Appendix X: OUTLINE DEVELOPMENT PLAN – NARRATIVE

Southeast Rangiora

Context

This area comprises approximately 57 hectares and is situated on the south-east side of the urban edge of Rangiora between the Northbrook Reserve to the north and Marsh Road to the south. The ODP provides for the integrated development of this new residential area that will yields around 600 housing units over the next 10-15 years.

The development is anticipated to progress in three sequential stages from north to south as depicted on the ODP as Blocks A B and C. The new REL Road traverses Block A north of Boys Road before forming the eastern boundary of Blocks B and C

The ODP identifies Block C as an 'odour constrained' area comprising a wetland area and a future light industrial zone, The detailed design and layout for Stage C to be determined once details of future road alignments and level crossings in the area have been finalised. A separate plan change or consenting process will be required before the industrial development can proceed.

The ODP comprises four 'layers' comprising a 'blue network, green network, movement network and a (resulting) land use pattern. The purpose of this methodology is to provide an integrated approach to managing the natural environment that maximises the opportunities to protect and enhance natural environmental features and integrate these into the built environment.

Blue Network

The blue network consists of three spatial elements which are to be recognised and provided for during the development of the Site.

1 Northbrook and Middlebrook

The Northbrook and esplanade reserve forms the northern and part of the western boundary of Block A in the form of a 20m wide ecological space with riparian planting and promenade walkway that allows for interaction with the space. The Northbrook has significant ecological and cultural value with further potential for enhancement. The Northbrook reserve has two large ponds bordering the Site, supporting various waterbirds, and coupled with the Northbrook itself may provide suitable spawning ground for native fish, such as upland bully and kanakana, and Kōura, a keystone species found in one of the Northbrook tributaries.

The Middlebrook has been modified for much of its length within the Site, but its ecological significance remains high. It already features more extensive riparian planting than the Northbrook and this shall be expanded on with its proximity to the Block B stormwater retention and the Block C bioderversity area. Like the Northbrook, this waterway provides a social, cultural, and amenity value for the Site and the surrounding area.

2.Overland flow-path

The overland flow path is the path through the Site that is taken by floodwater. This path will be undeveloped and planted without impeding any flow rate, the overland flow path is encased in planted greenspace and stormwater treatment areas providing large areas of landscaped open space. In Block A the lowest point in the land is the Northbrook, which already forms the overland flowpath for the upper part of the development The esplanade surrounding it will be designed to accommodate additional flow in significant rain events.

In Block B, the overland flow path runs across the southern portion and is designed to collect water from the Site's western boundary and channel it south of any urban development or stormwater retention to the eastern boundary. This flowpath also functions as a high amenity pedestrian/cycle corridor.

3 Stormwater management areas

The stormwater management areas shown on the ODP will be multi-functional. Most of the time they will be dry and provide amity and passive recreation areas for local residents. However, their principal function is surface water attenuation and filtering out contaminants prior to water entering the Northbrook and Middlebrook.

Green network

The green network comprises 4 key spatial and functional elements:

- Ecological green space integrated into the blue network and providing important protection to the ecological functions of the existing waterways;
- Open space and recreation - neighbourhood parks to provide for a range of active and passive recreation activities;
- Green links for internal amenity and fine grain connectivity
- Green interfaces to manage effects of development within and between the development area and surrounding environment.
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1. Ecological green space

Riparian planting should provide both habitat, shade, and resource for invertebrate species. Riparian planting also needs to provide habitat connectivity for non-aquatic species. Harakeke, cabbage tree, and kowhai, for example, are effective habitat and provide nectar for bellbird and tauhoe (waxeye). These riparian strips promote the ecological connectivity between the waterway and the surrounding spaces. It also needs to support banks stability/ *Carex spp.* and other inundation tolerant species help limit erosion and the subsequent sedimentation of waterways that harms invertebrate communities. Further up the banks of the waterway harakeke, cabbage tree, lancewood, pittosporum, and kowhai are effective bank stabilizing plants.

The Northbrook is a potential lamprey spawning site, and with a conservation status of “Threatened – Nationally Vulnerable”, the preservation of this waterway as a potential lamprey spawning habitat is critical. Large rocks and tree roots are an important factor in and around the waterways. They provide habitat, promote bank stability, and help to oxygenate the water. This is important for small fish species, invertebrates, and koura which have been found in one of the tributaries of the Northbrook.

To provide the best for the Northbrook and the rest of the Sites ecology, further planting of greenspaces within the Site will support the dispersal of many bird and flying invertebrate species by creating an integrated network.

2. Open Space and Recreational green space and SMAs

Green open spaces will provide amenity for existing and future residents in Rangiora. These spaces should maintain the “open” character of Rangiora and ensure that local residents (particularly those in higher density areas) have adequate provision of and access to quality outdoor spaces. Council’s open space requirements cited in the Long Term Plan and Activity Management Plans should be adhered to during subdivision design.

Landscaped buffer areas shall be provided along the periphery of the area where it adjoins non-residential activities. This will ensure effects arising from conflicting land uses are minimised, particularly reverse sensitivity with rural neighbours. Unless otherwise specified

Several public open spaces to add amenity to the neighbourhood, relief for more compact residential clusters, and provide residents with the opportunity for recreation. A central neighbourhood park of min. 2000m2 is to be established in Stage A and B respectively. The location of these recreational reserves has been determined based on the number of reserves established in the wider area and to ensure people living within the development block have access to open space/reserve within a 400m walking radius of their homes. These local parks will provide passive recreation opportunities which is essential for the level of residential density proposed. All three neighbourhood parks function as the green heart of the development and offer a ‘spatial break’ and ‘meeting place’ for the medium density development.

Whilst the exact location and final size of the reserves will be determined at the time of subdivision, it is anticipated that the central green space in Block B will be larger, between 5000m^2 and 6000m^2, and the central green space in Block A will be smaller around 2000m^2. Both will be able to accommodate a variety of active and passive recreational opportunities along with landscaping. A third large greenspace located adjacent to the Northbrook in Block A and will be an extension of the esplanade environment with a strong focus on tree planting natural landscaping creating a more tranquil and contemplative space that directly associates with the waterway. It is strategically placed to accommodate the retention of existing specimen trees and provide several pedestrian crossing points over the Northbrook.

The ODP identifies several key green links to ensure the pedestrian connectivity at a finer grain, these are to be no less then 10m in width and designed and landscaped to minimise their length and maximise views into to ensure adequate passive surveillance them from local roads.

4. Interfaces and edge treatment

The following green interfaces should be provided to manage effects of development within and between the development area and surrounding environment.

The edge treatment of private property boundaries (fencing and planting) towards open space reserves, green links and utility reserves shall be considered during subdivision design to ensure maximum passive surveillance over all public spaces (incl. roads, reserves) is achieved. This can/will be enforced through district plan rules, consent notice and /or developer covenants.

A residential - rural interface treatment consisting of fencing and planting requirements is proposed only along the boundary with the existing rural lifestyle properties to the south of Block B.

Along the western boundary to the small pocket of rural lifestyle land the 10m landscaped channel will provide some distance and visual mitigation.

A 6m landscaped boundary shall be established around the light industrial area within Block C to mitigate the potential visual effects of light industrial development which tends to be larger in bulk / height and with less space dedicated to amenity planting on the individual sites.

Movement Network

Access and Transport

The ODP employs a roading hierarchy that delivers a range of integrated transport options, including active transport connections from the development area to adjacent neighbourhoods that facilitate the use of existing and future public transport route options. Road connections shall be designed to achieve permeability, whilst minimising the number of new intersections and maintaining appropriate intersection spacing.

The ODP features a primary north south route that provides a connection point from Northbrook Road to Marsh Road known as the Rangiora Eastern Link (REL) Road. Boys Road will form the main east-west primary road, linking the existing adjacent urban fabric to the Northbrook Esplanade. Several additional north south and east west connections are provided as secondary roads. The proposed roading hierarchy will deliver an accessible and coherent neighbourhood that provides safe and efficient access to the new development and can cater for extensions to existing public transport routes and/or new routes along the primary roads.

The requirement for the intersection upgrade at Boys Road/REL Road is also identified on the ODP. In addition Boys Road will require widening of the road corridor to an urban standard where possible whilst co-ordinating with management of the existing waterways and adjacent rural land uses

An integrated network of local roads will facilitate the safe and efficient distribution of internal traffic, provide access to properties, assist in connecting the open space reserves network both within and beyond the site and provide links to adjoining neighbourhoods.

For Block C, Local Road access would be to Marsh Road and or directly to the REL. If Marsh Road is used, this would require upgrades to an urban form and changes to the Marsh Road rail level crossing. No heavy vehicle access should be provided to Dunlops Road however light vehicle and or shared paths could provide for local connectivity. The OP includes future provision for Dunlops Road to be connected to the REL, north of the Future Light Industrial Zone.

The transport network for the area shall integrate into the pedestrian and cycle network established in adjoining neighbourhoods and the wider township.

Boys Road frontage is anticipated to be upgraded to an urban standard in accordance with the Engineering Code of Practice. This work is to be undertaken in a manner that encourages future residential properties to front directly onto Boys Road, thereby providing direct access to those properties

Cycling and walking paths will be located wherever possible within reserves and green links to provide a pleasant amenity for users and enhance the levels of activity in these public areas. Where pathways are contained within the road reserve they bare to be incorporated into the roading design of the overall road network giving adequate space to accommodate cyclists and to facilitate safe and convenient pedestrian movements. Three indicative pedestrian crossing points are shown on the ODP on Boys Road at key locations where main pedestrian connections cross primary and secondary roads to support a safe pedestrian and cycle network.

Pedestrian Network

For Block A the Northbrook Esplanade will form the main pedestrian spine with a shared cycle/walk trail from which several green links lead into the development. A second pedestrian route will run in a north-south direction along the existing paper road forming an active edge to the elevated landscaped utility reserve.

For Block B this north-south connections extends across Boys Road, through the site, directly connecting to the large SWMA at the south of Block B. This paths follows an infrastructure corridor consisting of green links, smaller roads and the local neighbourhood park. A second key shared path follows from the REL Road through the site in an east –west direction via the landscaped overland flow path twoards the existing urban neighbourhood and the local primary schools directly to the west of Block B. This provides for the future connection if a future pedestrian crossing of the railway line can be provided connecting to Denchs Road via Hegan Reserve

Cycling and walking paths will be located wherever possible within reserves and green links to provide a pleasant amenity for users and enhance the levels of activity in these public areas. Where pathways are contained within the road reserve they are to be incorporated into the road design with adequate space to accommodate cyclists and to facilitate safe and convenient pedestrian movements.

Three indicative pedestrian crossing points are proposed on Boys Road at key locations where main pedestrian connections cross primary and secondary roads to support a safe pedestrian and cycle network.

For Block C the pedestrian/cycle network connects to the shared cycle/walkway within the REL Road corridor for travel to the south-west and to the north where there are also connections through the stormwater reserve. A small local road connection and / or shared path could provide for local walking and cycling connectivity to Dunlops Road.

Land Use

Residential use and density

The development area shall aim to achieve a minimum net density of 15 household per hectare, but if ground conditions make this density impractical or leads to poor urban design outcomes the development of Stages A and B shall aim to achieve 12 hh/ha. (hh/ha). This is to be averaged over the area of the Site, excluding the area identified as an Odour Constrained Area where dwellings are not permitted 500 m from the edge of the Wastewater Treatment Ponds.

The zoning framework supports a variety of site sizes to achieve this minimum density requirement. As This area is be developed in stages, and confirmation at the time of subdivision of each stage, and an assessment as to how the minimum net density of 15 household per hectare for the overall area can be achieved (or not) , will be required.

Medium density areas within the Site are able to be supported by adjacent amenities that include key open spaces including a neighbourhood park, local parks, green corridors and a small commercial hub within the Site.

Community hub

A small commercial zone is proposed adjacent to the intersection of the REL with the Northbrook Esplanade to provide good accessibility and to meet some of the convenience needs of residents in the immediate area. It is to be limited to a café/bar and ancillary activities, in a single tenancy, of no more than 650m^2 to minimise effects on the local transport network

Community and Educational Facilities

The provision of new educational facilities are not part of the design concept but could be provided within the Site or in the wider area albeit subject to a needs assessment.

The existing Museum and community facilities are to be integrated with appropriate, access and carparking and pedestrian linkages to allow the continuation of its use.

Odour constraint area

No sensitive activities are provided for in the 'Odour Constrained Area' due to the waste water treatment area adjoining the ODP at the southern boundary across Marsh Road. The restrictions in this area is either regulated through a future zone change or shall be supported by an appropriate, enduring legal/planning mechanism (such as a covenant, consent notice, certification) imposed at the time of subdivision.

Servicing

Stormwater

Detailed stormwater solutions are to be determined by the developer in collaboration with Council at subdivision stage and in accordance with Environment Canterbury requirements. Systems will be designed to integrate into both, the transport and reserve networks where practicable.

Site stormwater management is anticipated to encompass a network of pipes, swales, basins, and treatment devices to provide conveyance, treatment and disposal to either groundwater recharge or discharge to nearby streams.

It is expected that stormwater design and construction would be undertaken in accordance with:

- WDC ECoP
- Christchurch City Council (CCC) Construction Standard Specification (CSS)
- CCC Waterways, Wetlands and Drainage Guide (WWDG)
- Auckland Regional Council Technical Publication 10 (ARC TP10) Stormwater management devices design guideline
- New Zealand Building Code (NZBC) Clause E1 Surface Water.

In addition, as part any application for subdivision consent the following requirements will be met:

- to undertake groundwater and spring water level monitoring and spring flow investigation across the Site to inform the construction methodologies that are applied in different parts of the Site, related to shallow groundwater issues; and
- to specify construction measures to ensure that shallow groundwater is not diverted away from its natural flow path for those areas where the shallow groundwater (in water bearing seams or layers) is likely to be intercepted by service trenches and hardfill areas.

Wastewater

The provision of infrastructure to service the area shall align with the Council‘s indicative infrastructure staging plan, unless an alternative arrangement is made by the landowner/developer and approved by Council.

A duplicate sewer main will connect existing development north of the site to the Rangiora wastewater treatment plant into which effluent from Stages A B and C will be discharged.