connect the Commercial Lot to the planned recreation reserve in Stage 2.

The Residential Superlot, of 2,384m<sup>2</sup>, is located on the corner of the secondary collector road and Kippenberger Avenue. This allotment will also have dual active frontages with the Road 2 (collector road) and Road 5 (local road).

#### Bellgrove Signage

The exact style of the signage will be confirmed during detailed design, however it will most likely be laser-cut metal signage, in the font/ logo of the Bellgrove branding. This will be fixed to the entrance walls located at each of the two intersections between the proposed collector roads and Kippenberger Avenue (as previously covered under 'Kippenberger Avenue Road Frontage Treatment'). There will be up to three entrance walls with signage installed along Kippenberger Avenue, two at Road 2 (one either side of the entrance) and one at Road 1 (to the east of the entrance). The metal signage will be up to 1m in height and 3m wide and incorporated into the entrance walls. In total there will be approximately 9m<sup>2</sup> of subdivision entrance signage in the Stage 1 proposal.



## 4.0 Relevant Planning Provisions

The following is an outline of the relevant planning provisions for assessing the landscape and urban effects of the Stage 1 proposed Bellgrove North development. A full assessment against the relevant planning provisions is available in Appendix 2 of this report.

### 4.1 Operative Waimakariri District Plan (WDP)

Under the WDP, the site is zoned Rural, and is within the Projected Infrastructure Zone boundary. The Bellgrove homestead is identified in the WDP as a heritage resource within the site. The proposal requires consent as a non-complying activity under the WDP.

Relevant objectives and policies under the WDP for assessing the potential landscape and urban design effects of the Bellgrove Development are found under chapters for “Health, Safety and Wellbeing” and “Urban Environment”. Key extracts from these are in the blue text below:

#### Health, Safety and Wellbeing

##### **Policy 12.1.1.1**

*Maintain and enhance the positive contribution that buildings and structures, and the spaces between them, make to the character and amenity of urban areas where people reside, the neighbourhood and streetscape.*

#### Urban Environment

##### **Objective 15.1.1**

*Quality urban environments which maintain and enhance the form and function, the rural setting, character, and amenity values of urban areas.*

##### **Policy 15.1.1.1**

*Integrate new development, subdivision, and activities into the urban environments in a way that maintains and enhances the form, function, and amenity values of the urban areas.*

##### **Policy 15.1.1.3**

*Promote subdivision design and layout that maintains and enhances the different amenity values and qualities of the different urban environments by:*

- a. providing links to public open spaces including walkways, cycleways and roads;*
- b. ensuring allotment lay out maximises the amenity and sustainable energy benefits;*
- c. enhancing the form and function of the surrounding environment;*
- d. providing efficient and effective transport networks including cycleways;*
- e. integrating new developments with the rest of the urban area, where they adjoin existing urban areas; and*

- f. *avoiding or mitigating conflicts between the effects of different land uses, such as between residential and business activities.*

## 4.2 Proposed Waimakariri District Plan (pWDP)

Under the pWDP, the site is zoned Rural Lifestyle Zone, and is located within the Northeast Rangiora Outline Development Plan (NER-ODP), which is an area identified as suitable for future residential development. The Bellgrove homestead is also identified in the pWDP as a heritage site.

Under Scheduled Natural Character Freshwater Bodies (Schedule 2) of pWDP, the Cam/Ruataniwha River has been identified as a scheduled natural character freshwater body. An aerial plan in Schedule 2 shows the Cam/Ruataniwha River extending through the site.

### **Northeast Rangiora Outline Development Plan (NER-ODP)**

The NER-ODP, of approximately 140 hectares, is bounded by Coldstream Road to the north, the Rangiora Gold Club and Golf Links Road to the east, Kippenberger Avenue to the south and the East Belt to the east. As the majority landholder, the Applicant has been actively engaged in the preparation of WDC's NER-ODP, which encompasses the Bellgrove North site planned for future residential growth, as well as neighbouring landholdings including an education precinct and a sports fields/ multi-sports facility. The NER-ODP is included in the Graphic Attachment with an overlay of the Bellgrove North development site for context (refer to pages 8 & 9 in the **GA**).

There are two development possibilities (Options A & B) for the NER-ODP, with the key difference being the location of the education precinct. The options include the same development outcomes sought for the Stage 1 area.

Key features of the NER-ODP, relevant to assessing the landscape and urban design of the proposal are outlined under the three sub-headings below:

#### Land Use

- The NER-ODP provides for a variety of allotment sizes. The entire Stage 1 area is within a future medium residential density area. The supporting text requires there to be a ratio of 70% medium density and 30% general residential density within the Stage 1 area.
- Medium density development is to be in the south and southwest area of the NER-ODP, closest to the Rangiora town centre and immediately adjacent to a local centre (the **Commercial Lot**).
- The Commercial Lot is strategically located to take advantage of high visibility and traffic flow generated by the north/ south primary road (Road 1).

#### Movement Network

- The NER-ODP provides access through a network of primary and secondary roads that ensure development integration, efficient traffic management and public transport corridors. The tertiary roads will respond to the detailed subdivision design.
- There is a main north/south primary road from Kippenberger Avenue through to Coldstream Road which must connect to MacPhail Avenue to the south and Coldstream Road to the north between the WDC's multi sports facility and the Rangiora Golf Course. The primary road must

include separate pedestrian and cycle paths. Vehicle access for new properties immediately adjoining the primary road corridor is to be provided from alternative roads to avoid vehicle/cyclist/ pedestrian conflict.

- Provision is proposed for cycleways along the Northern Flow Channel and Cam/Ruataniwha River that connects with the wider cycling network beyond the NER-ODP.

#### Open Space and Stormwater Reserves

- The NER-ODP indicates two open space reserve (recreational reserves) together with the stormwater management area, Northern Flow Channel reserve, Cam/Ruataniwha River esplanade and green link reserves.
- The open space reserves are shown on the NER-ODP in a position where they are located strategically within a 500m radius of all residential households.
- The Northern Flow Path and Cam/Ruataniwha River are overland flow paths required for relieving localised flooding and/ or an Ashley River breakout. Amenity planting is encouraged, including enhancement of habitat sanctuary and in-stream conditions.
- The NER-ODP is divided into three stormwater catchments, and there is a requirement to discharge into the Northern Flow Channel and Cam/Ruataniwha River to maintain flow into waterways. Each of these shall have attenuation basins. Stormwater must be collected into the basins before being discharged into the flow channels. It is anticipated that the attenuation basins will be dry basins.
- The stormwater reserves are to provide attractive open space and visual relief for built-up areas. There are opportunities for residential development adjacent to them to look out across them and benefit from their amenity. The stormwater reserves can also include passive recreational roles for walking, cycling, and playing.

#### Summary of Key NER-ODP Features:

- A ratio of 70% medium density and a maximum 30% general residential zone density in the south of the NER-ODP (Option B) as well as immediately adjacent to the local centre.
- Location of roading connection of north/south road to MacPhail Avenue at Kippenberger Avenue.
- A road to connect the new north/south road to East Belt.
- Location of overland flow paths and adjoining green links and cycleways, including any required waterbody setbacks
- Location of the local/neighbourhood centre at the north/south road corridor, in proximity to a flow path
- Separated shared pedestrian / cycleway at the north/south road corridor

Relevant objectives and policies of the pWDP for assessing the potential landscape and urban design effects of the Bellgrove Development include:

#### ***SUB-P1 Design and amenity***

*Enable subdivision that:*

1. *within Residential Zones, incorporates best practice urban design, access to open space, and CPTED principles;*
2. *minimises reverse sensitivity effects on infrastructure including through the use of setbacks;*
3. *avoids subdivision that restricts the operation, maintenance, upgrading and development of the National Grid;*
4. *recognises and provides for the expression of cultural values of mana whenua and their connections in subdivision design; and*
5. *supports the character, amenity values, form, and function for the relevant zone.*

### **RESZ-P1: Design of development**

*New development in residential areas is well designed and laid out, including by:*

1. *ensuring that the bulk, scale and location of buildings on sites is consistent with the environment anticipated for the zone, and that impacts in relation to dominance, privacy and shadowing are minimised, while recognising the ability for larger sites in the General Residential Zone and Medium Density Residential Zone to absorb greater height;*
2. *ensuring that the combination of buildings, paved surface, and landscaped permeable surface coverage retain a landscaped component for residential sites and provide opportunity for on-site stormwater infiltration, and where this is reduced that it is offset by suitable planting, other green surface treatment, and stormwater attenuation;*
3. *maintaining streetscapes in Residential Zones where garaging and buildings are set back from the street, and where these setbacks are reduced, that sufficient space is still available for vehicle manoeuvring and impacts of dominance on the streetscape are minimised;*
4. *facilitating passive surveillance and active residential frontages through controls on glazing, avoidance of blank facades, provision of habitable rooms and front door entrances to residential units facing the street, and consider modification of those controls only where other active design features such as verandas are incorporated;*
5. *minimising the adverse impact of high fences on streetscape character and public safety; and*
6. *ensuring that residential activities are provided with sufficient on-site outdoor living space for residents through access to outdoor living space that is complements the housing typology, or where not directly provided, take into account alternative arrangements for open space (either within the site or within close proximity to the site).*

### **RESZ-O3: Residential form, scale, design, and amenity values**

*A form, scale, and design of development that:*

1. *achieves a good quality residential environment that is attractive and functional;*
2. *supports community health, safety and well-being;*
3. *maintains differences between zones; and*
4. *manages adverse effects on the surrounding environment.*

### **RESZ-P3: Safety and well-being**

*Provide for safety and well-being by:*

1. *taking into account the following CPTED principles in the design of structures, residential units, outdoor areas and public open spaces:*
  - a. *access – safe movement and connections;*
  - b. *surveillance and sightlines – see and be seen;*
  - c. *layout - clear and logical orientation;*
  - d. *activity mix – eyes on the street;*
  - e. *sense of ownership – showing a space is cared for;*
  - f. *quality environments - well designed, managed and maintained environments;*
  - g. *physical protection – using active security measures; and*
2. *providing for peaceful and pleasant living environments which enable limited opportunities for signs, appropriately manage the impacts of on-site traffic generation to minimise impacts on neighbouring properties and road networks, and minimise adverse effects of noise and light, particularly in night time hours.*

### **ECO-P8: Waterbodies**

*Recognising Te Mana o te Wai, maintain the ecological integrity of waterbodies by avoiding indigenous vegetation clearance near them.*

## **4.3 Cam/Ruataniwha River Esplanade Width**

Under both district plans, the Cam/Ruataniwha River is required to have a 20m esplanade reserve on both sides of the river. This is to be vested in WDC as Local Purpose (Esplanade) Reserve. The planning provisions in the WDP and pWDP require the esplanade reserve for the Cam / Rutantiwha River to be used for conservation and natural hazard mitigation purposes.

The Applicant engaged Rough and Milne early in 2021, along with Aquatic Ecology Ltd, to examine the esplanade provisions of the WDP and determine the narrowest width for the esplanade that would achieve these intentions.

Following site investigations and analysis it was concluded that the Cam/Ruataniwha River esplanade should vary in its width (rather than having an even width), with a minimum width of 7m. This is deemed to meet the intentions of the esplanade for the following reasons:

### Conservation

- Provision of a setback strip that can serve as an ecological corridor for native bush birds.
- Replacement of exotic tree species with appropriate indigenous species; and
- Establishment of a diversity of plantings, including a canopy (trees), subcanopy (shrubs), and riparian planting (grasses).

### Natural Hazard Mitigation

- Realignment and straightening of the Cam/Ruataniwha River (removing its tight meandering loops) to provide a more direct path for shifting flood water promptly;
- Regrade the channel banks to a slope less susceptible to erosion and suitable for planting; and,
- Remove obstructions caused by old logs, branches, and rubbish within the riverbed.

## 5.0 Landscape & Urban Design Assessment

The landscape and urban design assessment for the Bellgrove Development – Stage 1 considers the following:

1. Appropriateness of the (Stage 1) allotment layout;
2. Appropriateness of the landscape design;
3. Assessment against the Urban Design Protocol; and
4. Assessment against landscape values including visual effects.

### 5.1 Appropriateness of the (Stage 1) Allotment Layout

#### Residential Lot Layout

Overall, the orientation and dimensions of the lot layout for the medium and general density residential allotments within the Stage 1 proposal, provide for a range of housing typologies with favourable solar aspects.

In general, the proposed higher density residential allotments are concentrated immediately south and southeast of the future commercial Lot and within the southwest part of the site, in proximity to High Street as sought by the NER-ODP. In addition, a few medium density allotments will be mixed in with the general density residential allotments to provide diversity of housing typologies and variety of household types within the foreseeable community.

The narrower medium density allotments (the higher density lots in Bellgrove Stage 1) will include a slightly wider allotment every fourth or fifth allotment and at the ends of the rows of narrow allotments to provide variation of built form, and to distinguish between different attached housing developments. Further the narrow medium density lots, with a north/south alignment, have a slightly skewed orientation, enabling offsets between the individual units within the terraced housing to provide modulation of built form. This is evident in proposed Lots 127 to 138, Lots 186 to 196 and 139 to 147.

Most of the allotments fronting the esplanade and stormwater area will be generous-sized general density residential lots (ranging from 535m<sup>2</sup> to 1127m<sup>2</sup>), with more than a dozen of these allotments exceeding 700m<sup>2</sup> in area. These allotments will likely be developed as larger, executive type residences with landscaped frontages, which will provide an attractive interface with the esplanade and stormwater reserve.

Where back-section allotments (i.e. Lots 35 & 36) are surrounded by other allotments on all sides with access provided by a shared driveway, they have been made slightly larger to maintain openness between the future dwellings within these allotments and the anticipated surrounding built form in neighbouring allotments.

#### Open Space Network

The proposed open space network will merge the esplanade, stormwater, walkway linkages into one substantial area of communal space with a well-connected shared path system.

The requirement to retain the two existing overland flow paths within esplanade and utility reserves has resulted in two linear parks, approximately 120m apart, spanning west to east across the site, which will be linked by the Western Bypass Channel reserve and the stormwater management area at either end. The shared path network throughout these reserves, including the linkage reserves connecting to the roading network, will enable people to undertake a variety of walking and cycling circuits throughout the Stage 1 development, making use of the open space network. As illustrated in the Open Space Network Context Plan (refer to page 6 of the **GA**), approximately half of the Rangiora township is within a 20-minute walk (1.6 km) of the open space network in the Stage 1 proposal, and it will likely be utilised by the wider community too. Overall, the proposed shared path network within Stage 1, shown in the Pedestrian and Cyclist Connectivity Plan (refer to page 11 of the **GA**), will provide a high level of amenity and recreation value for the Rangiora community.

The proposed Recreation Reserve (Lot 2000), surrounded by medium density residential development, in the northwest part of the site will provide visual relief, amenity and social gathering area for residents living within this higher density area.

Taking into consideration, the adjoining future Stage 2 Recreation Reserve, the open space network has a variety and diversity of open space. This includes expansive open space, groupings of trees (i.e. in the stormwater reserve) and corridors of open spaces extensively planted with indigenous vegetation. The future Stage 2 Recreation Reserve will also introduce a different type of open space with a children's playground, planting, seating, and other features.

Central to the open space network in Stage 1 is the Bellgrove heritage homestead, an important landmark within the subdivision, which will be partially visible from the secondary collector road (Road 2), specifically the proposed culvert road bridge over the Cam/Ruataniwha River, and from the esplanade immediately adjacent to the historic setting. The design controls for the boundary interfaces of the Heritage Lot will ensure open views into the property are preserved. These will include a post and rail fence backdropped by either a clipped hedge or shrub planting (to the height of the fence), and a circle of specimen trees that will frame views of, and provide a leafy setting around, the Bellgrove homestead. In addition, although it will be sold as a private residential allotment, the opportunity will remain for a future owner to repurpose it for community functions, such as a wedding venue (any such proposal would be considered in the context of the planning provisions as part of a separate consent).

From a landscape perspective, it would be desirable to retain the existing redwood tree within the Heritage Lot as a prominent landmark feature. Unfortunately, the redwood does not fit within the proposed lot layout, particularly as it requires a 15m protection zone around the root system of the tree. Sometime ago, the tree lost its top section in high winds, and there is a risk that this could happen again, which would be a safety issue in a new residential area.

Fortunately, the large existing totara integrates with the proposed lot layout. It is inside the Cam/Ruataniwha River esplanade, near the crest of the riverbank. The evergreen tree has been accurately surveyed and is located some 23m to the northeast of the homestead. This tree is proposed to be retained if possible, during site earthworks.

The external design of the pump station located in the stormwater reserve, immediately adjacent to Kippenberger Avenue, is to be confirmed during detailed design. The permitter fencing will be softened with shrub planting as a continuation of the planting proposed around the adjacent attenuation basin. This will ensure the pump station is integrated into the stormwater reserve and presents harmoniously to the street.



## 5.2 Appropriateness of Landscape Design

The landscape design for the Stage 1 proposal is illustrated in the Indicative Reserve and Streetscape Plans (refer to pages 14 to 19 in the **GA**). This includes both hardscape and softscape elements, that will provide a coherent landscape character throughout the Stage 1 proposal, as well as establish a strong framework and design vision for the remainder of the Bellgrove Development, ensuring its realisation is sustainable, distinctive, and resilient for years to come.

### Streetscape Design

In general, the streetscape design in the Stage 1 proposal includes both the carriageway and footpath thresholds, street trees, amenity shrub planting, box culvert barriers, subdivision entrance walls, residential boundary interfaces, as well as the interfaces/ covenants for the Bellgrove historic site.

The proposed entrance walls and signage into Bellgrove Development, from Kippenbeger Avenue, will provide legibility, wayfinding, and establish a distinctive design identity for the development.

It is anticipated that the modulated linear form of the acoustic fence (to be confirmed at detailed design stage) will provide visual interest along Kippenbeger Avenue, which will also be upgraded with new street tree and shrub planting, including a narrow strip of planting along the base of the fence, between the site boundary and shared path.

Further, wayfinding throughout Stage 1, and the remainder of the Bellgrove Development, will be achieved through a combination of carriageway segmental paving areas, exposed aggregate concrete footpath thresholds, and a complementary selection of street trees and amenity shrub planting. The carriageway paving is strategically located within the local roads, near their junction with the collector roads, to provide traffic calming and amenity. The footpath thresholds will also provide design discernibility, at a pedestrian level, and will include tactile indicators to WDC standards. The street trees will mostly be exotic species tolerant of the site conditions, that can be limbed up to maintain vehicle sightlines. The shrub planting located at important intersections will also assist with wayfinding and provide amenity. These will be low species that maintain vehicle sightlines.

A feature of the Stage 1 proposal are the box culvert bridges, which will be constructed where roads cross over the overland flow channels and Cam/ Ruataniwha River. This will occur in four locations including two instances on the secondary collector road (Road 2), and one instance each on the main primary collector road (Road 1) and east/west local road (Road 8). The exterior of the culverts will be clad in a unifying material (to be confirmed at detailed design) and barriers will be designed for above the culvert openings to provide safety from falling, and to accentuate the bridge crossings as design elements contributing to the identity and distinctiveness of the Bellgrove Development.

The Bellgrove homestead, positioned centrally within the Stage 1 proposal, has an eastern road frontage approximately 46m long with the north/south secondary road. A 1.2m high post and rail fence is proposed, which will be white or neutral in colour to complement the homestead and echo the former white picket fence segments either side of the existing entrance to 52 Kippenberger Avenue, which will be reinstated at the new driveway entrance to the Heritage Lot. A clipped hedge (or low shrub planting) will be planted as a leafy backdrop immediately behind the post and rail fence. The hedge will be maintained at the same height as the fence. Other mitigation and enhancement measures proposed for the Heritage Lot include 13 proposed new specimen trees within the Heritage Lot, and a further 8 new trees within the adjacent esplanade, to reinstate the original circular arrangement of trees (refer to page 24 in the **GA**). Further the future dwellings within immediate



neighbouring lots proposed to the south will be limited to single storey. These measures are in place to maintain a sense of openness around the homestead, while also framing views of the historic building from the street scene, in accordance with WDC district planning matters relating to the homesteads' historic setting.

### Reserve Network Design

The reserves in the Stage 1 proposal include the linear overland flow path reserves (Northern Flow Channel, the Cam/Ruataniwha River, and the Western Bypass Channel) the expansive stormwater management area and walkway linkage reserves.

The overland flow path reserves will have the greatest concentration of planting in comparison to the other reserve areas, and a predominance of indigenous plantings. Most of the planting will be along the gently graded banks of the overland flow path channels and realigned Cam / Ruataniwha River. This will comprise extensive tree planting, to replace the existing exotic trees that will be felled to make way for the Cam/Ruataniwha River realignment. The tree species will include totara, kanuka, lacebark, titoki, akeake, and other species, that have been determined with the project ecologist to be appropriate for the site conditions, and for providing habitat sanctuary. An indicative list of suitable plant species is provided in the Graphic Attachment (refer to page 26 in the **GA**).

The trees will be underplanted with ephemeral riparian planting, dotted with groupings of taller woody shrub species on the upper banks. The lower riparian planting will be frangible, to avoid inhibiting the flow of flood water. Together, this combination of upper canopy, sub-canopy and riparian planting will provide an enhanced corridor of flow path reserves; it will stabilise and protect the channel banks from erosion; and it will provide a buffer between recreational areas and the channels. The reserves and esplanades, between the crest of the banks and reserve/ esplanade boundaries with surrounding residential properties will be grassed and planted with groups of trees and specimen trees. The tree arrangement has been designed to be compliant with WDC's setback requirements from boundaries and paths, as outlined in WDC's Engineering - Code of Practice – Part 10 – Reserves, Streetscapes and Open Spaces. These trees will include a combination of indigenous and exotic species that can be limbed up to provide amenity, safety, and access, for pedestrians and service vehicles. Some low shrub planting is proposed along residential boundaries, particularly southern boundaries of residential lots adjoining the reserve/ esplanade, which will have solid fences, rather than an open style fence.

The stormwater management reserves along the eastern and southern boundaries will have the most expansive open space areas. Planting will be limited to groupings of mostly exotic trees species (tolerant of open conditions) around the periphery of the dry attenuation basins, and either side of the shared path network. Shrub and riparian planting will be strategically placed around the slopes of the basins to conceal or soften the inlet/ outlet structures and the exterior walls of the cycle underpass.

The linkage reserves will be grassed with a band of low shrub planting along the road frontages to accentuation entry points (provide wayfinding) to the shared path network within the reserves from the street.

In general, the residential/ reserve boundaries will have a 1.2 open style fence, with some 1.8m tall timber fences along southern boundaries, and around corner lots to provide a balance of privacy and reserve outlook. Residential lots with open style fencing will be encouraged to landscape behind the post and rail fence to provide an attractive interface with the reserves. Residences that require greater containment for young children and pets can elect to have a tensioned cable installed between the timber rails.

The shared path meandering through the overland flow path reserves, Cam/Ruataniwha River esplanade and stormwater management area will be asphalt, with exposed aggregate thresholds at key junctions and nodes to enhance legibility and wayfinding. The shared path will cross the overland flow channels and Cam/Ruataniwha River by way of footbridges. Interspersed seating along the shared path network will provide opportunities to pause and rest a while.

### Design Narrative and Elements

Many of the design elements in the Stage 1 proposal will determine the design vernacular for the overall Bellgrove Development. In essence, the design elements will be derived from a design narrative crafted by **Rough and Milne** that identify the key design drivers for the development and will create a strong identity and distinctiveness for the Bellgrove Development. The key design elements that will be replicated throughout the development include:

- Planting design
- Entrance walls and signage
- Footbridges
- Culvert bridge surrounds and barriers
- Boundary interfaces

## 5.3 Urban Design Assessment

The Stage 1 development has been assessed under the following relevant urban design topics: – (1) Urban Form and Character, (2) Urban Structure and Connectivity, (3) Relationship to Street, (4) Public Realm and (5) Architectural Concept. These topics align with the New Zealand Urban Design Protocol, specifically the seven C's: Context, Character, Choice, Connections, Creativity, Custodianship and Collaboration, but are more specific to the proposed development.

1. **Urban Form and Character** – built form patterns, urban grain, land use, identity, and character.
2. **Urban Structure and Connectivity** – overall spatial structure, site-wide connections, and scale relationships.
3. **Relationship to Street** – street role and character, access, edge quality and street amenity.
4. **Public Realm** – quality of routes and spaces, safety, public invitation, and occupation of space.
5. **Landscape Architectural Concept** – visual interest, scale relationships, and entrances.

### ***Topic 1: Urban Form and Character***

Stage 1 will include a mix of medium density and general residential built forms, structured around an expansive network of open space, occupying some 25% of the site, and set within a logical order of well-connected streets.

Central to the built form pattern proposed, will be the Bellgrove homestead, which will be retained for its historic heritage value. The homestead will be a central landmark within the Stage 1 proposal serving as a reminder to the past, and adding depth and distinctiveness to the neighbourhood, while strengthening the sites' connection to the past. The homestead will be maintained within a generous sized allotment (the Heritage Lot), to maintain an open character around the historic building.

Immediately adjacent properties to the south will have consent notices ensuring new development responds sensitively to the heritage building. The street and esplanade boundaries of the Heritage Lot will also be built in accordance with the landscape plan to ensure these interfaces are appropriate in their character and form while providing filtered views of the homestead. While the retention of more mature trees, particularly the redwood and weeping elm, would add character and improve visual amenity, this was not possible given their dispersed arrangement beyond the periphery of the Heritage Lot, and the realignment of the Cam/Ruataniwha River within the adjoining esplanade.

The medium density housing will include a combination of terrace housing on the narrower lots (10m wide), duplexes, and standalone dwellings. The terrace housing is likely to comprise a combination of single and two storey buildings, with the standalone dwellings typically being single storey.

The terrace housing is anticipated to be developed in blocks, of two, four and five lots, to create a variety of architectural form. The sections for terrace housing will be sold to a range of builders with design guidelines and developers approval requirements, to ensure they are designed/ constructed to a high standard and are in keeping with the masterplan and vision for Bellgrove Development.

Given the terrace housing fronting the Northern Flow Channel (Lots 127 to 138 and 186 to 196) have a skewed orientation to both the road and reserve, the layout provides an opportunity to stagger the frontages of the respective units slightly, to provide modulation of built form.

Some of the higher density housing will be serviced by a rear access lane (10m wide) enabling the street frontage to the north of these units to be clear of driveways, providing streetscene amenity and better solar gain. Where the narrower, 10m wide, lots require vehicle access from the street for garaging, it is recognised that there will be limited space for street tree planting in the berm, and landscaping within the lots will be restricted to narrow bands between the internal boundaries, driveways, and paths leading to the front door.

The landscape of the open space network will exhibit a consistency of character throughout, ensuring that the overland flow, stormwater, and link reserve areas collectively possess a strong identity. Consistency of character will add to the perceived connectivity that the open space network provides, encouraging public transport and active transport modes. Consistency of character will be achieved using a coherent design vocabulary of materials and forms derived from the developments design narrative (described earlier in this report) as well as plant species indigenous to the site to establish a landscape character reflective of past ecosystems. While possessing an overall character and identity, the open space network will also include a variety and diversity of open space (taking into consideration the adjoining Stage 2 Recreation Reserve), that in general, provide expansive open space areas, densely planted corridors, and activity nodes. In addition to providing amenity and recreational opportunities, the open space network will perform a functional role as the means for collecting, purifying, and discharging stormwater from the catchments within the site, as well as shifting flood water expediently through the channelised overland flow paths within the site. An integrated network of attenuation basins and vegetated swales, including the Cam/Ruataniwha River, will manage flood and stormwater while simultaneously enhancing the ecology of the site, providing habitat sanctuary for native fauna and amenity and educational opportunities for the community.

## ***Topic 2: Urban Structure and Connectivity***

The Stage 1 proposal is built around a network of open space that acts as the principle structural element of the master planned community. Providing connections to all parts of the community, the open space network will facilitate and encourage walking and cycling and will provide amenity and access to recreational opportunities for all residents. A key aspect of the open space network are

Northern Flow Path and Cam/Ruataniwha River, which form two linear parks, running from northwest to southeast, functioning as pedestrian and cycle movement corridors. These will play a similar role to the Avon River in central Christchurch, gently curving their way through the built environment, providing open space, amenity, and connectivity to and from the Commercial Lot and feeding into the more expansive open space areas of the stormwater management area, ensuring all members of the community have equal access to the open space network. Green links will connect residential areas of the development not immediately fronting the open space network, providing accessways, aligned with key desire lines, for residents living nearby and members of the wider community walking or cycling through the Bellgrove Development. The reserve and esplanade areas will together contribute to the provision of open green space and indigenous habitat at the wider city and regional scales.

The urban structure within the Stage 1 proposal will cater for a mix of medium density and general residential building typology. This will provide development flexibility and diversity contributing to a richer master planned community, unique in comparison to other developments in Rangiora, making it a special place in this location.

The Stage 1 proposal has been designed in general accordance with the anticipated density outcomes of the NER-ODP. The positioning of medium density around important nodes, such as the Commercial Lot and within the southwest corner of the development near the Rangiora town centre, is seen positively given denser living area in these locations will contribute to economic sustainability and vibrancy of the future local and town centre. The lower density development, zoned general residential, fronts most of the open space network where larger sections will enable more landscaping and therefore, a more attractive interface with the reserve and esplanade areas, so they appear bigger by utilising the 'borrowed scenery' within these larger residential lots.

The proposed road layout is in accordance with the structure sought by the NER-ODP and includes an extensive network of pedestrian and shared paths ensuring good connectivity with the open space network and surrounding urban environment.

The Stage 1 proposal has both internal and external pedestrian and cycling connections throughout the development. The elaborate shared path network includes as many as five footbridges, to maintain key pedestrian/cycling desire routes across the overland flow paths and Cam River / Ruataniwha. It also has provisions for future connections to the surrounding area, such as a cycle underpass below Kippenberger Avenue, and the provisions for extending the shared path network in all directions within the NER-ODP.

### ***Topic 3: Relationship to Street***

The Stage 1 proposal will be developed with three hierarchal street typologies: a primary north/south collector road (Road 1), a secondary north/ south secondary collector road (Road 2), and local roads (Roads 3 to 10) comprising two crescents and two cul-de-sac roads.

The primary collector road (Road 1) along the western boundary will include a separate shared path and footpath and be the main (direct) thoroughfare from north to south for the NER ODP. Road 1 will have the appearance of a main through road given the absence of residential driveways along and the provision of a central median along majority its length. Concrete kerb planters within the paved parking bays will maintain an avenue of street tree planting on both sides of the road, rather than being restricted to the eastern grass berm.

Residential properties with a southern boundary with Kippenberger Avenue (arterial road), will have a well-articulated solid acoustic fence, 1.8m in height, that will be softened with shrub planting grading

up from the adjacent grass verge and shared path to approximately half the height of the fence. The combination of a segmented linear form for the fence, and landscaping along its base, will pleasantly alter the uniformity of the fence, soften its exterior, and provide an attractive landscaped interface with the street.

The exact typology and housing design will be determined by future purchasers of the residential lots. A series of residential design standards are proposed for each lot that are included as draft conditions with the application and proposed as future consent notices. These standards will look to ensure that the proposed future dwelling establishment is of a built form character that is appropriate for the future residential land use.

Design standards for future dwellings differ depending on the position of residential lots within the development (i.e. whether they are adjacent to a reserve area) and the density of the lots (medium vs general residential). Custom standards are also proposed for the two residential lots proposed immediately south of the Belgrove Homestead (Lot 1400). The design standards include provisions relating to building height, site building coverage, recession planes, landscaped permeable surface areas, road and internal boundary building setbacks, ensuring habitable rooms at ground level that interact with the street and/or reserve areas, outdoor living space areas and fencing.

A full list of the proposed built form conditions can be found in the Assessment of Environmental Effects prepared by Aurecon, accompanying the subdivision and resource consent applications for the proposed Belgrove (Stage 1) development.

#### ***Topic 4: Public Realm***

The future Commercial Lot within the Stage 1 proposal is strategically located at the junction of the north/south primary collector road (Road 1) and east/west secondary road (Road 8), adjoining the Northern Flow Channel, and is positioned directly across from the future Stage 2 Recreation Reserve. The Commercial Lot is aligned east/west providing optimum north-facing retail development opportunities and is of a size comparable to successful retail areas in other residential developments. The shared path connects to the Commercial Lot by way of a footbridge aligned centrally with the Stage 2 Recreation Reserve. It is envisaged that collectively, this area will become a node for social interaction and activity within the local community.

As described above, the historic Belgrove homestead, within its new setting within the Stage 1 proposal, has the potential to enhance the public invitation and occupation of space, should the homestead be adapted for public functions and events. Even within its proposed private allotment, views of the homestead from Road 2 and the esplanade will contribute positively to the public realm.

The quality, safety and accessibility of the routes and spaces within Stage 1 Belgrove have been carefully considered, at macro and micro scales, to ensure the Belgrove development is a positive addition to the urban fabric of Rangiora.

Reserve and esplanade areas will have low, or partially transparent, boundary fencing (along most residential/ reserve boundaries), to ensure these areas have passive surveillance. The reserve road frontages will be kept open to provide accessibility and visibility.

The linear (overland flow path) reserves have been designed with interspersed green links to avoid long runs without alternative routes and ensure multiple connections to encourage public use of this space and to comply with CPTED (Crime Prevention through Environmental Design) principles, such as avoiding entrapment areas.

The footpath thresholds within the street intersections have been designed so that the setdowns are setback from the corners, where it is safer to cross the road. Where the spaces between the footpath and kerb are planted, the plant species selected will be low growing, to maintain vehicle sightlines. Tactile indicators will be included in the footpath setdowns to assist visually impaired users.

While the shared paths will be formed to the usual 2.5m width, the footpaths will have a generous width of 1.8m making them more accessible for prams, wheelchairs, and groups of people.

Barriers will be installed adjacent to footpaths, above the box culvert openings, to comply with 'safety from falling' standards and provide repeated architectural form enhancing streetscene amenity and reinforcing the identity and distinctiveness of Bellgrove Development.

Footbridges will be used, rather than spillway paths, where shared paths cross the (dry) overland flow channels. By keeping the movement network at the same level as the shared paths, and not dipping down to follow the profile of the channel, pedestrian and cyclist safety will be maintained, while also making a feature of traversing the flow path channel by an elevated footbridge. Once the corridor planting has become established (approx. 10 years), the footbridges will also provide a lookout through the canopy layers of the indigenous vegetation.

### ***Topic 5: Landscape Architectural Concept***

Visual interest for the Stage 1 proposal is provided in the design elements, their spatial arrangement and how people experience and interact with these. The principal design elements are: - the entrance walls, boundary interfaces, paving thresholds, footbridges, and planting.

The design elements will be derived from a design narrative, used to develop unique forms, patterns, and arrangements for the design elements that will together provide a unique design vernacular and 'sense of place' for the Bellgrove Development.

The scale relationship of the open space network includes narrow linear spaces associated with the overland flow reserves and Cam/Ruataniwha River esplanade, as well as broad open spaces related to the stormwater management area.

Within the Cam/Ruataniwha River esplanade, the reserve width between the 'top of bank' and boundary, where residential lots are on both sides, ranges from 7 to 9m on the northern side, and 7 to 17m on the southern side. The northern side contains the shared path network, with a small portion on the southern side where it crosses the Cam/Ruataniwha River channel to connect into a link reserve. The shared path has a meandering alignment, and therefore, the space between the path and northern boundary ranges from 2.3 to 10m+, and the space between the path and 'top of bank' is between 1.5 and 4.5m. The southern side will be grassed and will be available for informal public access and as access for maintenance vehicles.

For the Northern Flow Channel, the reserve width between the 'top of bank' and boundary, where Stage 1 and 2 residential lots are on both sides, is consistently 7m on the northern side and 3m on the southern side. The shared path network occupies the northern side, except where it crosses the Northern Flow Channel to the southern side to connect to the Commercial Lot. The shared path has a shallow meandering arrangement, and consequently, the space between the path and northern boundary ranges from 2.0 to 3.6m, and the space between the path and 'top of bank' is between 0.8 and 2.0m. The southern side will be grassed and is assessable for public access but will primarily be used for vehicle access for maintenance.



As described previously, the tree arrangement in relation to paths and reserve boundaries has been designed in relation to the setback requirements in WDC's Engineering Code of Practice. Therefore, the scale relationship between trees on the periphery of the open space network and the immediately surrounding residential lots is deemed appropriate.

Three types of fences are proposed for the residential/ reserve boundaries (post and rail, pool fencing and solid fencing) to provide visual interest and functionality, while also striking a good balance with other desired attributes, including casual surveillance and screening of the rear of residential properties (where sheds, bins, clothes lines, etc are likely be located) from within the reserves; and providing privacy, enclosure, and an open outlook for residential lots oriented towards the reserves.

Entrance walls located inside the private allotments, on the respective intersection corners, will be designed to enhance the arrival experience at Bellgrove North while also providing screening and noise attenuation for the private allotments. The solid acoustic fence in between the entrance walls, will interface with Kippenberger Avenue and will be designed to provide visual interest and street amenity.

#### **5.4 Assessment against landscape values including visual effects**

The Stage 1 proposal has been assessed using the Draft Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines<sup>9</sup>.

"A landscape effect is a consequence of changes in a landscape's physical attributes on that landscape's values. Change is not an effect as landscapes are constantly changing. It is the implications of change on landscape values that is relevant."<sup>10</sup>

It is important to appreciate that change to the character of a landscape is not necessarily adverse. Whether effects are adverse or not depends to a large extent on public expectation of what can be reasonably anticipated to occur in the landscape. Allied to this is the landscape context in terms of its degree of naturalness/modification, existing patterns, scale, visibility, and levels of public appreciation.

Potential landscape and visual amenity effects are those that change the appearance of the landscape, including its natural character. Any natural or physical activity has the potential to alter the landscape character and amenity.

##### **Landscape Character Change**

As previously described under the 'landscape character' section of this report, the site of the Stage 1 proposal is essentially a working rural landscape, with varying degrees of rural amenity. Both the rural environment within the site itself and the surrounding urban environment possess alternate levels of amenity. Both environments have their own distinct character and a definite contrast between them is already apparent. Amenity values of the Stage 1 Bellgrove site include openness, spaciousness, a spine of naturalness and greenery associated with the tree vegetation of the Cam/ Ruataniwha River and historic homestead setting. For residents living across the road from the site on Kippenberger

---

<sup>9</sup> 'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines'. [Final draft subject to final editing, graphic design, illustrations, approved by Tuia Pito Ora/NZILA]. 5 May 2021.

<sup>10</sup> 'Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines'. [Final draft subject to final editing, graphic design, illustrations, approved by Tuia Pito Ora/NZILA]. 5 May 2021. Page 61.

Avenue, amenity values may also include proximity to green (rural) open space as well as general rural outlook and amenity of the area.

With any rezoning of rural land for urban development, it is inevitable that a significant change in landscape character will result. The Stage 1 proposal will result in a change to the character and visual amenity of the site, and therefore, potential issues with loss of green (rural) open space, especially for those residents in the locale, will arise. It is important to appreciate that a change in landscape character does not necessarily mean a loss of amenity.

In general, landscape character will change from predominantly rural to urban residential because of the proposed land use change, increased density of dwellings and roads and the substitution of working agricultural land with public open space and amenity planting. Essentially the basis from which amenity is derived will come from an alternative source. In essence, this is the replacement of rural amenity with high levels of urban amenity. Generally, amenity in an urban setting emanates from attractive building design, tree, gardens, well-maintained properties, and quality open space. The way in which open space integrates with the built form of development will also impact amenity outcomes.

Regarding the site, the greatest degree of landscape change will occur on land that is nearest to the existing surrounding urban environment to the west and south, because the eastern part of the site, which currently possess higher rural amenity will be developed as a stormwater management area, which will retain open space and will establish groups of tree planting.

There would appear to be no strong reason, from a landscape perspective, that the site is not suitable for urban expansion. The subject land is not considered as significant natural environment; however, it is noted the upper reaches of the Cam/ Ruataniwha River extend through it (and is identified as a scheduled natural character freshwater body), and the river, and adjacent historic homestead, are surrounded by mature tree vegetation.

As a result of the development, it is inevitable that the natural character of the site will be lower, keeping in mind that the only noteworthy natural feature within the site is the Cam/ Ruataniwha River, and this has already been modified from its natural state, with a dominance of large exotic trees and distinct absence of an understory of riparian planting, as well as a modified vegetation pattern along the Cam/ Ruataniwha River, given the exotic trees are constrained to the riverbanks by stock fencing. This modified landscape, has already undergone historical change to exotic pastureland and will become increasingly modified with urban expansion. At the same time, the proposed restoration planting of the Cam/ Ruataniwha River and Northern Flow Channel, with indigenous vegetation, will increase natural character along these channels.

While the replacement indigenous planting within the realigned Cam/ Ruataniwha River will initially be sparse at the 'time of planting', the new planting will start growing immediately, and over several years, establish a new upper canopy, to replace that currently provided by exotic trees, but also a sub-canopy and understory of riparian planting, which is currently lacking in the existing vegetation. The multiple canopy layers and understory buffering will provide greater biodiversity, landscape quality and amenity value, particularly where people will view the planting at closer proximity from the shared paths and surrounding grass areas within the esplanade and reserves.

The reintroduction of indigenous vegetation in the Cam/ Ruataniwha River, that departs from the exotic tree vegetation, as well as indigenous planting in the overland flow paths and stormwater management areas, will re-establish aspects of the pre-existing landscape character that has been lost to agriculture, returning a degree of natural character to the open space network within the Bellgrove Stage 1 proposal.



The eastern edge of the proposed development will also impact on landscape character, as illustrated in the Indicative Reserve Sections (refer to page 27 of the **GA**). This part of the site will be raised for servicing and natural hazard mitigation. Battering is proposed, along the eastern boundary within the site, that will be between 0.5 and 1.0m high, which will be either grassed or planted depending on the steepness of the batter.

As described previously, the interface along Kippenberger Avenue will be relatively flush with the existing ground level and landscaped with trees and shrub planting within the stormwater reserve, east of the secondary collector road (Road 2), and the western section will include an acoustic fence and landscape planting. The latter will be a significant change in landscape character for those north facing residences on the southern side of Kippenberger Avenue, that currently have an open, rural outlook across the site (this is described in more detail in the proceeding assessment of visual effects).

### **Visibility of Landscape Character Change**

Visibility of Stage 1 of the proposed Bellgrove Development will be mostly experienced by: people traveling along Kippenberger Avenue; people living in residential properties on the southern side of Kippenberger Avenue with a northern outlook across the site; the Lamb & Hayward property immediately southwest of the site, and from a short section of the East Belt Road just south of Rangiora High School.

In addition to this, views of the Stage 1 proposal will also be obtainable from Devlin and MacPhail Avenues where they intersect with Kippenberger Avenue and potentially from the adjoining rural lifestyle properties to the east and west of the site, however from aerial photography, it appears that views of the site from the residences on these properties will be mostly obscured by surrounding vegetation.

The Stage 1 proposal is not visible from Coldstream Road or Golf Links Road located on the periphery of the wider Bellgrove Development site, nor is it visible from the new Rangiora Sports and Recreation Centre (MainPower Stadium) on Coldstream Road.

It may be possible to obtain distant views of the Stage 1 proposal from the Rangiora Golf Club, however from examination of recent aerial photography it is highly likely that any views of the proposal from the golf course would be obscured by existing trees and shelterbelt planting both within the golf course and within the northern part of the Bellgrove Development site.

### **Assessment of Visual Effects**

*“Visual effects are a subset of landscape effects. They are consequences of change on landscape values as experienced in views. They are one technique to understand landscape effects.”<sup>11</sup>*

Amenity is what makes an environment pleasant in both the physiological and aesthetic sense.

The following is an assessment of the visual amenity effects of the Stage 1 proposal based on the main viewing locations identified above. The assessment refers to the Viewpoint Location Plan and Site Photographs on pages 28 to 32 in the Graphic Attachment.

---

<sup>11</sup> ‘Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines’. [Final Draft subject to final editing, graphic design, illustrations, approved by Tuia Pito Ora/NZILA 5 May 2021]. *Page 61.*

## People travelling on Kippenberger Avenue

### Existing Situation

As described previously, Kippenberger Avenue is east-west arterial road extending through to High Street within the Rangiora township. It is frequently used by people travelling between Rangiora and Woodend, and it provides a transition between the wider rural environment and urban settlement of Rangiora. An avenue of mature street trees (Ash species) along both sides of the road serves as a natural 'gateway' feature into the Rangiora township from the east, albeit the street trees on the southern side of Kippenberger Avenue, west of the site entrance, are newly planted trees.

Heading west towards Rangiora township, the earliest views of the site are available from the kerb extensions where the speed signs change from 80km p/hr to 50km p/hr, albeit these views are fleeting given the avenue of street trees. Where views into the site are available, such as from above the cattle underpass below Kippenberger Avenue, just before its intersection with Devlin Street (refer to Viewpoints 1A and 1B on page 29 in the **GA**), the open pastureland within the site, is backdropped by the tree vegetation associated with the Cam/ Ruataniwha River and the historic setting of the Bellgrove homestead.

For nearly half of the site road frontage with Kippenberger Avenue, views into the site are obscured by a large shelterbelt, just inside the site southern boundary. The shelterbelt roughly extends from the intersection of Kippenberger Avenue and Devon Street to the east to the existing entrance to the site to the west (refer to Viewpoint 3 on page 30 in the **GA**).

The most prominent views of the site from Kippenberger Avenue are available along its western road frontage, between its intersection with MacPhail Avenue (refer to Viewpoint 4A & 4B on page 31 in the **GA**) and the existing site entrance, adjacent to the western end of the shelterbelt planting within the site. From this section of Kippenberger Avenue expansive views across the open pastureland within the site will be obtainable. For people traveling east out of Rangiora, the homestead is visible, approximately 215m away, nestled within its surrounding tree vegetation. The existing row of pin oak trees along the driveway contributes to its visibility by drawing the eye to the historic homestead.

### Proposed Change

In general, the Stage 1 Bellgrove proposal will result in the northern side of Kippenberger Avenue, which is currently open farmland, being developed for residential housing. This will counter-balance the existing urban development on the southern side of Kippenberger Avenue and redefine the urban limits of the Rangiora township further east, near the Kippenberger Avenue intersection with Devon Avenue.

The visual effects of the Stage 1 proposal on Kippenberger Avenue can be assessed in two parts. Firstly, the section of new residential development that will be located immediately opposite Kippenberger Avenue, and secondly, the section of residential development that will be located further back, behind the stormwater reserve immediately fronting Kippenberger Avenue.

The western section of Kippenberger Avenue will result in the greatest visual effects, given the open pastureland within the site will be replaced by an increased density of built form and solid fencing (albeit softened with landscaping), significantly reducing the openness and greenery of the working agricultural land currently experienced from the road. This section along Kippenberger Avenue adjacent to the Stage 1 proposal, will have **moderate to high** visual amenity effects.

The eastern section of Kippenberger Avenue will have a more positive visual amenity outcome because the proposed stormwater management area, will to some degree, maintain open space and establish new tree vegetation, albeit this will include urban elements such as attenuation basins and a pump station. The open space and established tree planting within the stormwater reserve will provide a high level of streetscene amenity. This section of traveling experience along Kippenberger Avenue adjacent to the Stage 1 proposal, will have **moderate** visual amenity effects.

Notwithstanding the above assessment of visual effects for the western and eastern sections of Kippenberger Avenue, residential development within the site, such as that proposed, is anticipated by higher order planning documents so even though the effects are moderate and moderate to high, they are still considered to be acceptable.

### Residents living in properties on the southern side of Kippenberger Avenue

#### Existing Situation

Approximately 15 general-density residential properties are located on the southern side of Kippenberger Avenue directly opposite Stage 1 of the Bellgrove development. The residential properties west of the sites existing driveway entrance to Bellgrove homestead (52 Kippenberger Avenue), currently possess an expansive northerly outlook across open pastureland within the site, albeit this is fragmented by mature street trees in the foreground (refer to Viewpoint 4A & 4B on page 31 in the **GA**). In contrast to this, the views from residential properties east of the sites entrance, are obscured by a dense Leyland shelterbelt just inside the site's southern boundary (refer to Viewpoint 2 on page 30 in the **GA**).

It is noted that there is also a larger lifestyle property and pet supply store (Pet Plus) located side by side, and immediately opposite the existing driveway entrance to Bellgrove homestead. Views of the site from the dwelling and main building on these properties are mostly obscured by dense vegetation along the road frontages with Kippenberger Avenue.

#### Proposed Change

Along the full length of the northern side of Kippenberger Avenue, adjacent to the site, the existing mature street trees, unformed road edge and overhead powerlines will be replaced with new street trees (planted in garden areas between parking bays), a formed kerb edge, a shared path, and undergrounded powerlines. This will significantly urbanise the northern roadway of Kippenberger Avenue.

For neighbouring residences in properties west of the sites existing driveway entrance, their northerly outlook will change significantly, from an expansive rural setting with mature trees, to a new urban environment set behind a solid (acoustic) fence along its southern boundary with Kippenberger Avenue. Nevertheless, the site and its immediate surroundings have been earmarked for the urban expansion of Rangiora to the northeast as part of the NER-ODP for many years, and while neighbouring properties on southern side of Kippenberger Avenue, will lose their rural outlook, this will to some degree, be replaced by a new urban streetscene amenity. As described previously, the proposed acoustic fence will be well-articulated possessing forms and materiality that complement the entrance walls at either end, and the 0.9m space between the fence and shared path will be planted with low planting. In addition, the northern side of Kippenberger Avenue will be upgraded with a shared path, parking bays and trees in planted areas. The combination of a well-articulated fence, street trees, and landscaping in both the street verge and along the fence, will provide an attractive interface with Kippenberger Avenue; however, the magnitude of the visual amenity effects is assessed as being **moderate to high**.

For neighbouring residences in properties east of the site entrance, their outlook will also change significantly, with the removal of the existing shelterbelt, and the opening of views into the stormwater reserve. This will improve the outlook of these properties and likely also improve solar gain, particularly in the winter months. While a couple of these properties will look directly at the pump station, within the stormwater reserve, particularly its perimeter fencing, this will be softened with shrub planting, except for in front of gateway to the compound. Overall, these properties will have **low to moderate** visual amenity effects.

It is noted that while many of the residential properties on the southern side of Kippenberger Avenue currently have an open road frontage with their living areas, oriented towards the site to take advantage of the rural outlook across the road, this amenity is diminished by the presence of an arterial road in the foreground and, it is anticipated that overtime, as the road become busier, the residents will likely erect solid fences for acoustic protection and focus inwards, similar to the residential allotments and southern interface of the Stage 1 development.

### People visiting the Lamb and Hayward Chapel

#### Existing Situation

The Lamb & Hayward funeral services property (92 Kippenberger Avenue) is located adjacent to the sites southwest corner, on the other side of a narrow accessway, leading to the rural lifestyle property at 78A Kippenberger Avenue. The accessway possesses an open post and wire fence either side. Lamb & Hayward currently have an open outlook to the east across the driveway, and open pastureland within site. The tree vegetation following the Cam/ Ruataniwha River and surrounding Bellgrove homestead provide a vegetated backdrop to the view (refer to Viewpoint 5 on page 32 in the GA).

#### Proposed Change

As part of the Stage 1 proposal, the accessway to 78A Kippenberger Avenue will become part of Stage 1 Bellgrove, enabling a smooth transition between the primary collector road (Road 1), extending north/south within the development and its junction with Macphail Avenue. Alternative access to 78A Kippenberger Avenue will be provided from the primary collector road inside the site.

The Stage 1 proposal will result in the new primary collector road immediately adjoining the Lamb & Hayward property. It is understood that the existing post and wire fence will remain in place along the its eastern boundary.

The rural outlook currently experienced from the Lamb & Hayward property will be changed significantly by the Stage 1 proposal. The primary collector road will dominant the outlook but is in keeping with that anticipated by the NER-ODP. While this is highly urbanised, it will also possess street trees along both the road berms and within the central median, and the median will be mostly in grass with areas of shrub planting, which will diminish and soften the hardstand surfacing. The proposed residential allotments on the opposite side of the new road, will likely install solid fencing along the entire length of their combined western boundaries to provide privacy and noise attenuation, given these residential allotments are to be accessed from local roads within the Stage 1 Bellgrove development. The visual amenity effects from the Lamb & Hayward property are assessed as being **moderate to high**.

### People travelling along the East Belt

#### Existing Situation

The East Belt Road extends in a north/ south alignment from Kippenberger Avenue in the south, to Coldstream Road in the north. For the most part, the road is surrounded by urban development on both sides of the road, including Rangiora High School. There is a reasonable gap in the urban development on the eastern side of the road, opposite the Rangiora Baptist Church, that is approximately 220m long. This gap enables views across open paddocks to the Stage 1 site.

#### Proposed Change

Currently, a shelterbelt is located along the site's western boundary opposite the gap, some 550m away, which screens views into the site (refer to Viewpoint 6 on page 32 in the **GA**), however this will be removed as part of the proposed Bellgrove development opening views into the new residential development, particularly the primary collector road (Road 1), extending north/south within the development.

The proposed development will result in a significant amount of tree vegetation in the background of the view being removed, and it's likely that distant views of the new urban development will be visible from this part of the East Belt for some time, given a decision on how the education precinct within the NER-ODP will be developed in the future is likely to be sometime away. The visual amenity effects from the Lamb & Hayward property are assessed as being **low**, while the paddocks remain undeveloped.

#### Visual Effects Summary

Overall, the visual catchment of the Stage 1 Bellgrove development is relatively small despite the large scale of the development, and public viewing locations are restricted to Kippenberger Avenue, the Lamb and Hayward chapel and a distant view from a small section of the East Belt.

While the proposed Bellgrove North development represents a significant change in landscape character and amenity, reverting from an open rural environment to a much denser urban environment, this change is anticipated within the district plan and its planned framework is illustrated in the NER-ODP. The site and surrounding area within the NER-ODP is the last remaining tract of land in proximity to the Rangiora town centre. It is therefore inevitable that this land, encompassing the site, will be developed, and it is a logical urban expansion of Rangiora.

## 6.0 Conclusion

### 6.1 Summary of Assessment

The proposed Bellgrove North occupies most of the land earmarked for development under the NER-ODP within the pWDP. Stage 1 is the largest stage within the development, and its design is important, as it will set the general character and framework for Bellgrove North Development going forward.

In general, Stage 1 complies with the relevant objectives and policies under both the WDP and pWDP, and is consistent with the NER-ODP for the following reasons:

- The lot layout for the medium and general density residential allotments, provide for a range of housing typologies with favourable solar aspects, and the medium density residential development is concentrated around the Commercial Lot, and in the southwest corner of the site near the Rangiora town centre.
- Design standards for future dwellings within the varying residential allotments will ensure built form is appropriate within the new residential neighbourhood.
- The Commercial Lot is strategically located adjacent to main roads and will have an outlook across linear flow path reserves, with a footbridge connection to a future Stage 2 Recreation Reserve, which together will provide a vibrant neighbourhood/ local centre.
- It provides a high-quality open space network, by merging the Cam/Ruataniwha River esplanade, overland flow path reserves, and the stormwater management area to form a substantial area of public open space. This area is connected through a network of shared paths and footpaths.
- It preserves the Bellgrove homestead as a historic landmark, within a generous sized Heritage Lot, within the development. Its proposed interface controls, tree planting, and other measures, will ensure the heritage of the building and its site is respected, while maintaining visibility from public viewpoints.
- It provides landscape and ecological restoration for both the Cam/Ruataniwha River and Northern Flow Channel that pass through the site, while enhancing its underlying function as an overland flow path for shifting flood water should this be required.
- The open space network is within walking distance of all residences within the Stage 1 proposal and the green linkage reserves provide access routes between residences and the larger areas of open space, as well as connections to the wider Rangiora community.
- A variety and diversity of open space (taking into consideration the adjoining future Stage 2 Recreation Reserve) is provided while at the same time possessing an overall character and identity for the development.

- Creative use of planting to reinforce connections to the open space network, afford habitat sanctuary, and visual relief from the surrounding built environment.
- Landscaping, including trees, shrubs, and groundcover planting, will firstly reinforce the hierarchy of, and secondly provide high amenity outcomes for both the road and open space networks.
- A high amenity interface between public and private area is provided for, as is passive surveillance of public spaces in accordance with the principles of CPTED.
- A landscape design that provides for a consistent landscape character throughout the development, ensuring the open space and streetscape network collectively possesses a strong identity and connectivity throughout the development.

## 6.2 Conclusion

Overall, the landscape and urban design of the proposed Bellgrove North Development – Stage 1 is considered appropriate. The Stage 1 proposal complies with the NER-ODP, and the lot layout and landscape design for the reserve and streetscape areas are considered appropriate and will play an important role in achieving a high amenity future residential environment that becomes an asset for the Rangiora community.

Given urban expansion in the northeast part of Rangiora is anticipated under the NER-ODP, the landscape and urban design effects of the Stage 1 proposal have been assessed as being less than minor.



# Appendix 1

Table 1: Ecosystem Factors Relating to Natural Character Rating<sup>12</sup>

Natural character rating	Very High		High		Moderate - High		Moderate		Moderate-Low		Low		Very Low	
	Natural	Non-disturbed	Near-natural	Very weakly influenced	Semi-natural	Weakly influenced	Agricultural	Moderately disturbed	Agricultural	Strongly influenced	Near cultural	Very strongly influenced	Cultural	Extremely disturbed
<b>Ecological naturalness state</b>	Natural	Non-disturbed	Near-natural	Very weakly influenced	Semi-natural	Weakly influenced	Agricultural	Moderately disturbed	Agricultural	Strongly influenced	Near cultural	Very strongly influenced	Cultural	Extremely disturbed
<b>Measure of human influence</b>	Natural	Non-disturbed	Near-natural	Very weakly influenced	Semi-natural	Weakly influenced	Agricultural	Moderately disturbed	Agricultural	Strongly influenced	Near cultural	Very strongly influenced	Cultural	Extremely disturbed
<b>Typical habitats</b>	<b>Self-regulating</b>													
	Habitats approaching pristine state – no human modifications to ecosystems		Forest vegetation communities with species and structure typical of the site, limited harvesting or clearing of biomass, light fertiliser, pastoralism		Managed exotic forests, extensive pastoral farmland, slight improvements		Intensive grazing, developed pasture. Selection of species in terms of grazing potential (ie clover ryegrass pasture) Extensive arable land, irrigation, fertilised, pesticides, drainage		Regular cultivation, intensively cropped arable land, horticultural cropping, drainage, heavy use of fertiliser and pesticides		Parkland, greenways, green open space		Urban-suburban	
<b>Vegetation structure</b>	No change	No change	No change	No change	Maybe naturally occurring layers beneath exotic canopy	Improved pasture, annual crops	Perennial or annual crops dominant	Amenity plants, turf, ephemeral weeds	Amenity plants, turf, ephemeral weeds	Amenity plants, turf, ephemeral weeds	Amenity plants, turf, ephemeral weeds	Amenity plants, turf, ephemeral weeds	Amenity plants, turf, ephemeral weeds	Amenity plants, turf, ephemeral weeds
<b>Floristic composition</b>	No change	No change	Most species spontaneous	Some species spontaneous, e.g. understory in exotic forestry	Few species spontaneous, other than weeds. Weed growth controlled	Few species spontaneous, other than weeds. Weed growth controlled	Few species spontaneous, other than weeds. Weed growth controlled	Few to no species spontaneous, other than weeds. Weed growth generally controlled	Few to no species spontaneous, other than weeds. Weed growth generally controlled	Few to no species spontaneous, other than weeds. Weed growth generally controlled	Few to no species spontaneous, other than weeds. Weed growth generally controlled	Few to no species spontaneous, other than weeds. Weed growth generally controlled	No species spontaneous, other than weeds.	No species spontaneous, other than weeds.
<b>Substrate change</b>	No change	No change	Few changes	Small, superficial	Moderate	Drastic	Drastic	Drastic - artificial	Drastic - artificial	Drastic - artificial	Drastic - artificial	Drastic - artificial	Drastic, compaction, artificial, impervious surfaces	Drastic, compaction, artificial, impervious surfaces

<sup>12</sup> Ecosystem Factors in the assessment of naturalness (After Sukopp 1971 and van der Maarel (1975).



Table 2: Nature of Effects<sup>13</sup>

Nature of Effect	Use and Definition
Adverse (negative)	The proposed development would be out of scale with the landscape or at odds with the local pattern and landform which results in a reduction in landscape and / or visual amenity values.
Neutral (benign)	The proposed development would complement (or blend in with) the scale, landform and pattern of the landscape maintaining existing landscape and / or visual amenity values.
Beneficial (positive)	The proposed development would enhance the landscape and / or visual amenity through removal or restoration of existing degraded landscape uses and / or addition of positive elements or features.

Table 3: Magnitude of Landscape Change<sup>14</sup>

Contributing Factors		Higher	Lower
Nature of Landscape Resource	Susceptibility to change	The landscape context limited existing landscape detractors which make it highly vulnerable to the type of change which would result from the proposed development.	The landscape context has many detractors and can easily accommodate the proposed development without undue consequences to landscape character.
	The value of the landscape	The landscape includes important biophysical, sensory and associative attributes. The landscape requires protection as a matter of national importance (ONF/L).	The landscape lacks any important biophysical, sensory or associative attributes. The landscape is of low or local importance.
Magnitude of Change	Size or scale	Total loss of addition of key features or elements. Major changes in the key characteristics of the landscape, including significant aesthetic or perceptual elements.	The majority of key features or elements are retained. Key characteristics of the landscape remain intact with limited aesthetic or perceptual change apparent.
	Geographical extent	Wider landscape scale	Site scale, immediate setting.
	Duration and reversibility	Permanent. Long term (over 10 years)	Reversible. Short term (0 – 5 years)

<sup>13</sup> Terminology defined by Boffa Miskell in Annexure 2 of the Evidence Prepared by B. Gilbert for Topic 2 QLDC Hearing on Landscape Methodology. 2019.

<sup>14</sup> Terminology defined by Boffa Miskell in Annexure 2 of the Evidence Prepared by B. Gilbert for Topic 2 QLDC Hearing on Landscape Methodology. 2019. Also, with reference to The Guidelines for Landscape and Visual Impact Assessment (3<sup>rd</sup> Ed), Landscape Institute and Institute of Environmental Management and Assessment, 2013, Routledge.

Table 4: Landscape Effects Rating Scale<sup>15</sup>

Very Low	Low	Low - Moderate	Moderate	Moderate - High	High	Very High
----------	-----	----------------	----------	-----------------	------	-----------

Table 5: Viewer Sensitivity and Magnitude of Change<sup>16</sup>

Contributing Factors		Higher	Lower
Nature of the Viewing Audience	Susceptibility to change	Views from dwellings and recreation areas where attention is typically focussed on the landscape.	Views from places of employment and other places where the focus is typically incidental to its landscape context. Views from transport corridors.
	Value attached to views	Viewpoint is recognised by the community such as an important view shaft, identification on tourist maps or in art and literature. High visitor numbers.	Viewpoint is not typically recognised or valued by the community. Infrequent visitor numbers.
Magnitude of Change	Size or scale	Loss or addition of key features in the view. High degree of contrast with existing landscape elements (i.e., in terms of form scale, mass, line, height, colour, and texture). Full view of the proposed development.	Most key features of view retained. Low degree of contrast with existing landscape elements (i.e., in terms of form scale, mass, line, height, colour and texture). Glimpse / no view of the proposed development.
	Geographical extent	Front on views. Near distance views. Change visible across a wide area.	Oblique views. Long distance views. Small portion of change visible.
	Duration and reversibility	Permanent. Long term (over 15 years).	Transient / temporary Short Term (0-5 years).

Table 6: Visual Effects Rating Scale<sup>17</sup>

Very Low	Low	Low - Moderate	Moderate	Moderate - High	High	Very High
----------	-----	----------------	----------	-----------------	------	-----------

<sup>15</sup> The seven-point scale of very low to very high is in accordance with the New Zealand Institute of Landscape Architects Te Tangi a te Manu – Aotearoa New Zealand Landscape Assessment Guidelines, April 2021.

<sup>16</sup> Terminology defined by Boffa Miskell in Annexure 2 of the Evidence Prepared by B. Gilbert for Topic 2 QLDC Hearing on Landscape Methodology. 2019. Also, with reference to The Guidelines for Landscape and Visual Impact Assessment (3<sup>rd</sup> Ed), Landscape Institute and Institute of Environmental Management and Assessment, 2013, Routledge.

<sup>17</sup> The seven-point scale of very low to very high is in accordance with the New Zealand Institute of Landscape Architects Te Tangi a te Manu – Aotearoa New Zealand Landscape Assessment Guidelines, April 2021.

Table 7: Comparative Scale of Degree of Effects<sup>18</sup>

Very Low	Low	Low - Moderate	Moderate	Moderate - High	High	Very High
Less than Minor	Minor		More than Minor		Significant	

---

<sup>18</sup> New Zealand Institute of Landscape Architects Te Tangi a te Manu, The Aotearoa New Zealand Landscape Assessment Guidelines, April 2021.

## Appendix 2

### Assessment Against Relevant Statutory Provisions

#### **Operative Waimakariri District Plan (WDP)**

The Stage 1 proposal has been assessed against the objectives and policies of relevance to Landscape and Urban Design under the WDP as follows:

##### ***Policy 15.1.1.1***

*Integrate new development, subdivision, and activities into the urban environments in a way that maintains and enhances the form, function, and amenity values of the urban areas.*

The lot layout of the Stage 1 proposal incorporates the existing landscape features of the site including the Cam/Ruataniwha River, the Northern Flow Channel and the Bellgrove homestead.

The proposed road network provides connectivity with the surrounding urban environment. Road 1 has been designed as an extension of existing McPhail Avenue and will become an important primary collector road between Kippenberger Avenue and Coldstream Road to the north. The road network enables future connections with subsequent Bellgrove North stages, as well as land within the NER-ODP to the west allocated for education purposes.

There are also good pedestrian and cycling connections throughout the site, with future potential connections to east and west of the NER-ODP, as well as a future underpass, below Kippenberger Avenue, to the ER-ODP to the south of Bellgrove North.

The Stage 1 proposal integrates the esplanade, stormwater utility reserves, stormwater management areas, and link reserves into a comprehensive open space network. With an area of 5.2 hectares, the open space network accounts for approximately 25% of the development site and spans the entire width of the site in two locations (the Cam/Ruataniwha River and Northern Flow Channel) and occupies most of the eastern part of the site (stormwater management area).

Although Stage 1 does not include a recreation reserve this will be included in Stage 2 immediately adjacent to the Northern Flow Channel in Stage 1 and will eventually form an extension of the Stage 1 open space network. Notwithstanding this, there is a small recreation reserve at Lot 2000, which will likely be used by occupants living in surrounding medium density residential area.

##### ***Policy 15.1.1.3***

*Promote subdivision design and layout that maintains and enhances the different amenity values and qualities of the different urban environments by:*

- *providing links to public open spaces including walkways, cycleways and roads;*

The arrangement of shared paths within the open space network will provide opportunities to take alternative shorter routes between local roads, avoiding the potential for vehicle conflicts on roads.

While the shared path and footbridge within the Northern Flow Channel will provide a connection to the future Stage 2 Recreation Reserve, it is recommended that a pedestrian connection be established through the future Commercial Lot to further link with this footbridge. This would provide a strong

connection, possibly along the boundary of the western diversion channel for residences in the southwest corner of the site, including the medium-density allotments.

- *enhancing the form and function of the surrounding environment;*

The east- west alignments of the Cam/Ruataniwha River and Northern Flow Channel, have played a major influence in determining the form of the open space network, as well as how it functions, such as maintaining overland flow paths across the site. These constraints have also given rise to opportunities such as a series of footbridges across the flood channels, which will not only provide better connections, but these can also become design elements providing identity and character for the Bellgrove Development.

- *providing efficient and effective transport networks including cycleways;*

The roading network for the Stage 1 proposal provides efficient and effective north/south connections through its primary and secondary collector roads. Road 2 is aligned centrally within the site providing an efficient distributor to the local roads on both sides. Cul-de-sac roads will be kept to a minimum (Roads 6 & 7) and while these do not provide connectivity, shared path linkages into the reserve network have been provided within the cul-de-sac roads.

The open space network within the Bellgrove Stage 1 development is well connected by an extensive shared path network that meanders along the northern banks of the Cam/Ruataniwha River and Northern Flow Channel.

- *integrating new developments with the rest of the urban area, where they adjoin existing urban areas; and*

The roading, shared path, and open space network within the Bellgrove Stage 1 development will integrate with the surrounding urban environment, including the future urban development areas within both the NER-ODP and SER-ODP. Key connections to these areas include:

- The stormwater management area will include linkages to both the Cam/Ruataniwha River and Northern Flow Channel for discharging flood waters.
- The naturalisation and flood management improvements of Cam/Ruataniwha River and Northern Flow Channel can be extended east into the neighbouring lifestyle properties, which are inside the NER-ODP as demonstrated on the Pedestrian and Cyclist Connectivity Plan (refer to page 11 in the **GA**).

The positioning of medium-density development in the southwest part of the site, will provide a greater concentration of people living within walking distance of the Rangiora town centre. This will inject more vibrancy and economic stability into the town centre.

The Commercial Lot is positioned adjacent to the primary collector road (Road 1) so that it will be accessible to people living in other parts of Rangiora, that might be passing through the Bellgrove North development (once connected to Coldstream Road).

- *avoiding or mitigating conflicts between the effects of different land uses, such as between residential and business activities.*

The interface with the different land uses surrounding the site to the east, west and south have been well considered, both in terms of their existing situation, and how the adjoining land within the NER-ODP might be developed in the future.

The eastern site boundary adjoins three rural lifestyle properties. The boundary interface will remain as existing standard post and wire fence. There is unlikely to be any reverse sensitivity issues with these neighbouring properties given the open space provided by the stormwater management area occupying this part of the site. There is no built form proposed within the vicinity of the eastern site boundary. The attenuation basins within this part of the site will require earthworks within proximity to the eastern boundary to provide containment within the basins. This involves lifting the ground level within the site. Nevertheless, as illustrated in the eastern boundary cross-sections (refer to page 27 in the **GA**), the level changes can be mitigated within the site by battering down to the existing fence line. The batter slope will mostly be in grass (see Sections A-AA & B-BB), however where it is too steep to mow, it will be planted with indigenous vegetation between the top of the bank and existing fence (see Section C-CC). This boundary treatment is considered appropriate for both the current adjacent rural properties and is designed to be easily integrated with future development within the neighbouring properties.

The southern site boundary is adjacent to Kippenberger Avenue, and the stormwater reserve will occupy 240m of the road frontage east of the proposed collector Road 2 (refer to Section D-DD). The boundary will be defined with interspersed tree and shrub planting. The combination of tree planting and open green space visible from the road will enhance streetscene amenity on an important gateway route into Rangiora. Although the pump station within the stormwater reserve will be visible from the road, its perimeter fencing will be surrounded by shrub planting, to reduce its prominence. The levels for the attenuation basins, within the stormwater reserve, will marry into future works along the northern side of Kippenberger Avenue. This work involves the installation of a 2.5m wide shared path, and a series of parking bays separated by trees and shrub planting in planters.

The western site boundary will include a new primary collector road (Road 1), shared path, and footpath between existing land reserved for education precinct in the NER-ODP and proposed urban development within the site. This is in accordance with that anticipated by the NER-ODP. The roading network, has been designed so that local Road 4 & 8, which intersect with the primary collector road, can extend further west, providing future connections with the education precinct.

Internally, within the Bellgrove Stage 1 proposal, the open space network will have both open and closed boundary interfaces between the reserves and residential allotments. Both the proposed post and rail fencing and aluminium pool fencing, will provide an open interface enabling residences fronting the reserves to provide casual surveillance in accordance with the principles of CPTED. Post and rail fencing is also proposed around the Heritage Lot, where it adjoins the esplanade and street. It is anticipated that many of these residences fronting the esplanade or reserves will landscape their adjoining yard to provide privacy, which in turn, will provide visual interest and amenity for people passing by the properties.

A closed timber fence is proposed along the southern boundaries of residential allotments fronting the esplanade or reserves, and properties adjacent to the linkage reserves. These fences will screen utilities often located in the rear yard, such as garden sheds, clothes lines, and wheelie bins, as well as providing privacy for allotments with a reserve frontage along more than one boundary.

A closed acoustic timber fence will be installed along southern boundaries of residential allotments where acoustic buffering from Kippenberger Road is required. This solid fence will be modulated with elements that complement the entrance walls and provide visual interest. The base of the fence will

be softened with low shrub planting, which together with the street tree planting proposed along the northern side of Kippenberger Avenue, will enhance streetscene amenity.

### **Proposed Waimakariri District Plan (pWDP)**

The Stage 1 proposal has been assessed against the relevant objectives and policies under the pWDP (outlined in Relevant Planning Provisions in this report), as follows:

#### ***SUB-P1: Design and amenity***

*Enable subdivision that:*

- 1. within Residential Zones, incorporates best practice urban design, access to open space, and CPTED principles;*

The Stage 1 proposal achieves this through its carefully considered lot layout, which maintains the overland flow paths of the Cam/Ruataniwha River and Northern Flow Channel extending through the site, while incorporating a lot layout that is consistent with best practice urban design principles (refer to the urban design assessment section in this report), provides access to extensive open space network incorporating the esplanade, stormwater reserve, overland flow path and walkway linkage reserves (refer to the appropriateness of lot layout section in this report) as well as providing for CPTED principles, such as passive surveillance and well connected spaces (refer to the appropriateness of landscape design section in this report).

- 2. minimises reverse sensitivity effects on infrastructure including through the use of setbacks;*

The Stage 1 proposal minimises reverse sensitivity issues by having the stormwater reserves along the eastern side of the development to provide open space between the urban development and neighbouring rural lifestyle properties to the east. To the west, the accessway to 78A Kippenberger Avenue will be incorporated into the Bellgrove roading network to provide a greater setback with the Lamb and Hayward chapel and a safer, more efficiently designed roundabout between the proposed primary collector road (Road 1), Kippenberger Avenue and MacPhail Avenue. For a larger part of the proposed developments interface with Kippenberger Avenue, residential housing is buffered from the road by the open space of the stormwater reserve. Where the residential housing is immediately adjacent to the arterial road, the southern boundary will include a solid acoustic fence, articulated with linear forms to provide visual interest.

- 3. avoids subdivision that restricts the operation, maintenance, upgrading and development of the National Grid;*

The proposed Stage 1 development is not located near the National Grid and there are no plans to extend the National Grid within proximity of the site.

- 4. recognises and provides for the expression of cultural values of mana whenua and their connections in subdivision design; and*

It is understood mana whenua have been involved in the preparation of the NER-ODP, and their feedback has been sought regarding Stage 1 of Bellgrove North.

- 5. supports the character, amenity values, form, and function for the relevant zone.*

Stage 1 supports the form and function of the NER-ODP (refer to the NER-ODP assessment below) and supports the character and amenity of the area through an appropriate lot layout, open space network and connectivity network (refer to the appropriateness of the lot layout).



### **RESZ-P1: Design of development**

*New development in residential areas is well designed and laid out, including by:*

- 1. ensuring that the bulk, scale and location of buildings on sites is consistent with the environment anticipated for the zone, and that impacts in relation to dominance, privacy and shadowing are minimised, while recognising the ability for larger sites in the General Residential Zone and Medium Density Residential Zone to absorb greater height;*

The Stage 1 Bellgrove development is consistent with the NER-ODP by providing a variety of medium and general density residential development, and concentrating higher density residential allotments, around the Commercial Lot and near the Rangiora town centre. Impacts in relation to greater height, such as dominance, privacy, and shadowing, have been considered by locating medium design development in areas where openness is provided by surrounding roads or reserves. The greatest concentration of higher density development has been designed around a central reserve (Lot 2000), which will provide visual relief and amenity.

- 2. ensuring that the combination of buildings, paved surface, and landscaped permeable surface coverage retain a landscaped component for residential sites and provide opportunity for on-site stormwater infiltration, and where this is reduced that it is offset by suitable planting, other green surface treatment, and stormwater attenuation;*

An extensive stormwater management area is proposed within the eastern part of the site for stormwater attenuation and infiltration. The first flush (dry) basins will be appropriately landscaped with trees and shrub planting.

- 3. maintaining streetscapes in Residential Zones where garaging and buildings are set back from the street, and where these setbacks are reduced, that sufficient space is still available for vehicle manoeuvring and impacts of dominance on the streetscape are minimised;*

The exact typology, housing design and setbacks will be determined by future purchasers of the residential lots. A series of residential design standards are proposed for each lot that are included as draft conditions of consent and as future consent notices to place on these titles. These standards will look to ensure that the proposed future dwelling establishment is of a built form nature that is appropriate for the future residential land use.

Design standards for future dwellings differ depending on the residential lot locations within the development (i.e. whether they are adjacent to a reserve area) and the density of the lots (medium vs general residential). Custom standards are also proposed for the two residential lots proposed immediately south of the Heritage Lot (Lot 1400).

The design standards for future dwellings and ancillary buildings (i.e. garages) will be appropriately setback from the street, so that built form does not dominant the street.

Car parking within the streets will be provided for within designated parking bays, which will restrict the quantity and location of car parking within the street, also ensuring it does not dominant the street.

Streetscape amenity will be provided through a well-crafted landscape design involving appropriate hardscape and softscape materials as shown in the Indicative Reserves and Streetscape Plans (refer to pages 28 to 32 in the **GA**).

4. *facilitating passive surveillance and active residential frontages through controls on glazing, avoidance of blank facades, provision of habitable rooms and front door entrances to residential units facing the street, and consider modification of those controls only where other active design features such as verandas are incorporated;*

Passive surveillance will be provided in the open space network through the provision of open style fences along residential and reserve boundaries and a lot layout ensuring the public places are overlooked in accordance with CPTED principles.

5. *minimising the adverse impact of high fences on streetscape character and public safety; and*

Although high solid fences are proposed along the southern boundaries of residential allotments fronting reserves and where residential allotments are adjacent to, or in the vicinity of Kippenberger Avenue, these will be well-articulated and visually grounded with low shrub planting.

6. *ensuring that residential activities are provided with sufficient on-site outdoor living space for residents through access to outdoor living space that is complements the housing typology, or where not directly provided, take into account alternative arrangements for open space (either within the site or within close proximity to the site).*

The higher density residential allotments are located either adjacent to, or within the vicinity of, the open space network.

### **RESZ-O3: Residential form, scale, design, and amenity values**

*A form, scale, and design of development that:*

1. *achieves a good quality residential environment that is attractive and functional;*
2. *supports community health, safety and well-being;*
3. *maintains differences between zones; and*
4. *manages adverse effects on the surrounding environment.*

The proposed Bellgrove North development achieves the above attributes through its allotment layout, roading layout, open space network and shared path network, which will ensure the residential development is a great place live, while also integrating with surrounding environment through good connections and buffering between other zones. The proposed landscape design and design elements (to be finalised during detailed design) will ensure the development is attractive, functional, and safe. The shared path and open space networks will support community health and well-being.

### **RESZ-P3: Safety and well-being**

*Provide for safety and well-being considering the following CPTED principles in the design of structures, residential units, outdoor areas and public open spaces:*

1. *access – safe movement and connections;*
2. *surveillance and sightlines – see and be seen;*
3. *layout - clear and logical orientation;*
4. *activity mix – eyes on the street;*
5. *sense of ownership – showing a space is cared for;*

6. *quality environments - well designed, managed and maintained environments;*
7. *physical protection – using active security measures; and*
8. *providing for peaceful and pleasant living environments which enable limited opportunities for signs, appropriately manage the impacts of on-site traffic generation to minimise impacts on neighbouring properties and road networks, and minimise adverse effects of noise and light, particularly in night time hours.*

The lot layout and interface treatments along the open space network will provide for the above CPTED principles. The Stage 1 proposal allows for good casual surveillance with the open space network including both road frontages and adjacent residential allotments. There is good visibility through the linkage reserves and the cul-de-sacs have connections to the reserve network. The roading layout and shared path network are logical and a range of design elements will assist with wayfinding. Overall, the Bellgrove development will be constructed to a high standard to ensure it becomes a quality living environment that is cared for by the community.

### ***ECO-P8: Waterbodies***

*Recognising Te Mana o te Wai, maintain the ecological integrity of waterbodies by avoiding indigenous vegetation clearance near them.*

The tree vegetation within the banks of the Cam/Ruataniwha River currently comprise weedy exotic species of little landscape value, and the Northern Flow Channel does not have any planting and is simply a grass swale. The proposed restoration of these areas with graded banks and appropriate indigenous vegetation will significantly enhance the ecological integrity of both the river and overland flow paths within the site.

### **Assessment Against the Northeast Rangiora Outline Development Plan (NER-ODP)**

The Bellgrove Stage 1 proposal has been assessed against the NER-ODP (Options A and B) under the following three subheadings: (1) Density & Land Use, (2) Movement Network, and (3) Open Space & Stormwater Reserves.

#### **Density & Land Use**

The NER-ODP requires a minimum residential density of 15 households per hectare, unless there are identified constraints to development, in which case no less than 12 households per hectare. The Stage 1 proposal has a residential density of approximately 13 households per hectare (including the Residential Superlot) despite having site constraints in terms of providing for the Cam/Ruataniwha River, overland flow paths, and the Heritage Lot.

The Stage 1 proposal achieves a concentration of medium density residential areas (min. lot size of 200m<sup>2</sup>) in the southwest corner of the Bellgrove Development, which meets the requirement for a minimum of 70% medium density and maximum of 30% general residential zone density (min. lot size of 500m<sup>2</sup>).

The Commercial Lot / future local centre is positioned within the approximate location illustrated in the NER-ODP on the corner of the main north/south primary road and Northern Flow Channel, with the future Stage 2 Recreation Reserve immediately to the north. It is also surrounded to the south and southwest by a concentration of medium density residential lots in alignment with the NER-ODP.

While the Western Bypass Channel creates a buffer some 16 to 20m wide between the commercial and primary collector road (Road 1), the planting arrangement within the channel will maintain good visibility of foreseeable commercial development, and parking bays are provided on both sides of Road 1 opposite the western end of the Commercial Lot. The footbridge between the Commercial Lot and Stage 2 Recreation Reserve to the north, will enable further connections to the Commercial Lot.

Overall, the density and land use within the Stage 1 proposal is in accordance with the NER-ODP.

### Movement Network

The Stage 1 proposal generally complies with the NER-ODP in terms of providing the main primary collector road (Road 1) and its southern intersection with McPhail Avenue. Its northern intersection with Coldstream Road will be fully resolved in Stage 4.

The secondary collector road (Road 2) is included in the Stage 1 proposal, however, unlike the development plan, this road extends north/south along the western interface of the Heritage Lot, rather than the eastern interface. The commentary accompanying the diagrams of the NER-ODP only states that from the south the secondary collector road is to be located west of Devlin Avenue, which extends into the Southeast Rangiora Development Area.

Pedestrian and cycleway infrastructure is provided by a 2.5m wide shared path along the northern sides of the Northern Flow Channel and Cam/Ruataniwha River overland flow paths. The shared path along the northern side of the Cam/Ruataniwha River includes a footbridge across the Western Bypass Channel providing a connection to the primary collector road (Road 1). This would facilitate the requirement for the shared path to be extended to Keir Street in the future.

Overall, the movement network within the Stage 1 proposal is in accordance with the NER-ODP, providing connections with the surrounding urban environment and future development areas.

### Open Space and Stormwater Reserves

The open space network, including the shared paths, will be within walking distance of every household within the proposed development.

Stage 1 excludes a large recreation reserve, given this is to be located further north as part of future stages. Proposed recreation reserve (Lot 2000) is additional to the recreational reserves shown on the NER-ODP.

As per the NER-ODP, the two overland flow paths will be maintained in the Stage 1 proposal, although the Cam/Ruataniwha River will be realigned to improve flood water displacement, improve the efficiency of the allotment layout, and enable land remediation.

A shared path is included on the northern side of Northern Flow Channel and Cam/Ruataniwha River reserves (as per the movement network ODP), with the southern side being retained as a grass accessway. The proposal partially meets the requirement for a road frontage to border at least one side of the green link, because a road follows the shared path for approximately 150m on the northern side of the Cam River / Ruataniwha. However, the remainder of the Cam/Ruataniwha River green link does not have a road frontage on one side, and instead, the green link either has residential lots on both sides or is surrounding by the stormwater management reserve. Nevertheless, the proposal provides the intention sought by WDC in the NER ODP being to provide visibility, amenity, and safety for users of the green link, through open style fencing for north-facing properties and good visibility and path networks within the stormwater management area on both sides of the flow path.

The NER-ODP also shows a green link along the eastern frontage of the Heritage Lot. Whilst there is no commentary about the intention of this green link, it is assumed that its intention is to provide views of the Bellgrove homestead, particularly its more engaging eastern frontage. Nevertheless, views of the eastern frontage will be obtainable from the adjoining Cam/Ruataniwha River esplanade, particularly where the heritage sites' eastern boundary with the esplanade has a chamfered corner.

The amenity and restoration planting within the Cam/Ruataniwha River and overland flow channels is covered in the latter part of this report under 5.3 - Appropriateness of Landscape Design.

The two stormwater management areas shown in the NER-ODP are in approximately the same positions in the Stage 1 proposal, albeit these will be combined into one large stormwater management area through merging with the overland flow path reserves. The NER-ODP's southern stormwater reserve is included in Stage 1, whilst the northern stormwater reserve is proposed within Stage 2.

Together, the combined stormwater reserves (Stages 1 & 2), Northern Flow Channel, Cam/Ruataniwha River esplanade and Western Bypass Channel reserves (Stage 1) and the recreation reserve (Stage 2) will provide a significant area of public open space within walking distance of residences, both within, and neighbouring, the Bellgrove North Development. They will provide visual relief for adjoining built up areas and a pleasant outlook for properties oriented towards the open space network. The stormwater reserves will provide passive recreational opportunities through a shared path network with footbridges and interspersed seating.

In my opinion, taken overall, the open space and stormwater reserves within Stage 1 exceed the expectation of the NER-ODP, by creating a larger and well-connected open space network encompassing all the reserves.