TECHNICAL SPECIALIST REPORT – LANDSCAPE, VISUAL AND URBAN DESIGN MATTERS

NOTICE OF REQUIREMENT - ROTOKAURI GREENWAY

PREPARED FOR  HAMILTON CITY COUNCIL AND WAIKATO DISTRICT COUNCIL

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Authors Qualifications and Experience

I hold a Bachelor of Landscape Architecture from Lincoln University (2001). I am a registered member of the New Zealand Institute of Landscape Architects (2008) and have practised as a landscape architect in the following capacities:

- Landscape Architect, Visual Landscape Design, Blenheim;
- Landscape Architect, Earthwork Landscape Architects (SI) Ltd, Christchurch;
- Landscape Architect, 2020 Liverpool (Mouchel), Liverpool (UK); and
- Senior Landscape Architect/ Urban Designer, Stantec New Zealand, Christchurch.

I am currently a senior landscape architect / urban designer at Stantec New Zealand and have been since 2011.

I have 18 years of experience working for clients in the local authority, public and private sectors on a wide variety of major projects. I have specialised in landscape design, visual and landscape effects assessments, reserve management planning and urban design projects.

I have been involved in several large infrastructure projects and corridor developments, including Johns Road – Groynes to Sawyers Arms Road of National Significance, The Barhill Chertsey Irrigation Stage 2 Intake, Richmond Lower Queen Street Upgrade, and Palmerston North Streetscape Guidelines. I am currently working on landscape design for the Lower Heathcote River and the State Highway 58 Safety Upgrade. This work has included providing advice on landscape treatment and mitigation measures to reduce any adverse visual and landscape effects of development. I have also undertaken Technical Reviews of the Landscape and Visual Effects for the Christchurch Southern Motorway Stage 2 and the landscape detailed design for Transmission Gully.
1. Introduction

1.1 Purpose of Report

Stantec New Zealand Limited have been engaged by Hamilton City Council (HCC) and Waikato District Council (WDC) to undertake an assessment of both the ‘Landscape and Visual Effects, and Urban Design Effects’ section of the ‘Assessment of Environmental Effects’ report prepared by BECA, for the proposed Notice of Requirement for the Rotokauri Greenway project.

Specifically, we were requested to determine whether the Rotokauri Greenway NOR and supporting documentation contain enough information for potentially affected/interested parties to determine how their property, activities, and interests could be affected by the Project.

The review was also to determine whether BECA has provided enough information to enable HCC and the public to understand the application and to ascertain the landscape, visual and urban design effects that the proposed works will have on the surrounding environment.

The assessment also addressed whether:

- The report contained enough information to enable a clear understanding of the landscape, visual amenity and urban design effects associated with the Project or whether additional information is required; and

- The landscape, visual amenity and urban design effects had been accurately scoped and assessed.

The purpose of this report is to provide a preliminary assessment of the landscape, visual and urban design effects of the proposal that will support the notification assessment prepared on behalf of HCC and WDC.

1.2 Documents Considered

The following documents were referenced:


The following appendices were reviewed:


A site visit was undertaken in May 2019. A meeting with Paul Smith, landscape architect from BECA, was held in Christchurch on the 4th June 2019.

2. Overview of Landscape, Visual and Urban Design Matters

Rotokauri in the north-west of the city has been identified as part of Hamilton City’s strategy for new residential and business development. The Greenway, of which this application refers, is termed the as the ‘central green drainage corridor’ in the Rotokauri Structure Plan, and describes that ‘it shall function as the principal stormwater drainage channel and a recreational and transportation corridor connecting the wider network of open spaces and natural features …[in the new Rotokauri development...]’ (Policy 3.6.1.1b).

The vision for the Rotokauri Greenway, as outlined in the Urban and Landscape Design Report (ULDF), is based on the stormwater function of the corridor. Twelve wetland ponds are proposed, that in conjunction with the improvements to the Rotokauri drain, act to treat, store and convey stormwater for the Rotokauri area. The wetland ponds and swale represent areas of potential for passive recreation, cultural expression and to enhance biodiversity – a wildlife corridor between Rotokauri and Whaiwhakareke. People will also be able to move throughout the site along a cycleway / walkway that will run continuously on both sides of the swale alignment, connecting to the SH1 pathway. It will also
connect to the rest of Rotokauri. A series of roads and streets will be developed for Rotokauri with bridges to cross the swale.

The site is located approximately 7km north west of the city centre of Hamilton and near State Highway 1. The area gets its name from Kauri logs buried in and around Lake Rotokauri. There is good connectivity to other notable places in Hamilton, for example, Wintec Rotokauri campus, Nga Taiatea Wharekura school, Hamilton Zoo / Waiwhakareke Natural Heritage Park, and The Base (one of New Zealand’s largest shopping areas). Lakes Rotokauri and Waiwhakareke are two significant landscape and cultural sites at either end of the Greenway site and will influence project outcomes. Lake Rotokauri and its margins was once believed to be covered in large forests with an abundance of birds and fish life. Following Maori and more so European settlement, significant vegetation clearance occurred resulting in today’s mostly rural agricultural landscape character. Due to the intended use of this land, as outlined in the HCC District Plan, and current development occurring, the rural character of Rotokauri has and is anticipated to give way to a more urban character.

The proposed Greenway is a 3.8 kilometre long corridor, identified by HCC as necessary to facilitate urbanisation of Rotokauri and hence be protected to be developed as such. In addition to its stormwater function, it will also serve as a public recreational space and be designed in a way that provides for a large amount of recreational use, extensive planting and the creation of wetland habitat with a ‘natural’ meandering swale conveying water through the corridor. These aspects of the Greenway will provide for a high degree of amenity to its users and those of the nearby areas. Indeed, the success of the Greenway will be measured by the extent of public use that occurs. The amenity provided by the Greenway and associated vegetation will act as a significant element of the future urban environment in Rotokauri. It represents a significant landscape restoration project in that it will re-create an ecological corridor between Lake Rotokauri and Lake Waiwhakareke, based on restoring the indigenous vegetation and habitats that would have existed prior to the draining of the Rotokauri area for farming purposes in the early 1900s.

The landform transitions from very expansive and flat plains at the Hamilton (eastern) end of the corridor through an area of rolling hillside from farmland west of SH1, culminating in a view toward Lake Rotokauri from Exelby Road. The swale will then flow downhill in a narrow section toward the lake.

Many of the key design considerations, in terms of integration with surrounding land uses, are about ensuring that the design retains opportunities to achieve positive landscape and urban design outcomes. In particular to maximise the extent, connectivity and continuity of public recreational and active transport use within the corridor, and to ensure that the Greenway is not visually or physically separated from adjacent land uses. This is particularly important near the WINTEC campus and the future suburban centre of Rotokauri.

As described within the ULDF, the Greenway provides opportunities to:

- Design the corridor with a consistent design theme;
- Create an attractive linear parkland environment;
- Vary the environment with pocket parks and destinations along the corridor;
- Enable the cultural expression of mana whenua along the corridor;
- and to provide convenient and safe off-road transport connections through Rotokauri.


The key issues in relation to potential landscape visual and urban design effects of the Project include the following:

- Physical construction effects due to the excavation of the swale on existing landforms, landcover and land use will be greater compared to what could generally be anticipated within this area, in terms of general residential development. Cumulatively, when viewed with the anticipated Rotokauri urban development, the earthworks will influence landscape character and amenity especially in the first three years of the construction phase.
4. Assessment of Effects

4.1 Requiring Authority Assessment and Proposed Mitigation

4.1.1 Landscape and Visual Matters

The Landscape and Visual Effects Assessment Report (LVA) notes that the landscape and visual effects relate to the changes in landform, land cover and land use, as well as a change in landscape character from rural to more urban, resultant from the extent of earthworks. The vegetation in the area is largely exotic, weed species in the Rotokauri Drain itself and sparse shelter belt and specimen tree planting, that results in an open and expansive landscape at the southern end, with landform playing a greater role in narrowing the corridor at the northern end. The report states that the earthworks are large in scale and will be moving in the opposite direction (west to east) than the pattern of the Rotokauri development.

There will be adverse visual effects as per the report, resulting from earthworks during the construction phase. Visual effects are outlined as being discernible from public spaces near the Rotokauri Swale and are discussed over three time periods. The most severe effects will be in the 0-3 year construction period, with the 3-20 year period of establishment having some negative effects, but moving to positive as landform and vegetation mature. At 20 years + once vegetation matures, effects will be positive.

I met with Paul Smith (Landscape Architect, BECA) on the 4th of June 2019 to discuss the project, the Landscape and Visual Effects Assessment Report attached to the NOR, and the items relating to landscape and visual effects in the Request for Information issued on the 22nd of May 2019.

9. The Landscape and Visual Effects Assessment focuses largely on the visual effects of the construction works and greenway corridor when viewed from public places. The corridor will however also be visible to private property owners, particularly those located on the hills above. Please therefore provide further assessment of the visual effects on the existing and future Rotokauri residents both during construction and once fully developed.

The approach undertaken by BECA in assessing the visual effects of the different time frames included an assessment of potential visual effects. Individual properties were not visited, however the LVA states that the proposed Greenway will be visible from Rotokauri Road, Exelby Road, Lee Road, the Wintec Campus, State Highway 1 and the Waikato Expressway Cycle Path. Adverse construction effects would be mostly experienced during the 0–3 year construction period. Viewpoints 2 and 3 are taken at the northern end of Lee Road. Descriptions under the viewpoint images state that the majority of the Rotokauri Development will be visible from elevated areas. Section 5.2 of the LVA describes the main works in relation to visual effects and able to be seen throughout the construction process, will be a result of removal of trees, widening of the Rotokauri Drain, creation of the cycle path and associated construction vehicle movements. Varying degree of visual effects from Moderate to Low have been assessed depending on where the Greenway Proposal is viewed. Positive effects would arise once the greenway was constructed (as it is public greenspace).

The landscape and visual assessment concludes that despite a degree of adverse effects on the landscape, both in terms of landscape character and visual effects, that overall, effects will be positive. The Policy Response (section 5.3) also assesses that there will be overall consistency with relevant objectives and policies in both the Hamilton District Plan and the Waikato District Plan.

4.1.2 Urban Design Matters

The urban design aspects of the Project are outlined as being aligned with the principles of the Rotokauri Structure Plan and aspirations of Hamilton City Council. The Road Network is yet to be developed. The ULDF has been developed in conjunction with HCC to ensure it ‘fits’ and responds to the future requirements of the Rotokauri Structure Plan. The ULDF also notes the development context of the Rotokauri Rise Masterplan in the creation of a multi-functional green space, and to create a series of

- Effects on landscape character and amenity over the entire corridor, post construction phase, and in local areas, stimulating development.
- The Greenway itself will alter the existing character within Rotokauri.
- Visual effects on views from the surrounding dwellings, properties and roads that will change over time.
- The potential for positive urban design outcomes.
direct and physical links to nearby public open spaces. The urban design and landscape principles guiding the ULDF state the following:

- Respond to context – character, function and scale of the receiving environment
- Connectivity – create legible, safe connections through the greenway and cross connections between adjacent land uses
- Accessibility – universal access and maximise natural surveillance along the corridor
- Sustainable design principles
- Amenity
- Integrated CPTED principles – Crime Prevention Through Environmental Design

The Key design features can be described as:

- Incorporating continuous pathways along both sides of the greenway
- Integrated open spaces throughout that will fulfil stormwater attenuation function, as well as
- Providing active and passive recreation opportunities, points of interest or focal points
- Footbridges or culvert ‘cross connection’ points over the greenway to encourage walking and cycling modes of transport and eliminates potential severance effects of the swale waterway
- Providing extension and connection of the greenway to the Wintec Campus
- Provision of viewing platforms, signage, seating and feature lighting to overlook the greenway between ch 850 and ch1250
- Provision of signage and wayfinding and to promote connection with cultural narratives and surrounding landscape features
- A predominantly native planting palette with seasonal specimen trees
- The swale to be planted with pockets of large vegetation
- Public artwork at both gateways of the corridor and at key activity areas.

Appendix B of the urban design report provides a useful Section Summary table that would guide future design work of the Greenway. The corridor has been broken into sections, with design opportunities and potential design moves identified for each.

The urban design report notes remaining design issues to be resolved in section 3.4.1:

- Design of pedestrian and cycle networks to connect to adjacent land use patterns
- Number of cross connection points (located at least every 200m along the greenway)
- Amount of available land within the greenway corridor for public realm / opportunities and outcomes
- Location of the wetland ponds outside of the greenway designation creates uncertainties around functional requirements of water quality and affects urban design and landscape principles
- The danger that the Rotokauri Structure Plan interface could turn its back on the Greenway, creating an undesirable and unsafe environment.

The urban design report recommends that further landscape and urban design input will be required as the greenway design progresses, and to mitigate landscape, visual and urban design effects. Firstly, to prepare a Landscape and Urban Design Concept Plan to further refine and implement the outcomes sought in the ULDF as a condition of the NOR designation. Secondly for HCC to apply conditions to determine the number of pedestrian cross connections, and key interfaces to avoid the greenway becoming an undesirable and unsafe environment.

4.1.3 Proposed Conditions

The proposed NOR conditions include two conditions to mitigate, remedy or avoid potential adverse landscape, visual and urban design effects of the Project Proposed Conditions 19 & 20 – Landscaping and Visual Mitigation:
18. At least 40 working days prior to the commencement of any earthworks or construction activity within the designation boundaries (excluding enabling works) the Requiring Authority shall submit for certification a detailed Landscape and Urban Design Plan (LUDP) to the Territorial Authority Chief Executive or nominee. The purpose of the LUDP is to provide a robust and integrated design that is attractive, coherent, durable and innovative to ensure that the Rotokauri Greenway is a high-quality open space rather than a heavily engineered environment that is unsympathetic to public use. This LUDP shall be in accordance with the Landscape and Visual Effects Report and Urban and Landscape Design Report submitted with the document titled “Rotokauri Greenway Notice of Requirement and Assessment of Environmental Effects” dated November 2018.

19. The LUDP shall be prepared by a suitably qualified landscape architect and shall include the following but not be limited to:

a) Details of the pedestrian and cycle network, including the width and type of path (e.g. shared versus separate) and the horizontal and vertical alignment and connections for universal access and to what degree that CPTED principles (safety of users) are integrated into the design;

b) Details of the number and location of pedestrian and cyclists cross-connections within a commercial/industrial and residential urban land uses;

c) Details of the maximum distance for closed off / fenced boundary treatments without entry and exit points and other activities for casual surveillance;

d) Location of paths in relation to adjacent land uses (i.e. paths closer to active uses like the suburban centre) to enhance and enable the wider open space network;

e) Details on variable edge treatments to the shared path;

f) Location of recreational and amenity areas/nodes within corridor to support specific urban hubs and adjacent activities;

g) Details around connectivity;

h) Options for land use optimisation in areas that are not developable for building uses that are likely to affect the adjacent uses, and therefore the urban design outcomes; and

i) Recognise any sites of significance and cultural values along the Greenway corridor;

4.2 Assessment and Proposed Mitigation

Overall, and over time, the Project will integrate successfully into the receiving environment and enhance the visual amenity and character of the area.

The current rural lifestyle environment is subject to the Rotokauri Structure Plan which will result in urbanisation of most of the land within this sector. The AEE and ULDF outline the need for further landscape and urban design input in the form of a Landscape and Urban Design Plan as well as items to be conditioned by HCC, as mitigation measures for any adverse effects.

I am happy that visual effects for surrounding residents have been satisfactorily considered. In our discussions Paul explained that he used the elevated view from the Lee Road spur as a generalised situation, as shown in viewpoints 2 and 3 in the Landscape and Visual Assessment report. We agreed that the approach taken in assessing the visual effects of the different time frames of the development was appropriate and that this included an assessment of potential visual effects. The degree of visual effects on surrounding residents will be similar to that gained along Lee Road and that temporary construction effects would be mostly experienced during the 0–3 year period. I agree that positive effects would arise once the greenway is constructed and as it matures over time. I agree that there will be negative effects in the short term, but that they will be outweighed by long term amenity benefits. In our meeting Paul identified properties on Lee Road, Exelby Road and Burbush Road that are likely to have a clear view of the construction works, albeit short term. I note that the construction will be progressively staged, so that there won’t be intensive construction works for the whole 3 years visible from any one location.

The urban design report also recommends that a working group for the swale be set up to develop the design. I agree that this would be beneficial.

In my opinion, the landscape and urban design opportunities, principles and key design features illustrated within the ULDF provide suitable measures that avoid, remedy or mitigate the adverse effects of the Greenway. The Landscape and Visual Mitigation conditions (Conditions 18 and 19) require the preparation of a “Landscape and Urban Design Plan” (LUDP) that identifies the specific landscape measures to be
implemented and maintained to mitigate any adverse visual, landscape effects of the project. The LUDP is to be in general accordance with the indicative landscape mitigation measures outlined in the Rotokauri Greenway ULDF.

5. Conclusion and Recommended Conditions

5.1 Landscape and Visual Mitigation Conditions

At this stage, I feel that the proposed conditions don’t currently cover the following:

- How the proposed pathways and other cross connections will connect with the future road network
- Overall landscape and urban design themes / narratives
- Concept / detailed design for all recreational and amenity areas / nodes
- Illustrations / visualisations and actual cross sections to develop the typical sections in the ULDF
- Proposed planting for amenity / ecological benefits
- How phasing of the greenway will be programmed and maintained during its design life.

5.1.1 Recommended Conditions

5.1.1.1 Recommended Condition 19

19. The LUDP shall be prepared by a suitably qualified landscape architect and shall include the following but not be limited to:

a) A vision statement and an outline of the landscape and urban design themes or narratives to be adopted for the entire length of the Project
b) Demonstrate how the design meets Safety in Design requirements, Territorial Authority standards and management plans, and national standards and / or best practice
c) Concept landscape plans with appropriate illustrations and cross sections showing the design scheme
d) Details of the pedestrian and cycle network, including the width and type of path (e.g. shared versus separate) and the horizontal and vertical alignment and connections for universal access and to what degree that CPTED principles (safety of users) are integrated into the design;
e) Details of the number and location of pedestrian and cyclists cross-connections within a commercial / industrial and residential urban land uses, and connections with any proposed road transportation networks;
f) Details of the maximum distance for closed off / fenced boundary treatments without entry and exit points and other activities for casual surveillance;
g) Location of paths in relation to adjacent land uses (i.e. paths closer to active uses like the suburban centre) to enhance and enable the wider open space network;
h) Details on variable edge treatments to the shared path;
i) Location of recreational and amenity areas/nodes within corridor to support specific urban hubs and adjacent activities;
j) Landscape design elements, including concept design for all recreational and amenity areas / nodes, hard and soft landscape materials, planting types, sizes and densities,
k) Details around connectivity;
l) Options for land use optimisation in areas that are not developable for building uses that are likely to affect the adjacent uses, and therefore the urban design outcomes;
m) Recognise any sites of significance and cultural values along the Greenway corridor; and
n) Planting phasing, management and maintenance requirements.
5.2 Conclusions

The Urban and Landscape Design Framework outlines a comprehensive suite of urban and landscape design principles and objectives for the Rotokauri Greenway. These will assist with integrating the Project into the surrounding landscape and minimise the landscape and visual effects resulting from the development.

As a large part of the Greenway traverses rural land, the rural character will inevitably be adversely affected to varying degrees by the Project, as would be expected by construction activities in this environment. The Greenway has been designed as a multi-purpose movement corridor – an asset for Rotokauri. Over time, mitigation planting will enhance the visual amenity and ecological values along the corridor and enhance the landscape character as development patterns move from rural to a more urban character.

I consider that the proposed conditions requiring the preparation of a Landscape and Urban Design Concept Plan will ensure over time the integration of the Project’s permanent works, including stormwater basins, pathways, recreation areas, structures, and planting works into the surrounding landscape and topography, having regard to the local landscape character and contexts along the Greenway.

In my opinion the proposed landscape and urban design conditions are appropriate measures to avoid, remedy or mitigate the landscape and visual effects of the Project.

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