Landscape Values Assessment – Karaka North Village - Assessment of proposed landscape architectural design of the site against 'Karaka North Landscape Management Plan'

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Prepared for: Karaka North Village Ltd.

Site Location: 69A Dyke Road (Lot 2 DP 536479) & 348 Linwood Road (Lot 1 DP 536479), Papakura, Auckland 2580

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The purpose of this document is to evaluate the landscape architectural design outcomes within Karaka North Village against the 'Karaka North Village – Landscape Management Plan – October 2021' (hereinafter referred to as 'LMP'). The purpose of this evaluation is to ensure that the design outcomes reached reflect the objectives of the LMP by adhering to guidelines provided within it. This report should be read in conjunction with the LMP, Karaka North Village - Stream Management Plan - L (herein after referred to as 'SMP-L'), Karaka North Village – Coastal Management Plan (herein after referred to as 'CMP') and the following landscape architectural drawing packages;

- 'Landscape Plan Set for Karaka North Village Ltd.' prepared by Greenwood Associates (hereinafter referred to as 'GA')
- 'Karaka North Landscape & Urban Design' prepared by LandLAB (hereinafter referred to as 'LL')

1. Structure of the report

This report will identify the objectives and key guidelines within the LMP to be utilised as the baseline for assessment of the landscape architectural design outcomes within Karaka North Village. (Note that relevant guidelines may vary between different areas of the site, see below)

To facilitate this assessment the overall site will be divided into the following sections as outlined below;

Table 1: Identified areas within the site

S/no.	Identified area of the site	Design Consultant
4	Swales at esplanade edge	GA
5	Permanent and intermittent streams	GA
6	Wetlands	GA
7	Streetscapes	GA
8	Community Centre	LL
9	Village Centre	LL
10	Private lots (lots 1-119)	LL

2. Design criteria as identified in Landscape Design Report

2.1. Prior to the drafting of the LMP the document 'Landscape Design Report – Karaka North Village Development' (herein after referred to as LDR) was prepared by GA. The purpose of this document was to define the character of the Karaka North Village site and define a set of design criteria to be applied to the site. Thus the provenance of the objectives and guidelines within the LMP can be considered to be the design criteria set forth in the LDR. The guidelines set out within the LMP ensure that the design criteria identified within the LDR are implemented at site.

2.2. The following excerpt from section 4 of the LDR refers to the landscape design philosophy that defined the design criteria for the site (note emphasis added by author – as deemed relevant to this assessment);

> *'In conjunction with the above, the following design principles are to be implemented to ensure that the developed site retains character and amenity values that allow it to maintain its place within the wider rural fabric.*
>
> - ***Freedom of movement through open spaces*** *of the site*

- *Fencing typologies that define rural character (post and rail, post and wire)*
- ***No sudden transformation between open rural, lower density areas and the more formal, urbanized commercial core***
- *Definition of an open space hierarchy to allow for a* ***working farm and a liveable rural village***
- *Allowance within design for traffic movement at peak commuting times (as a satellite rural village).'*

The following excerpt of section 5 of the LDR outlines practical application of the design criteria (emphasis added by author – as deemed relevant to this assessment);

- *Fencing restricted to post and wire, post and rail and timber screens*
- *Private lots bordering open space restricted to post and wire, post and rail and hedges*
- *Open space planting limited to trees planted as single specimens or organically arranged groves*
- *Movement network through open space utilizing posts to organize movement but allow for freedom of movement*
- ***Incorporation of water body areas into movement network***
- *Utilization of existing stock movement paths for both pedestrian movement and stock movement*
- *Ensuring* ***open space both amenity and rural character are interwoven with large stocked paddocks throughout, to ensure a working farm is maintained***
- ***Street planting in lower density residential areas randomly organized***
- ***Street planting in higher density residential areas formally organized***

3. Objectives and Key Guidelines from Landscape Management Plan

This section will identify the objectives and key guidelines from the LMP.

LMP Objectives and Purposes

3.1. As per section 2 of the LMP, the objective of the plan is as follows;

> *'The purpose of the LMP is to ensure the ongoing management of open space areas set out in the Village Masterplan.'*

As per section 3 of the LMP the purpose of the plan is as follows (note emphasis added by author);

> *'To provide guidelines for the maintenance and* ***enhancement of the natural character values of the Whangamaire Stream corridor****.'*
>
> *'To provide guidelines to ensure the integration of all rural open spaces and buildings within the Karaka North precinct.'*
>
> *'To provide guidelines for the owner for the implementation, management and maintenance of all retained existing vegetation and all newly installed vegetation that form part of the proposed development of Karaka North Village.'*

3.2. Therefore, based upon the above the key overarching assessment criteria for the landscape architectural design response to the site are;

- Enhancement of the natural character values of the Whangamaire Stream corridor (note that for the purposes of this assessment the permanent and intermittent streams located on site will be considered part of this corridor as they can be considered tributaries of the Whangamaire stream)

- The integration of all rural open spaces and buildings

3.3. Sections 5-23 of the LMP contain guidelines that seek to ensure the above stated assessment criteria are met. Below outlines the identified key criteria and the relevant areas they are applicable to; (note that all appendices of the LMP (A-L) are applicable for assessment)

Table 2: Key LMP Guidelines and relevant applicable areas of the site

List of abbreviations:
SW- Swales at esplanade edge
ST - Permanent and Intermittent streams
WL -Wetlands
SS - Streetscapes
CC – Community Centre
VC – Village Centre
PL – Private Lots

S/no (LMP).	Guideline (note all emphasis added by author)	Relevant areas of the site
1.8	All **plant palettes within the appendices of the LMP represent the preferred plants to be utilised at site**. In the event that there is difficulty procuring plants of a sufficient standard and that a delay in this procurement would result in a delay to establishment of plant communities then they may seek an alternative species. Additionally if the **client wishes to supplement this list in areas within the site deemed to be of significant importance (such as lookout points) then they may do so.**	ALL
1.9	The **details for pathways, fences and gates included in the appendices of the LMP represent the minimum baseline requirements**, the owner may choose to enhance these details with additional materials if they wish.	ALL

5.5	**Rural character open space** is located along the **western boundary of the Karaka North Village site**. This open space reinforces the rural character of the area. It is one of the main two areas of the site (along with the rural amenity open space) for the grazing of livestock. The **public can access this area for passive recreation**. Rural character is enforced by the fencing type, hedgerow layout and open tree planting layout. Stock should be kept in this area throughout the year where possible to reinforce the rural character of the area. **Revegetation planting will be utilised within this area to strengthen the visual links to the adjacent Significant Ecological Area**	SW
5.6	This area borders an **esplanade reserve which contains a Significant Ecological Area (SEA), the SEA runs along the full length of the esplanade reserve, and in three locations which cross into the rural character open space**. The esplanade is not fenced along its legal boundary with the site but rather at the boundary of the vegetated area that forms a part of the SEA within the esplanade (via existing post, wire and batten fencing). This **arrangement will be maintained and the esplanade itself will be maintained in accordance with the rural character open space, visually appearing to form one overall pastoral open space.**	SW
5.10	**Natural rural character open space** – These portions of open space feature vegetation **that occurs around water bodies and riparian areas**. The larger portion of this open space is situated within a natural gully that slopes towards the Whangamaire stream and will be a key drainage corridor for the site. The gully is heavily vegetated with a mixture of exotic and native vegetation. **These areas are to be protected with stock fencing. The surrounding pastured areas will be grazed with stock intermittently**. **Pedestrian access will be provided around the perimeter of this area**. The remaining area is located on the northern boundary of the site and can be described as a large fragment of exotic vegetation located around an intermittent stream (refer section 6.7 of this document) and sits within an area of flat pastoral landscape. More information on these areas can be found in the GA CMP and SMP-L documents and GA Landscape Plan Set 10/21 drawings 210912/37-56.	ST, WL
5.11	The above-mentioned areas of vegetation surrounding streams and natural drainage corridors will be **supplemented by revegetation planting that will result in the eventual establishment of dense stands of native planting where areas of pasture and sporadic exotic vegetation currently stand**. Revegetation planting is to adhere to the strategies outlined in the GA documents CMP and SMPL-L 2021' and be limited to the areas outlined in GA Landscape Plan Set – 10/21 drawings 210912/31 – 210912/56.	ST,WL
5.14	**Neighbourhood open space** – All amenities are to adhere to the following principles; • **Raw (unmodified) materiality** including hardwood timber or steel, specified to chunky rural vernacular design detail. • A **further element of stone or unmodified precast and/or in-situ concrete** can be added as an accent in combination with steel or hardwood. • The final design should look and **feel chunky and robust**, as to have a rustic rural quality. Appendix L of the LMP provides exemplar images of preferred vs non-preferred elements of amenities that adhere to the above principles	CC/VC/PL
5.15	**Neighbourhood open space** – Play equipment is to conform to the same general design standards as site amenity (refer section 5.12) in terms of finish of materials. To reduce ongoing maintenance play equipment selection is to be limited to equipment that has no rotating moving parts. Examples of **acceptable play equipment**; • Slide • Balance Beam • Swing (regular pendulum motion) • See-saw • Sand pit • Climbing wall • Nature play elements Examples of **non-acceptable play equipment**; • Swing with a circular swinging motion • Maypole • Roundabout	PL
5.17	As per GA Landscape Plan Set – 10/21 drawing 210912/3 **street trees are to be regularly spaced (where allowable) in areas of medium density** (refer section 10.2 of this document), **whereas in standalone dwelling and lifestyle areas, trees are randomly spaced. Acceptable tree species are listed in Appendix B-1 of this document** with **open space trees to be used in lower density areas and street trees to be used in medium density areas. Shrub, groundcover and grasses species to be utilised for street planting are given in the 'street planting' schedule Appendix B-3 of this documen**t, street planting is divided into four groups, the distribution of which throughout the site is provided in GA Landscape plan Set – 10/21 drawings 21012/5-19.	SS
5.18	Where shown, shrub beds are to be **placed on the roadside of streets to separate footpaths from roadways. Low level shrubs, groundcovers and grasses (< 1m) are to be placed in areas closest to driveways to increase visibility**, with higher level shrubs placed away. **Hedges should be avoided in these areas to reduce maintenance within the public realm**, hedges can be limited to street side areas of private plots (refer section 10 of this document).	SS
5.20	There are currently two tree avenues located on the site, **these avenues form an important part of the rural character of the site and will be retained**. The **current gravel roads within these avenues will be repurposed and enhanced as pedestrian and cyclist connections** (refer section 18 of this document for pathway typologies). The northern avenue comprises of London Plane and the southern avenue comprises of English Oak, the trees of these avenues are in various states of health with some strong specimens and some weak specimens (in biological terms), these trees are to be physically surveyed at site, with those weaker specimens and those which clash with physical works (roads, earthworks etc.) tagged for removal to be replaced with new specimens of the same species, if removal becomes widespread then it would be pertinent to select	SS

	a tree species from within the 'street trees' schedule of the appendices of this document.	
5.23	**Esplanade reserve** - The esplanade is **currently not fenced along its boundary, with the only fencing occurring at the extent of the SEA**. Landowner approval has been granted for **this arrangement to continue with no visual demarcation at the legal boundary of the esplanade and rural character open space**. The esplanade area outside of the SEA will be maintained in accordance with the rural character open space and, **visually there will be no distinction between the two. In effect the pastoral/grassed areas of esplanade will become visually part of the adjoining rural character open space** and will be open (along with the rural character open space) for public access. The fence will be utilised to protect the native and exotic vegetation of the SEA.	SW
6.3,6.9	**Permanent Stream and Pond Area/Intermittent Stream** - The management approach for these areas, is to **promote native revegetation of these key riparian areas**. This will be achieved through removal of selected exotic vegetation (exotic vegetation is identified in the Arboricultural assessment). The key management principles to promote native re-vegetation are to; • **Promote native regeneration within this zone via the progressive removal of exotic vegetation,** the subsequent staged planting of native species and ongoing control of exotic weeds (refer section 13). • **Plant native riparian plants** (refer Appendix B-4) to provide shade, filter nutrients and sediment runoff and create habitat within water bodies. • **Plant native riparian plants** (refer Appendix B-4) along the vegetation edge of water bodies to prevent exotic weed re-establishment along the margin. Note that this is an activity that takes place over time (typically ten years) with periodic removal of exotic shrubs and replacement by natives. Significant (from an aesthetic point of view) exotic shrubs can be retained if they are considered by the owner(s) to positively contribute to maintaining the rural character aesthetic. • Exotic trees are to be physically surveyed with significant, mature specimens to be retained and weaker specimens to be removed. This survey should be undertaken with both ecological, biological and aesthetic factors taken into account, with the final decision on what is to be retained to rest with the owner. • Weed and pest management (refer section 17 of this document) to promote the establishment of new native riparian plantings.	ST
7.2	**Significant Ecological Areas (SEAs)** - A SEA is located immediately outside of the western boundary of the site, within the 'open space conservation zone' which sits partially within the esplanade reserve (refer section 5.22 of this document). In three locations this SEA crosses the boundary into the Karaka North Village site. This **SEA forms an integral part of the natural character values of the Whangamaire stream corridor through an organically shaped vegetation barrier that contains a mix of native and exotic vegetation**. These organically shaped planting arrangements are an **important defining component of the rural character of both the Karaka North Village site and the wider rural area.** This area is subject to the clauses of the AUP OIP outlined in section 6.2 of this document.	
7.4	The management approach for the SEA areas, incorporates the responsibilities outlined in 7.2 and promotes native revegetation of these areas as per those being promoted for the fragments of vegetation identified in section 6 of this document. The key management principles to promote native re-vegetation are to; • **Promote native regeneration within this zone** via the ongoing control of exotic weeds (refer section 17). • **Plant native riparian plants** (refer Appendix B) to provide shade, filter nutrients and sediment runoff and create habitat within water bodies. • **Plant native riparian plants** (refer Appendix B) along the vegetation edge of water bodies to prevent exotic weed re-establishment along the margin. • Weed and pest management (refer section 17) to promote the establishment of new native riparian plantings.	SW
10.15	**Medium Density Plots** - All planting within type 1 plots (180 sq.m+), that is visible from the public realm, is to be **organised in naturalised layouts, species variation should be minimal between adjoining plots**. Trees are to be **limited to the lower height trees given in the 'street trees'** planting schedule of Appendix B of this document.	PL
10.16	**Medium Density Plots** - All **street frontage planting within type 1 plots (180 sq.m+) is to maintain a cohesive identity between adjacent plots,** with a **limited plant palette that is shared across adjoining plots,** with subtle layout and species changes every few plots. All species in these areas are to be limited to the **'street tree' and 'fruit tree' schedules provided in Appendix B-1/B-2 of the LMP** and the 'street shrub, groundcover and grasses' and schedule provided in B of this document.	PL
10.18	**Shared Private Open Space** - Shared private open spaces are to serve the private lots that immediately surround them, there is no public access to these sites. Whilst these spaces are private, they are considered to be a part of the open space network. The **purpose of these sites is to provide a break-out area of passive recreational space for the residents of the bordering plots.**	PL
10.19	**Shared Private Open Space** - These areas are to **consist of lawn, shrubs and trees, which are to conform with the 'street planting' plant lists given in Appendix B of the LMP.** Paved areas are to be **limited to the areas of ingress/egress** from neighbouring properties. Shrubs are to be **utilised along property boundaries to ensure that privacy within private lots is maintained**. **Trees should be placed in such a manner that there is no overhang to neighbouring private lots.** (Refer Appendix K of the LMP for diagrammatic example)	PL

14.3	**New Amenity Planting - Direct planting** represents plants installed in a single operation (i.e.: no staging), **plants installed at this stage are typically larger than those installed with revegetation planting**. Direct planting is **utilised where a quicker aesthetic (i.e. street planting) or functional (i.e.: alluvial slope erosion protection) effect is required**. It is also used in smaller areas where revegetation is not practical.	SW/ST
14.4	**New Amenity Planting - Revegetation planting** is typically staged with colonising species planted to establish a canopy and enrichment species planted after canopy establishment to complete the undergrowth. In some instances a single planting operation can be undertaken if a sufficient vegetative canopy exists. **Plants utilised for revegetation planting are typically smaller than those utilised for direct planting**, as such these plants require protection from both the elements and terrestrial pests in the form of plant guards. **The GA documents CMP and SMP-L provide further information on revegetation strategies and processes.**	SW/ST
16.2	Any **establishment of a formal orchard will be limited to the community centre area**. Outside of this formal orchard fruit trees will be considered as 'open space trees' and will be planted within the open spaces.	CC
18.6,-18.8	**Gravel pathways** are to consist of two types; A limestone hoggin chip with a wooden edge, which will be utilised within treed avenues and a type consisting of non-hoggin chip gravel that will be placed within the prevailing ground and will be utilised for both pedestrian and livestock movement. A summary of where **gravel pathways should be utilised**; • For areas where transition of cattle is required (can be used as pedestrian tracks when not utilised by cattle) • For short spans such as traversing a transition from a paver surface to a softer surface • In portions of pathway through areas prone to water collection during periods of heavy rainfall • At approaches to gates or stiles where users of open space would congregate • Areas where vehicles will be parked adjacent to areas of rural open space at the western edge A summary of where **gravel pathways should be avoided**; • Long meandering pathways through open space	SW/ST/VC
18.14-18.16	A standard detail for an elevated wooden boardwalk can be found in Appendix H of the LMP A summary of where elevated **wooden boardwalks should be utilised**; • Moving through ecologically sensitive areas such as wetlands and riparian areas • Over areas where water must be crossed • Over drainage gullies that will have overland water flows during times of high rainfall (over the appropriate flood level)	SW/ST
	A summary of where elevated **wooden boardwalks should be avoided**; • Directly over areas that do not contain water or are flood channels • Low lying areas where they may be flooded • In areas where a vehicle may require access • In areas where stock would be required to be moved along	
18.17-18.19	**Residential concreted pathways - Concreted pathways are used within housing areas and high amenity public realm spaces / the village centre and village green.** Concrete pathways **outside of these areas are to be limited**, with the predominant pathway/trails types as given earlier. Use of asphalt pathways is to be limited to service areas. Concreted and asphalt pathways can be separated into the following categories; • **Monolithic concrete surfacing**: Concrete poured at site to form a pathway, can be poured to any shape laid out on the ground, the **only breaks in the surfacing would occur at any required expansion joints, decorative saw cuts are permitted.** The texture of the surface of monolithic concrete **surfacing can range from a smooth finish to a coarse texture (exposed aggregate).**This change in texture can be used to delineate differences in surface use. • **Unit paving**: Unit paving consists of individual units of concrete paving, typically either 50mm (pedestrian use) or 80mm (vehicular use) thick and are square or rectangular in shape. Unit pavers require a hard edge to be contained, which can be an existing structure such as a fence, building or road kerb, or a prepared edge such as a timber edge. A **variety of unit paver sizes can be used as a design feature to provide visual variety**. Unit pavers are more expensive per square metre than concrete surfacing and should be used sparingly in higher profile areas or as accents to monolithic concrete surfacing. **Concrete pavers can be considered for use in large areas where permeable pavers are to be used as this can assist in surface drainage**. • Asphaltic surfacing: Asphaltic surfacing is utilising black asphalt for pathways. This form of surfacing is less expensive per square metre than monolithic concrete surfacing and unit paving. Asphaltic surfacing lacks the visual and textural variety of the two previously stated surfacing options, to increase this variety asphalt surfacing can be utilised in conjunction with hard surfacing with greater texture and colour variety.	VC
18.20-18.22	**Natural stone pathways** consist of pathways comprised of unit paving cut from natural stone. These cuts can be regular or irregular (referred to as 'crazy paving')	CC/VC

	A summary of where natural stone pathways **should be utilised;** • Key intersections as an accent to concrete footpaths • Within the **village square and village green areas** • Within the **community centre** • At entry **thresholds to parks** A summary of where natural stone pathways **should be avoided**; • As the main material in footpaths within streets • As pathways in vegetated areas • As meandering pathways through rural open space	

4. Swales at Esplanade Edge

4.1. The swales and the existing significant ecological areas (hereinafter referred to as SEA_T) at the esplanade edge are planted with native plantings both directly and through a revegetation process.

The areas of direct planting are limited to the banks and channels of the proposed swales.

The existing SEA_T areas that extend into the development site are to have all of the exotic vegetation removed from them and replaced with native vegetation to be planted in a staged re-vegetation process, referred to as 'strategy A' throughout the CMP. Specific details of this process can be found within sections 5.3, 5.4,5.16-5.20 and 5.25-5.33 of the CMP.

4.2. This removal of exotic vegetation (which can be characterised as weeds) and its replacement with native planting and the expansion of native vegetation both within and adjacent to the esplanade reserve can be seen as enhancing the natural character values of the Whangamaire stream corridor. Furthermore, the revegetation planting undertaken both within and, adjacent to, the SEA-T can be seen as a starting point for future revegetation of the existing planting areas located within the riparian areas of the Whangamaire stream.

4.3. An analysis is provided below in Table 3 referencing the relevant assessment guidelines as per Table 2

Table 3: Assessment of swales at esplanade edge against relevant LMP guidelines

S/no (LMP).	Guideline (note all emphasis added by author)	Design Response	Relevant Drawings / Document Refs + Any consents required
1.8	All **plant palettes within the appendices of the LMP represent the preferred plans to be utilised at site**. In the event that there is difficulty procuring plants of a sufficient standard and that a delay in this procurement would result in a delay to establishment of plant communities then they may seek an alternative species. Additionally if the **client wishes to supplement this list in areas within the site deemed to be of significant importance (such as lookout points) then they may do so.**	All proposed plants in both direct planting and revegetation areas conform with the plants provided in Appendix B of the LMP.	GA drawings 210912/26, 27,29,30, 31-36 CMP – Appendix B
1.9	The **details for pathways, fences and gates included in the appendices of the LMP represent the minimum baseline requirements**, the owner may choose to enhance these details with additional materials if they wish.	An indicative open space trail has been shown within the adjacent open spaces to provide context to the network of gravel paths and wooden boardwalks proposed to move through the SEA_Ts and adjacent supplementary planting. The materiality and location of these pathways is appropriate as per the LMP.	GA drawings 210912/5, 9, 12, 16, 31-36
5.5	**Rural character open space** is located along the **western boundary of the Karaka North Village site**. This open space reinforces the rural character of the area. It is one of the main two areas of the site (along with the rural amenity open space) for the grazing of livestock. The **public can access this area for passive recreation**. Rural character is enforced by the fencing type, hedgerow layout and open tree planting layout. Stock should be kept in this area throughout the year where possible to reinforce the rural character of the area. **Revegetation planting will be utilised within this area to strengthen the visual links to the adjacent Significant Ecological Area**	As per the above design response to LMP point 1.9 an indicative pedestrian network has been indicated that allows for use for public recreation, with access given through portions of the SEA_Ts and the proposed planting areas that sit adjacent to them. Revegetation and supplementary direct native planting are proposed both within the SEA_T areas within the site and esplanade (after removing the exotic species) this will not only provide visual links to the SEA_T immediately adjacent to the site but also strengthen the links by increasing the planting coverage within the	GA drawings 210912/5, 9, 12, 16, 31-36 CMP – Section 4 Resource Consents: E15.4.1 (A20)

		pastoral area	
5.6	This area borders an **esplanade reserve which contains a Significant Ecological Area (SEA), the SEA runs along the full length of the esplanade reserve, and in three locations which cross into the rural character open space**. The esplanade is not fenced along its legal boundary with the site but rather at the boundary of the vegetated area that forms a part of the SEA within the esplanade (via existing post, wire and batten fencing). This **arrangement will be maintained and the esplanade itself will be maintained as in accordance with the rural character open space, visually appearing to form one overall pastoral open space.**	As per the above design response to LMP point 5.5 the proposed planting will strengthen the visual links to the off-site portion of the SEA_T The pastoral of areas of the esplanade are accessible to the general public through the indicative pedestrian network shown within the GA landscape plan set.	GA drawings 210912/5, 9, 12, 16, 31-36 CMP – Section 4 Resource Consents: E15.4.1 (A20)
5.23	**Esplanade reserve** - The esplanade is **currently not fenced along its boundary, with the only fencing occurring at the extent of the SEA**. Landowner approval is being sought for **this arrangement to continue with no visual demarcation at the legal boundary of the esplanade and rural character open space**. The esplanade area outside of the SEA will be maintained in accordance with the rural character open space and, **visually there will be no distinction between the two. In effect the pastoral/grassed areas of esplanade will become visually part of the adjoining rural character open space** and will be open (along with the rural character open space) for public access. The fence will be utilised to protect the native and exotic vegetation of the SEA.	As per the above design response to LMP point 5.5 the proposed planting will strengthen the visual links to the off-site portion of the SEA_T The pastoral areas of the esplanade are accessible to the general public through the indicative pedestrian network shown within the GA plan set. The proposed planting and retention of pastoral grass ensures that the esplanade and the adjacent open space will visually present as a single space. In the event that the esplanade becomes fenced there will be minimal, if any, modifications required to the proposed landscape at the western edge	GA drawings 210912/5, 9, 12, 16, 31-36 CMP – Section 4 Resource Consents: E15.4.1 (A20)
7.2	**Significant Ecological Areas (SEAs)** - A SEA is located immediately outside of the western boundary of the site, within the 'open space conservation zone' which sits partially within the esplanade reserve (refer section 5.22 of this document). In three locations this SEA crosses the boundary into the Karaka North Village site. This **SEA forms an integral part of the natural character values of the Whangamaire stream corridor through an organically shaped vegetation barrier that contains a mix of native and exotic vegetation**. These organically shaped planting arrangements are an **important defining component of the rural character of both the Karaka North Village site and the wider rural area.** This area is subject to the clauses of the AUP OIP outlined in section 6.2 of this document.	As per earlier responses within this table, the rural character of the area is not only maintained but enhanced with the proposed revegetation of the SEAs within the site boundaries and the supplementary planting proposed in both the swales and immediately adjacent to the SEAs	GA drawings 210912/5, 9, 12, 16, 31-36 CMP – Section 4 Resource Consents: E15.4.1 (A20)
7.4	The management approach for the SEA areas, incorporates the responsibilities outlined in 7.2 and promotes native revegetation of these areas as per those being promoted for the fragments of vegetation identified in section 6 of this document. The key management principles to promote native re-vegetation are to; • **Promote native regeneration within this zone** via the ongoing control of exotic weeds (refer section 17). • **Plant native riparian plants** (refer Appendix B) to provide shade, filter nutrients and sediment runoff and create habitat within water bodies. • **Plant native riparian plants** (refer Appendix B) along the vegetation edge of water bodies to prevent	As per earlier responses, within this table, native vegetation is promoted throughout the SEAs within the site boundaries and will be supplemented with direct planting. Native riparian planting is provided at the proposed swales both within the channels and the banks. The planting within the swales will be direct planting, whereas the SEAs will be via a staged revegetation process, upon maturation this planting will present as a single continuous planting area within the pastoral landscape linking visually to the SEA that populates the Whangmaire stream corridor	GA drawings 210912/5, 9, 12, 16, 31-36 CMP – Sections 4, 5, 6, 8 Resource Consents: E15.4.1 (A20)

	exotic weed re-establishment along the margin. • Weed and pest management (refer section 17) to promote the establishment of new native riparian plantings.		
14.3	**New Amenity Planting - Direct planting** represents plants installed in a single operation (i.e.: no staging), **plants installed at this stage are typically larger than those installed with revegetation planting**. Direct planting is **utilised where a quicker aesthetic (i.e. street planting) or functional (i.e.: alluvial slope erosion protection) effect is required**. It is also used in smaller areas where revegetation is not practical.	As per reply to section 7.4 above, direct planting is utilised within the swales and will supplement the revegetation planting within the SEAs and their immediate surrounds	GA drawings 210912/5, 9, 12, 16, 31-36 CMP – Sections 4, 6, 8
14.4	**New Amenity Planting - Revegetation planting** is typically staged with colonising species planted to establish a canopy and enrichment species planted after canopy establishment to complete the undergrowth. In some instances a single planting operation can be undertaken if a sufficient vegetative canopy exists. **Plants utilised for revegetation planting are typically smaller than those utilised for direct planting**, as such these plants require protection from both the elements and terrestrial pests in the form of plant guards. **The GA documents CMP and SMP-L provide further information on revegetation strategies and processes.**	Refer responses to LMP sections 5.5, 5.6, 7.4 and 14.3	GA drawings 210912/5, 9, 12, 16, 31-36 CMP – Sections 4, 5, 6, 8 Resource Consents: E15.4.1 (A16), E15.4.1 (A17)
18.6,-18.8	**Gravel pathways** are to consist of two types; A limestone hoggin chip with a wooden edge, which will be utilised within treed avenues and a type consisting of non-hoggin chip gravel that will be placed within the prevailing ground and will be utilised for	Gravel pathways are utilised through portions of the SEA_Ts and link to wooden boardwalks and the proposed wider open space trail network.	GA drawings 210912/5, 9, 12, 16, 31-36

	both pedestrian and livestock movement. A summary of where **gravel pathways should be utilised**; • For areas where transition of cattle is required (can be used as pedestrian tracks when not utilised by cattle) • For short spans such as traversing a transition from a paver surface to a softer surface • In portions of pathway through areas prone to water collection during periods of heavy rainfall • At approaches to gates or stiles where users of open space would congregate • Areas where vehicles will be parked adjacent to areas of rural open space at the western edge A summary of where **gravel pathways should be avoided**; • Long meandering pathways through open space		
18.14-18.16	A standard detail for an elevated wooden boardwalk can be found in Appendix H of the LMP. A summary of where elevated **wooden boardwalks should be utilised**; • Moving through ecologically sensitive areas such as wetlands and riparian areas	Wooden boardwalks are utilised through portions of the SEA_Ts (where flood channels render gravel pathways unsuitable) and link to gravel pathways and the proposed wider open space trail network.	GA drawings 210912/5, 9, 12, 16, 31-36

	• Over areas where water must be crossed • Over drainage gullies that will have overland water flows during times of high rainfall (over the appropriate flood level) A summary of where elevated **wooden boardwalks should be avoided**; • Directly over areas that do not contain water or are flood channels • Low lying areas where they may be flooded • In areas where a vehicle may require access • In areas where stock would be required to be moved along		

5. Permanent and Intermittent streams

5.1. Both the permanent and intermittent streams currently feature predominantly (conservatively estimated at a minimum of 95%) exotic tree and shrub planting upon their banks within their riparian zones. The riparian zone intermittent stream (identified as 'stream B' in the SMP – refer Appendix B of the SMP) is populated by exotic trees and shrubs that can be classified as weeds, whereas the trees and shrubs within the riparian zones adjacent to the permanent stream (identified as 'stream A' in the SMP – refer Appendix B of the SMP) can be classified as both a mixture of weeds and character defining trees.

5.2. The design responses for both streams involve the native revegetation of these riparian banks, however the approach to this differs.

5.3. Within the permanent stream, trees that are considered to be character defining and that contribute to the rural character are retained, with the native revegetation established and staged in such a manner that the native planting eventually replaces the exotic planting upon its natural death. Those exotic plants that are considered to be weeds, and thus not character defining, are to be removed at the commencement of planting and revegetated through a combination of staged and direct planting. These will see a combination of the approaches identified in the SMP as strategy A, B and C.

Strategy B will be utilised where the character defining trees are to be retained (refer sections 7.3, 7.5, 7.6, 7.8-7.12 and Appendices B/C of the SMP).

Strategy C will be utilised in areas that are devoid of character defining trees and thus, defined as weeds. (refer sections 7.3, 7.7 and Appendices B/C of the SMP).

5.4. Within the riparian areas of the intermittent stream, the exotic planting will be removed in its entirety and revegetated utilising strategy A (refer sections 7.13-7.17 of the SMP)

5.5. In addition to revegetation planting the lower reaches of the permanent stream will see the provision of pathway for pedestrians that will move them through the revegetated space, piers will be provided for interaction with the pond that sits at the approximate midpoint of the stream, the pathway will link to the overall pedestrian network of the site enabling all members of the public to access the space.

5.6. This revegetation planting will enhance the natural character of the two on-site streams. Thus, this revegetation planting can be considered to be contributing (when considered in concert with the design responses at the interface with the off-site SEA_T (refer section 4 of this document) to the enhancement of the natural character values of the Whangamaire stream corridor.

5.7. The retention of existing exotic trees at the margins of the permanent stream and their gradual replacement with native vegetation allows for a retention of landscape elements that define the current, prevailing rural character of the site, whilst allowing for a gradual transition to this portion of the site coming to represent a more natural landscape character than a rural character. (note that areas of high natural character within wider modified landscapes can be considered to be a defining characteristic of New Zealand rural character)

5.8. An analysis is provided below in Table 4 referencing the relevant assessment guidelines as per Table 2

Table 4: Assessment of permanent and intermittent streams against relevant LMP guidelines

S/no (LMP).	Guideline (note all emphasis added by author)	Design Response	Relevant Drawings / Document Refs + Any consents required
1.8	All **plant palettes within the appendices of the LMP represent the preferred plans to be utilised at site.** In the event that there is difficulty procuring plants of a sufficient standard and that a delay in this procurement would result in a delay to establishment of plant communities then they may seek an alternative species.	All proposed plants in both direct planting and revegetation areas conform with the plants provided in Appendix B of the LMP.	GA drawings 210912/5, 7, 9,10,13, 26, 29, 30, 37-56 SMP – Sections 6, 7, 8, Appendix B, C, D

	Additionally if the **client wishes to supplement this list in areas within the site deemed to be of significant importance (such as lookout points) then they may do so.**		
1.9	The **details for pathways, fences and gates included in the appendices of the LMP represent the minimum baseline requirements**, the owner may choose to enhance these details with additional materials if they wish.	An indicative open space trail has been shown within the adjacent open spaces to provide context to the network of gravel paths and wooden boardwalks proposed to move through the SEAs and adjacent supplementary planting. The materiality and location of these pathways is appropriate as per the LMP.	GA drawings 210912/5, 7, 9,10,13, 26, 29, 30, 37-56 SMP – Sections 6, 7, 8, Appendix B, C, D
5.10	**Natural rural character open space** - These portions of open space feature vegetation **that occurs around water bodies and riparian areas**. The larger portion of this open space is situated within a natural gully that slopes towards the Whangamaire stream and will be a key drainage corridor for the site. The gully is heavily vegetated with a mixture of exotic and native vegetation. **These areas are to be protected with stock fencing. The surrounding pastured areas will be grazed with stock intermittently**. **Pedestrian access will be provided around the perimeter of this area**. The remaining area is located on the northern boundary of the site and can be described as a large fragment of exotic vegetation located around an intermittent stream (refer section 6.7 of this document) and sits within an area of flat pastoral landscape. More information on these areas can be found in the GA CMP and SMP-L documents and GA Landscape Plan Set 10/21 drawings 210912/37-56.	The areas surrounding the permanent and intermittent streams are regarded as important natural character elements within the site. The intermittent stream area will be stripped of its existing exotic tree planting and replanted with native species through a staged revegetation process. A wetland will also be introduced at this area. The area surrounding the permanent stream will see selected exotic trees retained to maintain elements of the wider prevailing rural character, these elements will be interspersed with staged native revegetation planting, that will eventually come to be the dominant plant signature at this area. Pedestrian access is available through the southern portion of the proposed permanent	GA drawings 210912/5, 7, 9,10,13, 26, 29, 30, 37-56 SMP – Sections 6, 7, 8, Appendix B, C Resource Consents: E15.4.1 (A16), E15.4.1 (A17)

		stream planting	
5.11	The above-mentioned areas of vegetation surrounding streams and natural drainage corridors will be **supplemented by revegetation planting that will result in the eventual establishment of dense stands of native planting where areas of pasture and sporadic exotic vegetation currently stand**. Revegetation planting is to adhere to the strategies outlined in the GA documents CMP and SMPL-L 2021' and be limited to the areas outlined in GA Landscape Plan Set – 10/21 drawings 210912/31 – 210912/56.	Refer response above to LMP section 5.10.	GA drawings 210912/5, 7, 9,10,13, 26, 29, 30, 37-56 SMP – Sections 6, 7, 8, Appendix B, C Resource Consents: E15.4.1 (A16), E15.4.1 (A17)
6.3,6.9	**Permanent Stream and Pond Area/Intermittent Stream** - The management approach for these areas, is to **promote native revegetation of these key riparian areas**. This will be achieved through removal of selected exotic vegetation (exotic vegetation is identified in the Arboricultural assessment). The key management principles to promote native re-vegetation are to; • **Promote native regeneration within this zone via the progressive removal of exotic vegetation,** the subsequent staged planting of native species and ongoing control of exotic weeds (refer section 13). • **Plant native riparian plants** (refer Appendix B-4) to provide shade, filter nutrients and sediment runoff and create habitat within water bodies.	As per response to LMP section 5.10 above; The permanent stream/pond area will be revegetated through a combination of different strategies, which allow for retention of exotic trees considered to be character defining. In addition the 5m either side of the banks of the permanent stream will be directly planted with native riparian planting to provide the ecological benefits of native riparian planting at a faster rate than would be possible with a revegetation strategy at these banks. The intermittent stream will see the entirety of its exotic planting removed and replaced with both native vegetation planting and a wetland.	GA drawings 210912/5, 7, 9,10,13, 26, 29, 30, 37-56 SMP – Sections 6, 7, 8, Appendix B, C, D Resource Consents: E15.4.1 (A16), E15.4.1 (A17)

	• **Plant native riparian plants** (refer Appendix B-4) along the vegetation edge of water bodies to prevent exotic weed re-establishment along the margin. Note that this is an activity that takes place over time (typically ten years) with periodic removal of exotic shrubs and replacement by natives. Significant (from an aesthetic point of view) exotic shrubs can be retained if they are considered by the owner(s) to positively contribute to maintaining the rural character aesthetic. • Exotic trees are to be physically surveyed with significant, mature specimens to be retained and weaker specimens to be removed, this survey should be undertaken with both ecological, biological and aesthetic factors taken into account, with the final decision on what is to be retained to rest with the owner. • Weed and pest management (refer section 17 of this document) to promote the establishment of new native riparian plantings.		
14.3	**New Amenity Planting - Direct planting** represents plants installed in a single operation (i.e.: no staging), **plants installed at this stage are typically larger than those installed with revegetation planting**. Direct planting is **utilised where a quicker aesthetic (i.e. street planting) or functional (i.e.: alluvial slope erosion protection) effect is required**. It is also used in smaller areas where revegetation is not practical.	As per reply to sections 6.3/6.9 of the LMP, direct planting is utilised within the 5m riparian corridor of the permanent stream. There are also some wider areas within the banks at the north-east of the permanent stream that will be directly planted	GA drawings 210912/5, 7, 9,10,13, 26, 29, 30, 37-56 SMP – Sections 6, 7, 8, Appendix B, C, D Resource Consents: E15.4.1 (A16), E15.4.1 (A17)
14.4	**New Amenity Planting - Revegetation planting** is typically staged with colonising species planted to establish a canopy and enrichment species planted after canopy establishment to complete the undergrowth. In some instances a single planting operation can be undertaken if a sufficient vegetative canopy exists. **Plants utilised for revegetation planting are typically smaller than those utilised for direct planting**, as such these plants require protection from both the elements and terrestrial pests in the form of plant guards. **The GA documents CMP and SMP-L provide further information on revegetation strategies and processes.**	As per reply to sections 6.3/6.9 and 14.3 above, revegetation planting is utilised in the majority of areas surrounding the permanent stream	GA drawings 210912/5, 7, 9,10,13, 26, 29, 30, 37-56 SMP – Sections 6, 7, 8, Appendix B, C, D Resource Consents: E15.4.1 (A16), E15.4.1 (A17)
18.6,-18.8	**Gravel pathways** are to consist of two types; A limestone hoggin chip with a wooden edge, which will be utilised within treed avenues and a type consisting of non-hoggin chip gravel that will be placed within the prevailing ground and will be utilised for both pedestrian and livestock movement. A summary of where **gravel pathways should be utilised**; • For areas where transition of cattle is required (can be used as pedestrian tracks when not utilised by cattle) • For short spans such as traversing a transition from a paver surface to a softer surface • In portions of pathway through areas prone to	Gravel pathways will be utilised to facilitate pedestrian movement through the south-west portions of the planting surrounding both the pond and the permanent stream. This gravel path will be linked to the proposed wider open space network and will, in conjunction with proposed timber jetty, allow for direct access to the pond edge.	GA drawings 210912/5, 7, 9,10,13, 26, 29, 30, 37-56

	water collection during periods of heavy rainfall • At approaches to gates or stiles where users of open space would congregate • Areas where vehicles will be parked adjacent to areas of rural open space at the western edge A summary of where **gravel pathways should be avoided**; • Long meandering pathways through open space		
18.14-18.16	A standard detail for an elevated wooden boardwalk can be found in Appendix H of the LMP A summary of where elevated **wooden boardwalks should be utilised**; • Moving through ecologically sensitive areas such as wetlands and riparian areas • Over areas where water must be crossed • Over drainage gullies that will have overland water flows during times of high rainfall (over the appropriate flood level) A summary of where elevated **wooden boardwalks should be avoided**; • Directly over areas that do not contain water or are flood channels • Low lying areas where they may be flooded	As per response to 18.6-18.8 above, wooden decking /boardwalks will be limited to the pond edge and will be accessed via a gravel pathway.	GA drawings 210912/5, 7, 9,10,13, 26, 29, 30, 37-56
	• In areas where a vehicle may require access • In areas where stock would be required to be moved along		

6. Wetlands

6.1. Three (3) wetland areas are proposed throughout the site, two (2) will set in the central area of natural character open space, with the remaining proposed wetland sitting adjacent to the existing intermittent stream.

6.2. The proposed wetlands are an engineered solution to accommodate storm water. These engineered features are incorporated into the landscape utilising native planting. Planting is also provided adjacent to these wetlands to ensure they form a part of the overall proposed native vegetation framework as opposed to sitting as isolated 'islands' within the pastoral landscape.

6.3. The wetlands introduce another character element to the wider site and can be seen to visually 'tie-in' with the proposed native planting expansions being undertaken at the existing riparian areas throughout the site.

6.4. The presence of wetlands within open pastoral fields and in close proximity to riparian corridors (refer section 5) can be considered, in conjunction with the proposed enhancements to the SEA_Ts and the on-site stream corridors, to enhance the natural character of the wider site

6.5. An analysis is provided below Table 5 in referencing the relevant assessment guidelines as per Table 2

Table 5: Assessment of proposed wetlands against relevant LMP guidelines

S/no (LMP).	Guideline (note all emphasis added by author)	Design Response	Relevant Drawings / Document Refs + Any consents required
1.8	All **plant palettes within the appendices of the LMP represent the preferred plans to be utilised at site**. In the event that there is difficulty procuring plants of a sufficient standard and that a delay in this procurement would result in a delay to establishment of plant communities then they may seek an alternative species.	All proposed plants in both direct planting and revegetation areas conform with the plants provided in Appendix B of the LMP.	GA drawings 210912/7 10,13,28, 48-56

	Additionally if the **client wishes to supplement this list in areas within the site deemed to be of significant importance (such as lookout points) then they may do so.**		
5.10	**Natural rural character open space** - These portions of open space feature vegetation **that occurs around water bodies and riparian areas**. The larger portion of this open space is situated within a natural gully that slopes towards the Whangamaire stream and will be a key drainage corridor for the site. The gully is heavily vegetated with a mixture of exotic and native vegetation. **These areas are to be protected with stock fencing. The surrounding pastured areas will be grazed with stock intermittently**. **Pedestrian access will be provided around the perimeter of this area**. The remaining area is located on the northern boundary of the site and can be described as a large fragment of exotic vegetation located around an intermittent stream (refer section 6.7 of this document) and sits within an area of flat pastoral landscape. More information on these areas can be found in the GA CMP and SMP-L documents and GA Landscape Plan Set 10/21 drawings 210912/37-56.	The wetlands will be planted with wetland appropriate plants. These wetlands will be fenced to prevent both pedestrian and livestock access to them.	GA drawings 210912/7 10,13,28, 48-56 Resource Consents: E15.4.1 (A16), E15.4.1 (A17)
5.11	The above-mentioned areas of vegetation surrounding streams and natural drainage corridors will be **supplemented by revegetation planting that will result in the eventual establishment of dense stands of native planting where areas of pasture and sporadic exotic vegetation currently stand**. Revegetation planting is to adhere to the strategies outlined in the GA documents CMP and SMPL-L 2021' and be limited to the areas outlined in GA	Wetlands themselves will utilise direct planting as opposed to staged revegetation, however native revegetation and direct native planting will be installed immediately adjacent to the wetlands to ensure they are absorbed into the wider landscape rather than appearing as isolated, fenced off 'islands'	GA drawings 210912/7 10,13,28, 48-56 Resource Consents: E15.4.1 (A16), E15.4.1 (A17)
	Landscape Plan Set – 10/21 drawings 210912/31 – 210912/56.		
14.3	**New Amenity Planting - Direct planting** represents plants installed in a single operation (i.e.: no staging), **plants installed at this stage are typically larger than those installed with revegetation planting**. Direct planting is **utilised where a quicker aesthetic (i.e. street planting) or functional (i.e.: alluvial slope erosion protection) effect is required**. It is also used in smaller areas where revegetation is not practical.	As per response above all wetlands will utilise direct planting within their boundaries as opposed to a staged revegetation response	GA drawings 210912/7 10,13,28, 48-56

7. Streetscapes

7.1. All streetscapes within the site are vegetated, with all featuring a combination of trees, shrub planting and lawn planting.

7.2. Trees are the dominant landscape element within the streetscapes. The layout of these trees is informed by the following design criteria as outlined in the original design report (refer section 1);

- *No sudden transformation between open rural, lower density areas and the more formal, urbanized commercial core*
- *Street planting in lower density residential areas randomly organized*
- *Street planting in higher density residential areas formally organized*

7.3. To this end the trees adjacent to the larger, lower density lots are arranged in a more randomised manner, with variable spacings and are to be less densely spaced than their counterparts located adjacent to the smaller, higher density lots.

7.4. Tree species are located in the areas adjacent to the larger lots and are selected from those trees proposed for the open spaces, therefore these larger lot areas feature a greater proportion of native specimens as street trees, than the smaller lots, which utilise a greater number of exotic trees that can be considered more formal than their native counterparts.

7.5. This arrangement of street trees allows a core item of the originally identified design criteria (refer section 1); " *No sudden transformation between open rural, lower density areas and the more formal, urbanized commercial core"*

7.6. An analysis is provided below in Table 6 referencing the relevant assessment guidelines as per Table 2

Table 6: Assessment of streetscapes against relevant LMP guidelines

S/no (LMP).	Guideline (note all emphasis added by author)	Design Response	Relevant Drawings / Document Refs + Any consents required
1.8	All **plant palettes within the appendices of the LMP represent the preferred plants to be utilised at site**. In the event that there is difficulty procuring plants of a sufficient standard and that a delay in this procurement would result in a delay to establishment of plant communities then they may seek an alternative species. Additionally if the **client wishes to supplement this list in areas within the site deemed to be of significant importance (such as lookout points) then they may do so.**	All proposed plants within the streetscapes are as per those provided in Appendix B of the LMP.	GA drawings 210912/5-19,22-24
1.9	The **details for pathways, fences and gates included in the appendices of the LMP represent the minimum baseline requirements**, the owner may choose to enhance these details with additional materials if they wish.	Gravel pathways are utilised within both the Oak and London plane tree avenues and link to overall pedestrian and cyclist paths networks	GA drawings 210912/5-19,22-24
5.17	As per GA Landscape Plan Set – 10/21 drawing 210912/3 **street trees are to be regularly spaced (where allowable) in areas of medium density** (refer section 10.2 of this document), **whereas in standalone dwelling and lifestyle areas, trees are randomly spaced. Acceptable tree species are listed in Appendix B-1 of this document** with **open space trees to be used in lower density areas and street trees to be used in medium density areas. Shrub, groundcover and grasses species to be utilised for street planting are given in the 'street planting' schedule Appendix B-3 of this documen**t, street planting is divided into four groups, the distribution of which throughout the site is provided in GA Landscape Plan Set – 10/21 drawings 21012/5-19.	As per the response to point 1.8 of the LMP above; All proposed plants are as per those provided in Appendix B of the LMP. The proposed tree layout intensifies as the corresponding lots reduce in size	GA drawings 210912/5-19,22-24
5.18	Shrub beds are to be **placed on the roadside of streets to separate footpaths from roadways. Low level shrubs, groundcovers and grasses (< 1m) are to be placed in areas closest to driveways to increase visibility**, with higher level shrubs placed away. **Hedges should be avoided in these areas to reduce maintenance within the public realm**, hedges can be limited to street side areas of private plots (refer section 10 of this document).	All footpaths are separated from roads by either a parallel parking bay or a planting bed, these beds contain either low-medium level shrubs or lawn. The frequency of shrub beds intensifies in concert with the frequency of street tree planting.	GA drawings 210912/5-19,22-24
5.20	There are currently two tree avenues located on the site, **these avenues form an important part of the rural character of the site and will be retained**. The **current gravel roads within these avenues will be repurposed and enhanced as pedestrian and cyclist connections** (refer section 18 of this document for pathway typologies). The northern avenue comprises of London Plane and the southern avenue comprises of English Oak, the trees of these avenues are in various states of health with some strong specimens and some weak specimens (in biological terms), these trees are to be physically surveyed at site, with those weaker specimens tagged for removal to be replaced with new specimens of the same species, if removal becomes widespread then it would be pertinent to select a tree species from within	Gravel pathways are provided between the trees to facilitate pedestrian and cyclist movement and link into the wider network. Beds of flowers are present within the verges below the trees and either side of this path to differentiate these avenues and keep a thread of what can be considered ' traditional rural character' running through the site.	GA drawings 210912/5-19,22-24

	the 'street trees' schedule of the appendices of this document.		
14.3	**New Amenity Planting - Direct planting** represents plants installed in a single operation (i.e.: no staging), **plants installed at this stage are typically larger than those installed with revegetation planting**. Direct planting is **utilised where a quicker aesthetic (i.e. street planting) or functional (i.e.: alluvial slope erosion protection) effect is required**. It is also used in smaller areas where revegetation is not practical.	All street planting is direct planting and will obtain a quicker aesthetic than the revegetation planting within the open spaces. Specified planting is of such an install size that a visible, maturing planting framework will be in place within the streetscapes as private lots become occupied with built form.	GA drawings 210912/5-19,22-24
18.6,-18.8	**Gravel pathways** are to consist of two types; A limestone hoggin chip with a wooden edge, which will be utilised within treed avenues and a type consisting of non-hoggin chip gravel that will be placed within the prevailing ground and will be utilised for both pedestrian and livestock movement. A summary of where **gravel pathways should be utilised**; • For areas where transition of cattle is required (can be used as pedestrian tracks when not utilised by cattle) • For short spans such as traversing a transition from a paver surface to a softer surface • In portions of pathway through areas prone to water collection during periods of heavy rainfall • At approaches to gates or stiles where users of open space would congregate	A gravel pathway will be provided within both the existing oak and plane tree avenues, when combined with these established trees and the proposed wildflowers upon the verges, this will provide a 'traditional rural character' element running through the site. This pathway will link into the site wide pedestrian and cycle network and can be considered to be the twin 'spines' of this network.	GA drawings 210912/5-19,22-24
	• Areas where vehicles will be parked adjacent to areas of rural open space at the western edge A summary of where **gravel pathways should be avoided**; • Long meandering pathways through open space		

8. Community Centre

8.1. The community centre sits at the north-western corner of the site, adjacent to the largest residential lots and within views of both the upper portions of the permanent stream and the interface with the esplanade reserve (refer sections 4 and 5).

8.2. The community centre integrates into the rural character open space by utilising open space tree planting to ease the transition between these two (2) spaces. The proposed community centre building does not sit at the apex of the landform upon which it sits but at a lower point allowing a greater level of absorption into the landscape.

8.3. Within the bounds of the community centre and its immediate surrounds the landscape response is characterised by the installation of productive, food producing plants in the form of orchards and vegetable gardens.

8.4. Planted earth mounding is utilised to facilitate pedestrian movement through the space with natural stone pathways weaving between the channels located between the earth mounds.

8.5. As per the streetscape response to the larger lot areas the tree framework within the community centre space does not adhere to an ordered framework but rather sits in a random, naturalistic pattern within the site.

8.6. An analysis is provided below in Table 7 referencing the relevant assessment guidelines as per Table 2

Table 7: Assessment of community centre landscape architectural design response against relevant LMP guidelines

S/no (LMP).	Guideline (note all emphasis added by author)	Design Response	Relevant Drawings / Document Refs + Any consents required

1.8	All **plant palettes within the appendices of the LMP represent the preferred plans to be utilised at site**. In the event that there is difficulty procuring plants of a sufficient standard and that a delay in this procurement would result in a delay to establishment of plant communities then they may seek an alternative species. Additionally if the **client wishes to supplement this list in areas within the site deemed to be of significant importance (such as lookout points) then they may do so.**	All proposed trees within the community centre are selected from the open space, streetscape and swale/wetland lists. This selection can be considered representative of the site's position at a meeting point of open space, streetscape and riparian areas. The grasses, groundcover and shrubs planting palette proposed by LandLab comprises approximately 50-60% plant material that is unique to the community centre, these additions can be considered complementary to those species provided through the appendices within the LMP and can be considered to be sympathetic to the prevailing proposed plant signature of the wider site, and thus be in keeping with the overall rural vernacular of the site.	LL drawings Karaka North Community Centre_Concept V.1_November 2021_LandLAB – pages 35, 55, 56, 57
1.9	The **details for pathways, fences and gates included in the appendices of the LMP represent the minimum baseline requirements**, the owner may choose to enhance these details with additional materials if they wish.	Pathway treatments are enhanced from those within the appendices of the LMP due to importance of the community centre within the wider site. The selected material can be considered consistent with, and appropriate to the prevailing rural character of the wider site.	LL drawings Karaka North Community Centre_Concept V.1_November 2021_LandLAB – pages 33, 36-39, 44
5.14	**Neighbourhood open space** - All amenities are to adhere to the following principles; • **Raw (unmodified) materiality** including hardwood timber or steel, specified to chunky rural vernacular design detail. • A **further element of stone or unmodified precast and/or in-situ concrete** can be added as an accent in combination with steel or hardwood. • The final design should look and **feel chunky and robust**, as to have a rustic rural quality. Appendix L of the LMP provides exemplar images of preferred vs non-preferred elements of amenities that adhere to the above principles	Whilst the community centre is not specifically designated as neighbourhood open space, it can be considered to have similar functions to neighbourhood open space, thus the guideline as outlined in section 5.14 of the LMP can be considered applicable to the space. The selected furniture palette can be considered in keeping with the images provided in Appendix L of the LMP and thus can be considered consistent to the overall rural character of the wider site	LL drawings Karaka North Community Centre_Concept V.1_November 2021_LandLAB – pages 45, 46
16.2	Any **establishment of a formal orchard will be limited to the community centre area**. Outside of this formal orchard fruit trees will be considered as 'open space trees' and will be planted within the open spaces.	The orchard is confined to the outer reaches of the community centre; placement of the orchard adds an additional element of rural amenity when viewed alongside the livestock that will inhabit the open spaces. This additional element of amenity further underscores the perception of the rural character narrative over the site.	LL drawings Karaka North Community Centre_Concept V.1_November 2021_LandLAB – pages 33-35
18.20-18.22	**Natural stone pathways** consist of pathways comprised of unit paving cut from natural stone. These cuts can be regular or irregular (referred to as 'crazy paving') A summary of where natural stone pathways **should be utilised;** • Key intersections as an accent to concrete footpaths • Within the **village square and village green areas** • Within the **community centre** • At entry **thresholds to parks**	Natural stone paving is utilised in the channels between the proposed vegetated mounds, this paving does not utilise a hard, uniform edge but uses the material to define the edge with the adjacent planting beds. Such a treatment provides a high level of amenity whilst allowing the vernacular of the prevailing rural character to still be present through this localised movement network.	LL drawings Karaka North Community Centre_Concept V.1_November 2021_LandLAB – pages 36-39, 44

	A summary of where natural stone pathways **should be avoided**; • As the main material in footpaths within streets • As pathways in vegetated areas • As meandering pathways through rural open space		

9. Village Centre

9.1. The village centre sits at the south-eastern corner of the site and can be considered as the culmination of the transition across the site from a strong rural character to an urbanised character.

9.2. The urban character is reinforced through the design language of the village centre utilising a strong geometric, linear layout supplemented by a collection of geometrically ordered landscape elements.

9.3. Whilst the alignment and organisation of the space lends itself to an urban character, the overall rural character vernacular of the site is underscored by the strategic placement of landscape elements and the use of surface materials, a key example being an area of gravel placed within the paving surfaces that houses vegetative elements and furniture that provides tangible, visual links to the underlying rural character vernacular of the wider site.

9.4. An analysis is provided below in Table 8 referencing the relevant assessment guidelines as per Table 2

Table 8: Assessment of village centre landscape architectural design response against relevant LMP guidelines

S/no (LMP).	Guideline (note all emphasis added by author)	Design Response	Relevant Drawings / Document Refs + Any consents required
1.8	All **plant palettes within the appendices of the LMP represent the preferred plans to be utilised at site**. In the event that there is difficulty procuring plants of a sufficient standard and that a delay in this procurement would result in a delay to establishment of plant communities then they may seek an alternative species. Additionally if the **client wishes to supplement this list in areas within the site deemed to be of significant importance (such as lookout points) then they may do so.**	All proposed trees within the village centre are selected from the open space, streetscape and swale/wetland lists. This selection across the respective plant lists can be seen as reflecting the underlying rural character vernacular of the site The grasses, groundcover and shrubs planting palette proposed by LandLab comprises approximately 50-60% plant material that is unique to the village centre, these additions can be considered complementary to those species provided through the appendices within the LMP and can be considered to be sympathetic to the prevailing proposed plant signature of the wider site, and thus be in keeping with the overall rural vernacular of the site.	LL drawings Karaka North Village Centre_Concept V.1_November 2021_LandLAB – pages 14-29, 51-54
1.9	The **details for pathways, fences and gates included in the appendices of the LMP represent the minimum baseline requirements**, the owner may choose to enhance these details with additional materials if they wish.	Pathway treatments are enhanced from those within the appendices of the LMP due to the importance of the site. The selected material can be considered consistent with, and appropriate to the prevailing rural character of the wider site.	LL drawings Karaka North Village Centre_Concept V.1_November 2021_LandLAB – pages 14-29, 44-50
5.14	**Neighbourhood open space** – All amenities are to adhere to the following principles; • **Raw (unmodified) materiality** including hardwood timber or steel, specified to chunky rural vernacular design detail. • A **further element of stone or unmodified precast and/or in-situ concrete** can be added as an accent in combination with steel or hardwood. • The final design should look and **feel chunky and robust**, as to have a rustic rural quality. Appendix L of the LMP provides exemplar images of preferred vs	Whilst the village centre is not specifically designated as neighbourhood open space, it can be considered to have similar functions to neighbourhood open space, thus the guideline as outlined in section 5.14 of the LMP can be considered applicable to the space. The selected furniture palette can be considered in keeping with the images provided in Appendix L of the LMP and thus can be considered appropriate to the overall prevailing rural character of the site	LL drawings Karaka North Village Centre_Concept V.1_November 2021_LandLAB – pages 14-29, 44-50

	non-preferred elements of amenities that adhere to the above principles.		
18.6,-18.8	**Gravel pathways** are to consist of two types; A limestone hoggin chip with a wooden edge, which will be utilised within treed avenues and a type consisting of non-hoggin chip gravel that will be placed within the prevailing ground and will be utilised for both pedestrian and livestock movement. A summary of where **gravel pathways should be utilised**; • For areas where transition of cattle is required (can be used as pedestrian tracks when not utilised by cattle) • For short spans such as traversing a transition from a paver surface to a softer surface • In portions of pathway through areas prone to water collection during periods of heavy rainfall • At approaches to gates or stiles where users of open space would congregate • Areas where vehicles will be parked adjacent to areas of rural open space at the western edge A summary of where **gravel pathways should be avoided**; • Long meandering pathways through open space	The Village centre features a gravel pathway encased by unit paving. This gravel does not serve as primary walkway but rather as an underlying rural character element, acting in concert with irregular shaped paving and tree planting to incorporate a functional rural aesthetic, to what is essentially an urban retail area. Thus the placement of gravel at this location can be considered appropriate and contributing to the enhancement of the overall rural vernacular within the overall site	LL drawings Karaka North Village Centre_Concept V.1_November 2021_LandLAB – pages 17, 18, 23, 44
18.17-18.19	**Residential concreted pathways** - **Concreted pathways are used within housing areas and high amenity public realm spaces / the village centre and village green.** Concrete pathways **outside of these areas are to be limited**, with	Usage of concrete surfacing / pathways can be considered consistent with the usage outline within the LMP. The arrangement of these elements within the space	LL drawings Karaka North Village Centre_Concept V.1_November 2021_LandLAB – pages 17-, 27, 44

	the predominant pathway/trail types as given earlier. Use of asphalt pathways is to be limited to service areas. Concreted and asphalt pathways can be separated into the following categories; • **Monolithic concrete surfacing**: Concrete poured at site to form a pathway, can be poured to any shape laid out on the ground, the **only breaks in the surfacing would occur at any required expansion joints, decorative saw cuts are permitted.** The texture of the surface of monolithic concrete **surfacing can range from a smooth finish to a coarse texture (exposed aggregate).**This change in texture can be used to delineate differences in surface use. • **Unit paving**: Unit paving consists of individual units of concrete paving, typically either 50mm (pedestrian use) or 80mm (vehicular use) thick and are square or rectangular in shape. Unit pavers require a hard edge to be contained, which can be an existing structure such as a fence, building or road kerb, or a prepared edge such as a timber edge. A **variety of unit paver sizes can be used as a design feature to provide visual variety**. Unit pavers are more expensive per square metre than concrete surfacing and should be used sparingly in higher	can be considered to underpin the overall rural character vernacular within an environment with a dominant urban land use pattern	

	profile areas or as accents to monolithic concrete surfacing. **Concrete pavers can be considered for use in large areas where permeable pavers are to be used as this can assist in surface drainage**. • Asphaltic surfacing: Asphaltic surfacing is utilising black asphalt for pathways. This form of surfacing is less expensive per square metre than monolithic concrete surfacing and unit paving. Asphaltic surfacing lacks the visual and textural variety of the two previously stated surfacing options, to increase this variety asphalt surfacing can be utilised in conjunction with hard surfacing with greater texture and colour variety.		
18.20-18.22	**Natural stone pathways** consist of pathways comprised of unit paving cut from natural stone. These cuts can be regular or irregular (referred to as 'crazy paving') A summary of where natural stone pathways **should be utilised;** • Key intersections as an accent to concrete footpaths • Within the **village square and village green areas** • Within the **community centre** • At entry **thresholds to parks**	Natural stone paving is utilised within the village square both as a complementary element (through the use of setts) to the concrete surfacing and as a rural character element (crazy paving accents) working in concert with the proposed gravel areas to bring a visible rural element/vernacular to what is essentially an urban space.	LL drawings Karaka North Village Centre_Concept V.1_November 2021_LandLAB – pages 17-, 27, 44
	A summary of where natural stone pathways **should be avoided**; • As the main material in footpaths within streets • As pathways in vegetated areas • As meandering pathways through rural open space		

10. Private Lots (Lots 1-119)

10.1. Lots 1-119 are split over six (6) super lots each containing a single town house within each individual lot. One (1) of these superlots contains a private open space at its centre for use by the residents of the surrounding individual private lots.

10.2. Lots 1-119 represent the extremities in terms of lot density throughout the site and thus, in conjunction with the village centre, represent the 'urban' core of the site. As reflected in the streetscape planting treatment (refer section 7) this area of the site represents a more formalised approach that can be considered more consistent with an urban environment.

10.3. As per the proposed landscape architectural design response for the village centre the design language for these private lots is underpinned by a geometrical order formal framework that contains vegetative and amenity elements that lend themselves to the overarching rural vernacular of the wider site.

10.4. Within the private lots there is a high degree of repetition within each super lot in terms of materiality and tree and shrub placement. Subtle variation between lots is utilised through variance in selected plant species.

10.5. Whilst there is a high degree of repetition within each superlot, there is a degree of variance between the superlots themselves with variance in both plant species and hard surface treatments.

10.6. The private open space located within lots 44-64 is an open lawn space interspersed with earth mounds, with trees and shrubs utilised at its perimeter.

10.7. An analysis is provided below in Table 9 referencing the relevant assessment guidelines as per Table 2.

Table 9: Assessment of private lot landscape architectural design response against relevant LMP guidelines

S/no (LMP).	Guideline (note all emphasis added by author)	Design Response	Relevant Drawings / Document Refs + Any consents required
1.8	All **plant palettes within the appendices of the LMP represent the preferred plans to be utilised at site**. In the event that there is difficulty procuring plants of a sufficient standard and that a delay in this procurement would result in a delay to establishment of plant communities then they may seek an alternative species. Additionally if the **client wishes to supplement this list in areas within the site deemed to be of significant importance (such as lookout points) then they may do so.**	Approximately 70% of the proposed private lot trees, shrubs, grasses and groundcovers are as per those set out within the appendices of the LMP. Those plants not within the LMP schedules can be considered consistent with those set out within the LMP in terms of character and appearance and can be considered an acceptable addition to the prevailing plant palette	LL drawings Karaka North Superlots_Concept V.1_November 2021_LandLAB – pages 9-12, 17-20, 25-28, 33-36, 41-44, 48-51, 56-59, 64-67, 72-74,78-81, 86-89, 92-95
1.9	The **details for pathways, fences and gates included in the appendices of the LMP represent the minimum baseline requirements**, the owner may choose to enhance these details with additional materials if they wish.	The internal pathway treatments are enhanced from those within the appendices of the LMP due to importance of the site. The selected material can be considered consistent with, and appropriate to the prevailing rural character of the wider site.	LL drawings Karaka North Superlots_Concept V.1_November 2021_LandLAB – pages 13-16, 18, 29-32, 34, 41, 45-47, 49, 60-63, 65, 75-77, 79, 89-91, 93, 97
5.14	**Neighbourhood open space** - All amenities are to adhere to the following principles; • **Raw (unmodified) materiality** including hardwood timber or steel, specified to chunky rural vernacular design detail. • A **further element of stone or unmodified precast and/or in-situ concrete** can be added as an accent in combination with steel or hardwood. • The final design should look and **feel chunky and robust**, as to have a rustic rural quality.	Whilst the private open space nestled within lots 44-64 is not specifically designated as neighbourhood open space, it can be considered to have similar functions to neighbourhood open space, thus the guideline as outlined in section 5.14 of the LMP can be considered applicable to the space. The selected furniture palette can be considered in keeping with the images provided in Appendix L of the LMP and thus can be considered to be consistent with the overall rural character vernacular of the	LL drawings Karaka North Superlots_Concept V.1_November 2021_LandLAB – pages 44, 99
	Appendix L of the LMP provides exemplar images of preferred vs non-preferred elements of amenities that adhere to the above principles.	site.	
10.15	**Medium Density Plots** - All planting within type 1 plots (180 sq.m+), that is visible from the public realm, is to be **organised in naturalised layouts, species variation should be minimal between adjoining plots**. Trees are to be **limited to the lower height trees given in the 'street trees'** planting schedule of Appendix B of this document.	Variation between plots is minimal, with subtle variations brought about by variance in tree species. Front yard trees are limited to smaller (4-6m) trees with narrow spread to ensure there is no clash with proposed street trees. Whilst front yard trees are not derived exclusively from the 'street tree' plant palette located in the LMP. They can be considered a close match to these trees and will complement the proposed street tree layout/species palette.	LL drawings Karaka North Superlots_Concept V.1_November 2021_LandLAB – pages 9-12, 17-20, 25-28, 33-36, 41-44, 48-51, 56-59, 64-67, 72-74,78-81, 86-89, 92-95
10.16	**Medium Density Plots** - All **street frontage planting within type 1 plots (180 sq.m+) is to maintain a cohesive identity between adjacent plots,** with a **limited plant palette that is shared across adjoining plots,** with subtle layout and species changes every few plots. All species in these areas are to be limited to the **'street tree' and 'fruit tree' schedules provided in Appendix B-1/B-2 of the LMP** and the 'street shrub, groundcover and grasses' and schedule provided in B of this document.	Cohesive identity is maintained across adjoining plots, with subtle changes related to tree species variation. Whilst front yard trees and shrubs are not derived exclusively from the 'street tree' plant palette located in the LMP. They can be considered a close match to these trees and will complement the proposed street tree layout/species palette	LL drawings Karaka North Superlots_Concept V.1_November 2021_LandLAB – pages 9-12, 17-20, 25-28, 33-36, 41-44, 48-51, 56-59, 64-67, 72-74,78-81, 86-89, 92-95
10.18	**Shared Private Open Space** - Shared private open spaces are to serve the private lots that immediately surround them, there is no public access to these sites. Whilst these spaces are private, they are considered to be a part of the open space network. The **purpose of these sites is to provide a break-out area of passive recreational**	A shared private open space is nestled within the void located within lots 44-64. No formal public access is available to the space, the park consists predominantly of an open lawn bed to allow for a variety of recreational	LL drawings Karaka North Superlots_Concept V.1_November 2021_LandLAB – page 41

	space for the residents of the bordering plots.	activities.	
10.19	**Shared Private Open Space** - These areas are to **consist of lawn, shrubs and trees, which are to conform with the 'street planting' plant lists given in Appendix B of the LMP.** Paved areas are to be **limited to the areas of ingress/egress** from neighbouring properties. Shrubs are to be **utilised along property boundaries to ensure that privacy within private lots is maintained**. **Trees should be placed in such a manner that there is no overhang to neighbouring private lots.** (Refer Appendix K of the LMP for diagrammatic example)	Whilst the selected trees for the private open space are not exclusively sourced from the 'street tree' planting lists, they can be considered a close match and the overall outcome in keeping with the desired plant signature of the streetscapes. Trees are predominantly placed at communal entry to the open space with two trees placed in central areas, this internal tree placement does not adversely affect the area available for passive and active recreation within the space. The placement of fruit trees in the southern extents of the space is seen as a positive introduction and adds an element of rural amenity to the space, further underpinning the overall rural character of the site.	LL drawings Karaka North Superlots_Concept V.1_November 2021_LandLAB - page 41

11. Conclusion

The design cycle of the project has seen the identification of the prevailing rural character of the wider site, identification of a set of design criteria to ensure the retention of this rural character as the wider site transitions from being a working farm interspersed with sporadic built form, to a rural village wherein residential living is the predominant land use activity with significant rural elements and character being retained.

The result of this ongoing design process has culminated in a concise landscape architectural design response to the site where not only is the prevailing rural character maintained through the open space network but is enhanced through increased native planting strengthening the existing planting fragments that intersperse the open pastoral spaces.

Within the residential areas of the site the overarching rural vernacular is addressed through the selected plant palette and its subsequent arrangement combined with the materiality of landscape elements and the interplay between hardscape treatments. This response allows the residential areas of the site to function as urban environments but still providing an experience that underlines the prevailing rural character of Karaka North Village.

As the author of both the LDR and the LMP, Greenwood Associates has reviewed all the landscape packages and is satisfied that the overall outcomes meet the design criteria outlined within the LDR, and subsequently meets the outcomes, (as outlined in section 3.1) anticipated by the LMP.