RiverLink

Greater Wellington Te Pane Matua Taiao

HUTT CITY TE AWA KAIRANGI

WAKA KOTAHI NZ TRANSPORT AGENCY

PROUDLY DELIVERING New Zealand Upgrade Programme

RiverLink

Notices of Requirement for Designations and Applications for Resource Consent

Volume Four: Supporting Technical Reports

Technical Report #14

Landscape and Visual Impact

IN THE MATTER OF	The Resource Management Act 1991
AND	
IN THE MATTER OF	Resource consent applications under section 88, and Notices of Requirement under section 168, of the Act in relation to the RiverLink project
BY	**Waka Kotahi NZ Transport Agency** Requiring Authority **Greater Wellington Regional Council** Requiring Authority **Hutt City Council** Requiring Authority

---

RIVERLINK
TECHNICAL ASSESSMENT #14
LANDSCAPE, VISUAL and NATURAL CHARACTER ASSESSMENT

Table of contents

Appendices

1 INTRODUCTION

1. My name is Lisa Rimmer. I am the primary author responsible for the preparation of this Landscape, Visual and Natural Character assessment. This assessment includes both natural and urban landscape matters[1] including aspects of urban design that are relevant to the designation for the RiverLink Project (the Project).

1.1 Qualifications and experience

2. I have a Bachelor of Horticultural Science (Massey University) and a Master of Landscape Architecture (Lincoln University). I am a registered member of the New Zealand Institute of Landscape Architects with 14 years' professional experience throughout New Zealand in a range of project types including infrastructure, policy and guidelines work, land development, public places, and streetscape design.

1.2 Code of Conduct

3. I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2014. This assessment has been prepared in compliance with that Code, as if it were evidence being given in Environment Court proceedings. In particular, unless I state otherwise, this assessment is within my area of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

1.3 Purpose and scope of assessment

4. This assessment forms part of a suite of technical assessments prepared for the RiverLink Project (the Project). Its purpose is to inform the assessment of effects on the environment (AEE) that accompanies the Notices of Requirement and resource consent applications under the Resource Management Act 1991 (RMA).

5. My assessment:

   i. explains the methodology used (including by reference to the existing environment and the nature and extent of landscape, visual and natural character[2] effects);

   ii. summarises the legislative and planning framework relevant to this assessment;

[1] Refer also to the assessment methodology, Section 4 of this report.

[2] Refer also to the assessment methodology Section 4 of this report for the definition of natural character used in this assessment for Te Awa Kairangi and its tributaries, under Section 6a of the RMA and in line with the Department of Conservation (DOC) Guidance Note on natural character. This includes the consideration of both natural science (biophysical) and matters of human perception associated with Te Awa Kairangi and its tributaries (the River Landscape) drawing on the work contained in Technical Assessments 2,6 and 7.

iii. describes the existing landscape in terms of both the broadscale context and areas within and immediately surrounding the proposed works, where there is the potential for landscape, natural character and visual amenity effects resulting from the Project works proposed in each sector. For the purpose of this assessment, Sector 1 is associated with the upper reach of the river, from Kennedy Good Bridge to Mills St and Sector 2, the lower reach, from Mills St to Ewen Bridge. Refer to Figure 1 below which shows the sector boundary. The description of the existing landscape includes any relevant areas identified in adopted planning instruments such as Outstanding Natural Features and Landscape (ONFL) and Special Amenity Landscapes (SAL) and an assessment of the degree of existing natural character of the river and its margins;

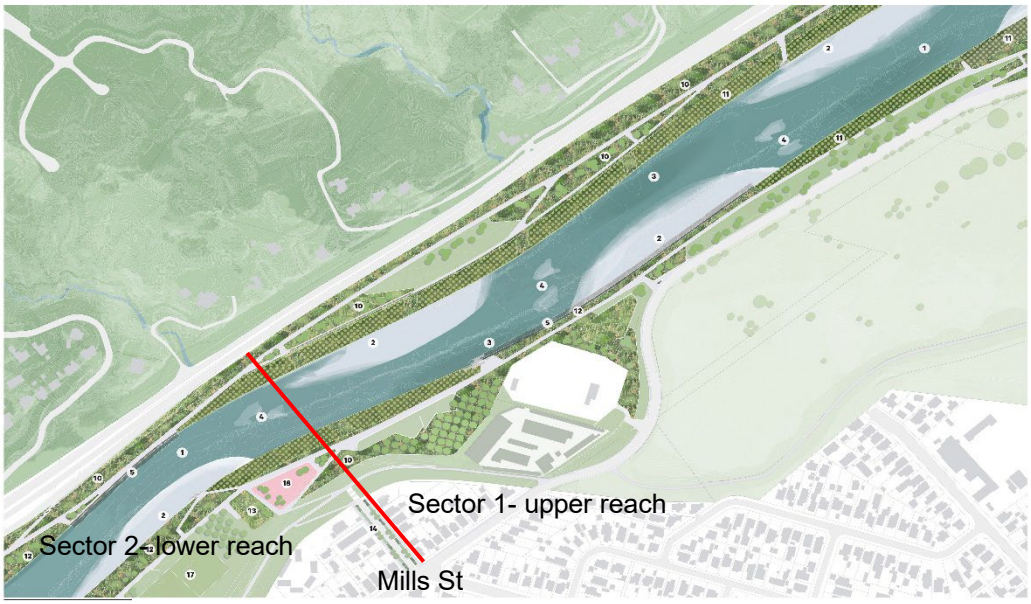

Figure 1: Upper and lower reach sector boundary

iv. assesses the potential effects of the Project in each sector including effects on:

a. the natural and urban (built) landscape, including notable trees;

b. views and visual amenity;

c. natural character of the river including tributaries to Te Awa Kairangi [3] (the Hutt River); and

d. public access to and along the river;

v. outlines the design measures used to avoid, remedy, or mitigate potential adverse effects and integrate positive effects; and

vi. provides an overall conclusion on landscape, visual and natural character effects including recommendations for further design and mitigation measures to be integrated in future stages of the Project.

6. My assessment has been informed by visits to the Project area in the design phase, throughout 2019 to 2021. Site visits, specifically to take context photographs, informing the assessment, and the preparation of photo-simulations from selected viewpoints, were

[3] Te Awa Kairangi is the oldest name for the Hutt River, attributed to first Polynesian explorer to come to this area, Kupe. Throughout the report the river or awa will be referred to by its original name.

carried out in November and December 2020 and February and March 2021 to publicly accessible areas and private properties, as agreed and arranged by the Project team.

7. In the preparation of my report, I have reviewed the design documentation lodged with the application and the following assessments of the Project.

   i. Technical Assessment No. 4 Hydrogeology;

   ii. Technical Assessment No. 5 Geomorphology;

   iii. Technical Assessment No. 6 Freshwater Ecology;

   iv. Technical Assessment No. 7 Terrestrial Ecology;

   v. Technical Assessment No. 9 Traffic Impacts and Transport Integration;

   vi. Technical Assessment No. 10 Noise and Vibration;

   vii. Technical Assessment No. 12 Archaeology and Heritage;

   viii. Technical Assessment No. 17 Cultural Impact;

   ix. Technical Assessment No. 16 Natural Hazards and Geotechnical; and

   x. Technical Assessment No. 18 Social Impact and Recreation.

8. I have been involved in the Project since 2019 providing design planning inputs relevant to the Project's Te Awa Kairangi Urban and Landscape Design Framework (ULDF) and a number of options assessed in the development of the consent design.

9. My assessment has been informed by discussions with relevant experts involved in the Project through the specialist team workshops (November 2020, January and March 2021) review of assessment drafts, as stated above, and meetings related to the refinement of the selected alternative for the Upper Reach Channel (over the same time period) and natural character matters relevant to the Hydrogeology assessment.

1.4 Assumptions and exclusions in this assessment

10. In the preparation of this assessment, I have relied upon the ULDF Overview, Design Strategy (Section 1+2, ULDF) and Design Framework (Section 3 ULDF), including the outcomes and opportunities set out for the main components of the Project:

    i. Te Awa Kairangi (River Landscape);

    ii. City Edge Design Connections (City-River-Community Connections); and

    iii. Melling Connections (Transport Connections)

11. The ULDF is underpinned by the Kaitiaki Strategy and He Korowai o Te Awa Kairangi narrative[4] which has been developed by the mana whenua partners and advisors for the Project. As set out in further detail in the ULDF, He Korowai (the korowai narrative) is drawn from the wider narrative of Te Ara Tupua, the path of Te Tupua (ancient phenomenon) with a focus on the korowai (cloak) laid by Te Tupua Ngāke who broke out the freshwater lake to form Wellington harbour, Te Whanganui a Tara, and, in his effort to escape created, Te Awa Kairangi, the Hutt River.

12. The vision for the Project, as included in the ULDF, three design themes of Vitality: River First, Connectivity: River to City and Identity:Te Awa Karirangi and overall whakataukī (proverb) for He Korowai reflects the values of Te Awa Kairangi (literally meaning the most precious, esteemed river).

[4] Refer to Section 1.3 and 2.1 and 2.2 of the ULDF.

“The ancient Te Awa Kairangi, its many tributaries, aquifer and harbour, the surrounding hills and plains; and the people, flora and fauna that call this place home are drawn together with Te Awa Kairangi at the heart to regenerate river and city.

Lifting the mana and mouri of Te Awa Kairangi, re-establishing Lower Hutt as a vital and connected river city with strengthened community and culture.

“He Korowai o Te Awa Kairangi, He Korowai ki te whenua

The cloak laid before us by the tupua Ngake.

The cloak that belongs to Te Awa Kairangi

The cloak that is of the land Papatuanuku and the tears of sky Ranginui

Let us lie within the protection and warmth

Fashioned to be worn as a mantle of prestige and honour,

A most prestigious cloak.”

13. Conceptually, the Project outcomes are the whatu raranga (fabric) which is created by the aho (east-west) and whenu (south-west) design elements and the aurei (the bridges) are the clasps that hold this cloak together.

14. The narrative is woven through all outcomes and opportunities set out in the ULDF. This means it is considered in all parts of the design; including the overall form and approach to flood protection, general arrangement, articulation of spaces and pathways and the palette of materials as well as specific elements, such as pedestrian and vehicle bridge, naming, wayfinding and interpretation and the approach used for all planting including areas required for flood protection.

15. In line with the New Zealand Institute of Landscape Architecure (NZILA) definition of landscape and the site's context, this means cultural expression outcomes for the Project (expression of the korowai narrative) has an important role to play in the assessment of natural landscape, urban landscape, visual amenity and natural character effects. The definition of landscape includes natural science, perceptual and associative matters, including values to tangata whenua which are significant in this area (refer also to Section 4 Methodology and Section 6 Existing Environment).

16. My assessment relies on the Project description along with technical and landscape drawings (plan and cross sections) and construction methodology provided in the AEE. For the purpose of this assessment, the main Project components (as identified in the ULDF design framework) are associated with the:

    i. **River Landscape** - within the proposed and existing flood banks to be retained;

    ii. **City-River-Community connections** - as required to connect the surrounding commercial and residential areas to and from the river, including the proposed pedestrian and cycle bridge, new (Melling line) train station and changes to local roads; and

    iii. **Transport connections** - including the new (Melling) interchange and vehicle bridge requiring realignment of an area of State Highway 2 (SH2) and the Melling rail line, an extension to Tirohanga Rd and new driveway access to two historic homes along the escarpment.

17. My assessment is informed by input from the other disciplines, as stated above, given that landscape, visual amenity and natural character result from natural science (physical), sensory and shared and recognised factors[5]. While these assessments are informative, this report assesses distinct matters, that relate to landscape, visual and natural character statutory provisions, policies and plans.

18. My assessment of urban landscape effects excludes consideration of any land use changes beyond the proposed designation boundaries of the Project, that might occur because of the proposal, such as through future urban development by council or private developers.

19. I have included the following supporting information (attached to this assessment):

    i. **Appendix A** – Natural Character Analysis;

    ii. **Appendix B** – Construction Methodology Analysis; and

    iii. **Appendix C** – Photo-simulations and Context Photographs.

2 EXECUTIVE SUMMARY

20. The Project is to construct, operate and maintain RiverLink. The proposed works include:

    i. a revised river channel and stopbank design to accommodate a greater flood flow;

    ii. flood resilience and amenity design works within Te Awa Kairangi to provide enhanced amenity outcomes and pedestrian/cycling connections;

    iii. a pedestrian bridge over Te Awa Kairangi;

    iv. an interchange on SH2 at Melling and a new Melling bridge;

    v. new local road connections and layouts;

    vi. a new Melling Line train station, and

    vii. enablement of future urban development of Hutt City centre along the river.

21. This assessment addresses the potential adverse and positive landscape, visual amenity and natural character[6] effects of the Project during operation (permanent) and construction (over a four-year period).

22. The effects differ in each sector (as defined by the reaches of the river) of the Project, and as a result of the works to establish a new River Landscape and additional City-River-Community and Transport connections.

23. Works in **Sector 1** (from Kennedy Good Bridge to Mills St) will result in positive and adverse effects. Overall, the landscape, visual and natural character effects of the Project in this Sector will be moderate and positive, noting there will be further refinement of the

[5] As referred to in the Greater Wellington Regional Council Regional Policy Statement Policy 25 and 27. For the purpose of this assessment, these terms are synonymous with the New Zealand Institute of Landscape Architects (NZILA) best practice guidance note which refers to physical (natural science), perceptual (sensory) and associative (shared and recognised) landscape matters.

[6] refer also to the assessment methodology Section 4 of this report for the definition of natural character used in this assessment for Te Awa Kairangi and its tributaries, under Section 6a of the RMA and in line with the Department of Conservation (DOC) Guidance Note on natural character. This includes the consideration of both natural science (biophysical) and matters of human perception associated with Te Awa Kairangi and its tributaries (the River Landscape) drawing on the work contained in Technical Assessments 2,6 and 7.

design at the Maraenuku ūranga in response to CPTED (Crime Prevention through Environmental Design) principles.

24. Works in **Sector 2** (from Mills St to Ewen Bridge) will result in both adverse and positive effects. Overall, the landscape, visual and natural character effects of the Project in this Sector will be moderate-high and positive noting a greater range of effects and potential for adverse natural landscape, urban landscape and visual amenity effects in particular areas:

    i. natural landscape: the effects will be, on balance, moderate-low positive due to the enhancement of naturalised features in the River Landscape. However, there is the potential for moderate-high adverse effects along the escarpment due to earthworks and vegetation removal required for the interchange and to establish new access driveways (to the historic homes, Lochaber and Casa Loma);

    ii. urban landscape: the effects will range from moderate to high positive due to the improved River Landscape, City-River-Community Connections and shift to a multimodal city. However, there is the potential for adverse effects:

        a. along Daly St, should any temporary uses of the future potential urban regeneration sites not promote pedestrian priority and activation or be used for permanent open air carparks post construction phase. Future development proposals will need to be well integrated with the RiverLink Project to avoid adverse effects;

        b. where Dudley St is required to be two-way (reducing options for pedestrian priority and residential character to develop). I understand a one-way option is under investigation which would address these concerns;

        c. where there are retaining walls and an earth batter proposed that impact on private properties in the Queens Drive surrounds, as associated with the new vehicle bridge ramps. I understand there are ongoing investigations that will confirm a consistent approach; use of a retaining wall or a planted earth batter. Note: The ULDF design outcomes, guiding the detailing of all earth batters and retaining walls including those associated with the interchange and the flood protection works, will be important help address potential adverse urban landscape effects; and

        d. design refinement to avoid safety issues, relevant to CPTED principles, are also recommended where there is a requirement for permanent parking areas under the new vehicle bridge, underpasses for cyclists through the interchange and path connections in close proximity to high retaining walls below SH2;

    iii. visual amenity: the effects will be, on balance, high and positive due to the ULDF outcomes proposed including the integration of cultural expression elements such as on the new pedestrian and cycle and vehicle bridge. However, there will be adverse visual amenity effects for the Mills St residents due to loss of privacy and viewing audiences of the interchange works alongside SH2 and in the Queens Drive surrounds, where the new vehicle bridge ramps are proposed;

    iv. natural character effects will be moderate-low and positive; and

    v. effects on public access, to and along the margins of the river, will be high and positive.

25. Temporary effects of construction on landscape, visual amenity and natural character will be high and very high adverse where there are active works. However, the timing, nature and extent of these effects have been limited by the proposed construction methodology

such that, overall, they are assessed as moderate adverse in Sector 1, the upper reach and moderate-high adverse in Sector 2, the lower reach. In particular, the methodology proposed over the 4-year construction period, as required to deliver the projects overall positive effects:

i. limits the extent of the disturbed reach in the active channel at any one time, (to less than 500m);

ii. reduces the loss of public access to the River Landscape, as the stages will be sequenced to ensure the adjacent side of the river remains open; and

iii. provides the opportunity for staged opening of the proposed works during the construction period.

26. I have made a number of recommendations for further mitigation of potential adverse landscape, visual and natural character effects), and to maximise positive effects (to be integrated in future stages of the project). In summary, the recommendations relate to the overall Project works and development of the design, and are to ensure/provide that:

i. the Project proceeds in accordance with the certified Urban and Landscape Master Plan (ULMP), which demonstrates how the RiverLink Kaitiaki Strategy principles and the urban and landscape design principles, themes, outcomes and opportunities in the ULDF have been taken into account in the development of the detailed design concepts for the Project;

ii. sufficient areas and access routes are provided for ongoing management and operation, to avoid user conflict and adverse natural character effects;

iii. there is further integration and development of the Korowai cultural expression narrative consistent with the Cultural Design Strategy of the ULDF ;

iv. design measures are developed to enhance habitats such as confirmed planting schedules, as relevant to natural character matters; and

v. construction management plans are prepared to provide for staging and sequencing that will limit adverse landscape, visual and natural character effects. This includes early establishment of all planting types including for flood protection and a return of public access to the river's edge as soon as it is safe and practicable to do so.

27. Specific detailed design measures recommended in Sector 1 for integration into the future stages of design development relate to the provision of:

i. the reconfigured off street car parking area below Belmont School and at Harcourt Werry Drive being retained in the design to ensure existing levels of access are provided for a range of users and on street parking is avoided;

ii. daylighted tributary flows into the Belmont Wetland to be retained and, in other areas, for naturalised stream/stormwater outlets to be integrated where possible;

iii. the final path alignment and planting specified around the existing substation and ūranga (associated with the historic Maraenuku Pā site) is refined using best practice CPTED principles, to ensure good sight lines and intuitive wayfinding; and

iv. through the construction management plan, the integration of indigenous species as part of the flood protection works and the removal of willows over time.

28. In Sector 2 it is recommended that the future detailed design stages of the Project:

i. ensure best practice integration of the interchange structures and the new vehicle bridge ramps in terms of urban landscape, visual amenity and potential CPTED issues, as anticipated in the ULDF;

ii. ensure best practice urban design principles are applied to resolve the detailed design of the retaining walls at the edges of private properties along Queens Drive and Rutherford Street in terms of urban landscape and visual amenity including consideration of a consistent approach; either retaining walls or earth embankments (as I understand is being investigated);

iii. consider the option to retain Dudley St as a one-way connection or shared space zone, to provide the greatest opportunity for a pedestrian priority environment and streetscape character preferred for inner city living. I understand these options are part of ongoing investigations;

iv. consider the potential tactical /temporary uses of the future urban regeneration sites along Daly St and measures to avoid the areas being used for open air parking beyond that needed during the construction period i.e. until such time as the River Landscape carpark is operational. Appropriate tactical/temporary uses should be included in the ULMP. Future proposals for the urban regeneration sites should be confirmed through an urban design evaluation and consider the ULMP; and

v. investigate further opportunities to improve the safety and ensure the design quality of the path network in confined areas, such as at the base of high retaining walls and where underpass connections are required, using best practice CPTED and urban design principles with reference to the ULDF and best practice guide, Bridging the Gap: NZTA urban design guidelines.

3 PROJECT DESCRIPTION

29. A full Project description is available in the AEE.

30. The Project is the design, construction, operation and maintenance of RiverLink. Key components of the Project are:

i. upgrade and raising of existing and construction of new stopbanks on both sides of Te Awa Kairangi/Hutt River between Ewen Bridge and Mills Street;

ii. instream works between the Kennedy Good and Ewen Bridges to re-align, deepen and widen the active river channel;

iii. the replacement of the two signalised at-grade intersections of SH2/Harbour View Road/Melling Link and SH2/Tirohanga Road with a new grade separated interchange;

iv. construction of an approximately 215 m long and up to 7 span road bridge with a direct connection across the River from the new interchange to Queens Drive;

v. removal of the existing Melling Bridge;

vi. changes to local roads;

vii. changes to the Melling Line rail network and supporting infrastructure, including replacing the existing Melling Station with a new station approximately 500m to the south;

viii. construction of an approximately 177 m long and 4 span pedestrian/cycle bridge over Te Awa Kairangi;

ix. construction of a promenade located along the stopbank connecting with future development, running between Margaret Street and High Street. This includes new steps and ramps to facilitate access between the city centre and the promenade;

x. Integration of infrastructure works with existing or future mixed-use development;

xi. associated works including construction and installation of culverts, stormwater management systems, signage, lighting, network utility relocations, landscape and street furniture, pedestrian/cycle connections and landscaping within the project area.

31. Project works of specific relevance to the assessment of landscape, visual and natural character effects, as are described in the full Project description include:

i. works to form the new **River Landscape** (between the proposed and retained flood protection stop banks) including the design for varied public activities and amenity;

ii. components designed to integrate the **City, River and Community** (to integrate the commercial and residential activity with Te Awa) including the proposed walking and cycling bridge, connection at the end of Margaret Street and new train station alongside Pharazyn Street; and

iii. works to provide new **Transport Connections**, as required to remove the old Melling Bridge and establish a new vehicular bridge connection at Queens Drive including the interchange over SH2 that connects with Harbour View Road.

32. For the purposes of this assessment, the Project has been divided into two sectors (as shown in Figure 1 above. These are:

i. **Sector 1** (upper reach) Kennedy Good Bridge to Mills Street

ii. **Sector 2** (lower reach) Mills Street to Ewen Bridge

4 ASSESSMENT METHODOLOGY

4.1 Methodology

33. The methodology I have used to assess landscape, visual and natural character effects of the proposal has followed best practice guidance set out by the New Zealand Institute of Landscape Architects' Best Practice Guidance Note 10.1 and Bridging the Gap: NZTA Urban Design Guidelines. My assessment has comprised:

i. review of Project documents provided and relevant assessment matters;

ii. review of statutory planning documents;

iii. site visits to understand the proposal and its context, and to record the existing environment in context photographs and to prepare photo-simulations (dates are included in Section 1 above);

iv. analysis of the existing environment considering the broader landscape context within which the Project is located and an evaluation of the baseline landscape; where the potential positive and adverse effects will be experienced;

v. desktop and field work identification of the visual catchment (areas from which the Project will be seen), viewing audiences and their likely sensitivities to the Project, and key viewpoints where visual effects are likely to be most pronounced;

vi. assessment of the summative landscape, visual and natural character effects arising from the Project including design measures and mitigation integrated in the concept design; and

vii. review of the construction and design approach and recommendations for additional measures to avoid, remedy and mitigate adverse effects and build in benefits - positive effects.

34. The following matters are considered in the description of the existing environment (and evaluation of the baseline landscape) and assessment of landscape and visual effects:

4.1.1 Landscape

35. Landscape is the cumulative expression of natural and human features, patterns, and processes in a geographical area, including physical components, perceptions, and associations[7]. This term captures both the natural and urban landscape patterns of the site and its city and river context (the three scales of the existing environment, as described below) including:

    i. landforms;

    ii. waterways and aquifers;

    iii. vegetation patterns;

    iv. terrestrial and freshwater ecology;

    v. past and continuing relationships of mana whenua;

    vi. heritage features;

    vii. historic associations;

    viii. road and rail network;

    ix. cadastral patterns;

    x. existing land use activities and built forms; and

    xi. modes of transport and connections including recreation.

4.1.2 Visual amenity

36. Visual amenity is a subset of 'landscape' relating to its sensory component (see below) and results from the combination of natural and urban landscape patterns. Effects on visual amenity (visual effects) are assessed in this report for the main viewing audiences of the Project. This assessment is assisted by photo-simulations and context photographs (see below).

37. In Section 2 of the RMA the term "amenity values" is defined as:

    "*Those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes*."

38. The main components of any landscape are physical (natural science), sensory (perceptual), and shared and recognised (associative). Factors[8] that contribute to these components include:

[7] New Zealand Institute of Landscape Architects, 2 November 2010, 'Best Practice Note 10.1: Landscape Assessment and
Sustainable Management'.

[8] The list is similar to a list contained in the 'Lammermoor decision' *(Maniototo Environmental Society Incorporated and others v Central Otago District Council and Otago Regional Council* Environment Court Decision C103/2009, paragraphs 201 to 204). The list is not exhaustive or fixed or a formula. It merely provides typical factors.

Table 1: Landscape components and factors

Landscape components	Factors
Physical (natural science and geographic)	***Natural*** - Geology and geomorphology- landforms - Topography and hydrology- waterways - Vegetation and soil patterns - Ecology and dynamic patterns of flora and fauna ***Urban*** - Settlement, cadastral and street patterns - Built forms - Land use
Sensory (perceptual)	- Geomorphic expressiveness (how obviously the landscape expresses land formation processes) - Aesthetic qualities and character (associated with the unique combination of natural and urban landscape features, patterns, and processes) - Coherence (the extent to which human patterns reinforce the underlying natural and urban landscape, through visual relationships) - Memorability (including visually striking features) - Legibility (visual clarity and visibility of landmarks, edges, and character areas, which reinforce natural wayfinding and memory) - Visibility, public and private views
Shared and recognised (associative)	- Tangata Whenua associations - Historical associations - Recreational activities - Iconic features or those closely associated with the community's identity and sense of place - Includes areas recognised through national, regional, and local statutory bodies, for example, through statutory acknowledgements etc.

39. The analysis of the existing landscape was carried out through site visits (see above) and desk-top investigations. Reference was made to other disciplines, as noted in Section 1 above. The natural and urban landscape baseline was described considering the factors listed above, to identify and understand its main components. This is a useful tool for analysis, however landscape is more than a list of factors or the sum of its parts. Landscape is a synthesis of physical, sensory, and shared and recognised factors. These

are used collectively to define its boundaries, character ('sense of place') and significance of the baseline under the RMA.

40. In this regard, particular attention was paid to planning and policy matters, including the Greater Wellington Regional Policy Statement (RPS) and Proposed Natural Resources Plan (PNRP), the operative City of Lower Hutt District Plan (District Plan) and relevant matters being considered in the District Plan review, as set out in more detail in Section 5 below.

41. As further detailed below, anticipated outcomes and permitted activities associated with operative zone and overlay and designation matters of HCC's District Plan were also considered, as is relevant to landscape and visual effects under the RMA.

4.1.3 Natural character

42. Natural character is a type of character, resulting from the balance of physical, sensory, and shared and recognised factors that have been influenced by human intervention. In planning terms there are specific requirements to address natural character under section 6(a) of the RMA to recognise and provide for, as a matter of national importance:

> "the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development".

43. For the purpose of this assessment, natural character considerations relate to the impact on Te Awa Kairangi and its tributaries, and the way in which the Project minimises these effects and/or provides for appropriate mitigation within the Project designation boundaries.

44. Natural character has been defined through the New Zealand Coastal Policy Statement 2010 (NZCPS), Policy 13(2) [9]and Department of Conservation (DOC) Guidance Note[10] on the NZCPS. In practical terms, this definition applies to natural character in general, not just in the coastal environment. When assessing natural character effects, I have assumed the following definition of natural character, with reference to this policy, which has also been used in the overall AEE and the Geomorphology Assessment for the Project (Technical Assessment No. 5). This definition has been adapted for the purposes of RiverLink, from the DOC NZCPS Guidance Note on natural character in the context of Te Awa Kairangi and its tributaries; the river and its margins[11].

[9] NZCPS Policy 13(2) Recognise that natural character is not the same as natural features and landscapes or amenity values and may include matters such as:
natural elements, processes and patterns;
biophysical, ecological, geological and geomorphological aspects;
natural landforms such as headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs and surf breaks;
the natural movement of water and sediment;
the natural darkness of the night sky;
places or areas that are wild or scenic;
a range of natural character from pristine to modified; and
experiential attributes, including the sounds and smell of the sea; and their context or setting.

[10] https://www.doc.govt.nz/globalassets/documents/conservation/marine-and-coastal/coastal-management/guidance/policy-13.pdf

[11] In practice the DOC guidance note applies to the assessment of natural character of wetlands, rivers, lakes, and their margins as well as coastal environments and it provides a guide to the assessment of the degree of natural character in all other environments.

45. *Natural character* is the term used to describe the *natural* elements of the river environment. The degree or level of *natural character* within an environment depends on:

i. the extent to which the natural elements, patterns, and processes occur;

ii. the nature and extent of modification to the ecosystems and landscape/riverscape;

iii. the degree of natural character is highest where there is least modification;

iv. the effect of different types of modification upon natural character varies with context and may be perceived differently by different parts of the community, and

v. in this context, 'elements, patterns and processes' means 'biophysical, ecological, geological, and geomorphological aspects; natural river/landforms such as beaches, berms and braiding of the active channel; and the natural movement of water and sediment.

46. My assessment looks at all of these aspects, drawing on the work contained in Technical Assessments 5, 6 and 7 relating to geomorphology and ecology to provide an overall assessment of natural character including the human perception aspect of (iv) above.

47. The following principles were adopted in this assessment:

i. Natural character is the unique combination of an area's natural features and processes;

ii. It comprises both biophysical naturalness and perception of naturalness;

iii. Factors influencing natural character are not exhaustive (for example, some are likely to be more, or less, relevant to this particular Project);

iv. Factors influencing natural character are not necessarily of equal weight (some are likely to be irrelevant to this Project); and

v. As part of landscape, an overall synthesis of the area's natural character needs to be made. In practice, factors that contribute to natural character form the basis of the 'natural landscape'.

48. The degree of natural character is typically evaluated against the following seven-point scale[12]. This is used in a Project assessment to help describe the existing environment.

very low	low	mod-low	moderate	mod-high	high	very high

49. As a guide:

i. Very high natural character generally means near to pristine landforms and landcover, essentially no human structures or patterns, and strong experience of natural processes.

ii. High natural character generally means a dominant presence of unmodified landforms and landcover, visually unobtrusive land management (e.g. extensive pastoral farming), few and visually integrated human structures, and strong nature based experiential aspects.

iii. Moderate-high, moderate and moderate-low natural character will generally mean one or more of the following: mostly modified landforms and land cover (e.g. pasture, plantations), only remnant indigenous vegetation, obvious land management patterns,

[12] The 7-point scale is generally accepted by Environment Court and NZILA and can be used to help describe the natural character of the existing environment and the extent of positive or adverse effects resulting from the development.

obvious or prominent human structures, reduced and less evident experience of natural processes; and

iv. Low and very low natural character would mean one or more of the following: highly modified landforms (including engineered structures), indigenous vegetation is absent, obvious intensive land management patterns (industry, urban development), diverse and prominent human structures, highly modified natural features and processes, experience of natural processes is very limited or absent.

4.2 Relevant planning provisions

50. While the assessment focuses primarily on its core subject matter and RMA Part 2 matters (natural character, landscape and visual), the methodology is framed in response to relevant provisions and anticipated outcomes in the RPS, PNRP and the District Plan. Relevant RPS, PNRP and District Plan provisions are briefly summarised in the report. Refer to Section 5 and 9 below.

4.3 Assessment of effects

51. Landscape and visual effects were assessed by Project sector, as defined by river reach[13] (refer to diagram in **Figure 1** above) and address the main components[14] proposed, as are shown in the drawing set in the AEE:

i. **Sector 1** Upper Reach – Kennedy Good Bridge to Mills Street, and

ii. **Sector 2** Lower Reach – Mills Street to Ewen Bridge.

52. Effects of the Project in each sector were assessed against the natural and urban landscape and, for the main viewing audiences, in relation to visual amenity and views along with natural character and public access. There is some overlap between these matters, as they define parts of the whole, components of landscape. However, it is useful to assess them separately as they relate to different statutory provisions.

53. Potential effects identified and assessed included:

i. effects on **landscape areas** identified in statutory planning documents, including those recognised in the operative HCC District Plan and through the Draft Technical Assessment commissioned by HCC in 2016. These areas are considered for completeness, due to proximity. There are no operative Landscape Protection areas, and the Draft Technical Assessment did not identify any Outstanding Natural Features or Landscapes (ONFLs) in the vicinity of the Project. Te Awa Kairangi was identified as a Special Amenity Landscape (SAL) in the preliminary technical study, including the areas between the existing flood banks of the Project site;[15]

ii. effects on the **natural character** of the river and its margins including the tributaries of Te Awa Kairangi;

iii. effects on **access** to and along the river;

[13] A river reach has distinct geomorphic (landform) and hydrological (water) conditions. The river reaches for the Project have been defined by the Project hydrologist.
[14] As described in the AEE noting that the design for the Project has been developed to a concept design stage to illustrate the purpose of the designations. This will be further developed through future stages of the Project.
[15] Draft ONFLs have been identifed as part of a preliminary technical study in 2016 for HCC, as are required under RPS Policy 25. Draft Special Amenity Landscapes, which may be identified under Policy 27 of the RPS, were also identified in this study. To date, these areas have not been progressed in the District Plan review. The areas identified as SALs in the technical study included the Te Awa Kairangi River and Project site between the existing flood banks.

iv. effects on **biophysical landscape** processes including streams and ecological health of Te Awa Kairangi (relying on input from other disciplines);

v. effects on **associative factors** such as historical themes, values to tangata whenua and shared and recognised values relating to existing public landscape uses such as for recreation (relying on input from other disciplines);

vi. effects on **urban patterns and forms** - including the connections between the river, city environs and transport routes considering spatial and movement patterns and the quality and character the design proposed;

vii. effects on **landscape use and activities** – including **amenity** of and access to the river;

viii. effects on **sensory** and **aesthetic qualities** (overall visual amenity) of the landscape, considering factors such as memorability (vividness), coherency, naturalness, expressiveness and transient values; and

ix. **visual amenity** (effects on views) from public and private places, considering the places from where the Project will be visible, sensitivity of audience, prominence, and amenity of the Project.

54. I have addressed design measures integrated into the Consent Design to avoid, remedy or mitigate effects in the assessment including the principles, design themes, and outcomes and opportunities described within the Project ULDF. This includes the intention set for cultural expression and the underpinning Kaitiaki Strategy (as referenced in the ULDF) to be integrated in the overall form and articulation of the Consent Design along with specific elements (to be resolved in future stages of the Project).

55. A summative assessment is then provided to address the overall impact of the Project on natural character and landscape and visual amenity values.

56. Effects during construction were also considered, as these will occur over a four-year period. The indicative programme for construction of the Project is outlined in the Construction Method Report.

57. I assessed effects resulting from a combination of the nature of the effect and its significance in relation to context. Effects are assessed against the existing environment i.e. positive and adverse effects are assessed in relation to the landscape baseline (as described under the existing environment) including the reasonably foreseeable future environment, as provided for by operative planning instruments such as the District Plan). A seven-point scale (from very low to very high) is used to help summarise the qualitative description of the summative effects.

4.4 Photo-simulations, context photographs and illustrative drawings

58. Photo-simulations, which show a view of the consent design, and stitched context photographs, which represent a view of the existing environment, have been used to assist the effects assessment. These images are included in **Appendix C**.

59. The viewpoints for the photo-simulations were selected to represent views from private properties and public areas for the main viewing audiences and from locations where there is the greatest potential for landscape and visual effects.

60. Stitched context photographs complement the photo-simulations and are generally taken from more distant viewpoints and/or where the effects are able to be assessed using other resources in the drawing set along with the Project description.

61. The images for both the photo-simulations and context photographs are printed across two A3 pages to show the correct scale at a normal reading distance of 400mm and a horizontal field of view of just under 120 degrees. A description of the methodology used to prepare the Photo-simulations is included in **Appendix C**.

62. The Schematic Landscape Plan, Landscape Sections, and other engineering drawings, provide a further reference for the assessment, and they are contained in Volume 5 of this application.

4.5 Conclusion

63. The main factors contributing to positive and adverse effects are summarised for each Project Sector, and I have concluded on the overall effects on natural character, landscape, and visual amenity. This includes recommendations for further design measures to avoid, remedy and mitigate adverse effects and to ensure positive effects relevant to natural and urban landscape matters are addressed, where these are part of the proposal.

5 LEGISLATIVE AND PLANNING CONTEXT

64. The following national statutory and non-statutory documents apply to this Project. These matters are relevant to both the evaluation of the baseline landscape and the assessment of effects:

5.1 Resource Management Act 1991 (RMA)

65. Matters of national importance particularly relevant to landscape, visual amenity and natural character matters for the Project include the following RMA sections, which relate to:

    i. 6(a) natural character of the coastal environment, rivers, wetlands, and their margins;

    ii. 6(b) outstanding natural features and landscapes;

    iii. 6(c) areas of significant indigenous vegetation and habitats;

    iv. 6(d) public access to and along rivers; and

    v. 6(e) the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.

66. Other RMA matters that are relevant include the following sections, which relate to:

    i. 7(aa) kaitiakitanga, the ethic of stewardship;

    ii. 7(c) amenity values;

    iii. 7(d) intrinsic value of ecosystems; and

    iv. 7(f) the quality of the environment, including the urban-built environment.

67. The following regional and district level statutory and non-statutory documents are relevant to this Project.

5.2 Greater Wellington Regional Council (GWRC) Plans and Policies

68. Relevant objectives and policies in the **PNRP** are contained in chapters 3 and 4, and relate to Māori relationships with their ancestral lands, water, sites, waahi tapu, and other taonga; natural character, form and function of urban development; biodiversity; sites with significant values; and natural features and landscapes.

69. Features relevant to landscape values for the Project are identified and mapped within the PNRP. These include values relating to Te Awa Kairangi and its identification including:

    i. waterbody of taonga to mana whenua, Ngāti Toa Rangatira and Taranaki Whānui ki te Upoko o te Ika, Ngā Tāonga Nui a Kiwa (Map 2 Schedule B);

    ii. sites of significance to Taranaki Whānui ki Te Upoko o Te Ika a Maui (Map 6 Schedule C4 Maraenuku Pā and Motutawa Pā);

    iii. river with significant indigenous ecosystems: high macroinvertebrate community health; habitat for indigenous threatened at-risk fish species; and (6 or more) migratory fish species (Map 13b, 13c Schedule F1) including Speedy's Stream;

    iv. significant contact freshwater body and priority for improvement of fresh and coastal water quality for contact recreation and Māori customary use (Map 20 Schedule H1 +H2);

    v. important trout fishing and spawning river; (Map 22a, 22b Schedule I Part A+B); and

    vi. water supply river (Map 26 schedule M1).

70. Further values to tangata whenua are recognised through Statutory Acknowledgements over Te Awa Kairangi and its tributaries for Taranaki Whānui ki Te Upoko o Te Ika a Maui (D1) and Ngāti Toa Rangatira (D2).

71. Relevant objectives and policies to landscape values in the GWRC operative **Regional Plans** (to be replaced by the PNRP) are contained within Regional Freshwater Plan appendices. These identify objectives and policies relating to: amenity values and public access, recreational uses, use of beds of rivers and the need to provide continued use of structures that are beneficial to people, communities and the environment, effects of structures in riverbeds on natural and amenity values, and structures resulting in loss or restriction to public access.

72. Relevant objectives and policies in the operative **RPS** are contained within chapter 3 and relate to: public access, historic heritage, indigenous ecosystems, landscape, regional form, design and function and resource management with tangata whenua. Policy 25 and 27 include matters to be considered in assessing landscape areas and their natural science, sensory and shared and recognised factors, and they provide explanation as to the tests required to identify ONFLs and SALs.

5.3 Hutt City Council Plans

73. Chapter 14E of the District Plan contains objectives and policies relating to the protection of significant natural, cultural and archaeological resources. The most relevant of these to the Project are policies 14E1.1 (c) – (i), which deal with natural character, visual amenity values and landscape values, and the effects of activities on those.

74. Chapter 14I also contains relevant policies relating to the effects of earthworks on natural character, and amenity, cultural and historical (landscape) values, including cultural and

spiritual values to mana whenua. The most relevant policies in this chapter include 14E1.1 (a) and (b); and 14I 1.2 (b) – (d) and 14G Notable Trees.

75. Mapping in the District Plan[16] identifies, in the vicinity of the Project:

i. Te Awa Kairangi as a primary (fast flowing, prone to erosion) river corridor alongside the central business district;

ii. Significant Natural Resources along the western hills above the Project including SNR 21 (Jubilee Park) between Normandale Rd and Gaskill Grove, SNR14, located alongside Harbour View Road and SH2 (the proposed site for the new interchange), SNR 45 between Pomare Rd and Wairere Rd, SNR59 between Wairere Rd and Natusch Rd and SNR49 (Speedys Reserve) between Hill Rd and Major Drive, above the Kennedy Good Bridge;

iii. Notable Trees (as identified through Plan change 36) that are located in Sector 1 and within the Project works area:

a. there are four notable trees (#26, #27, #28 & #29 - phoenix palms) located between Fraser and High Streets;

b. Notable Tree #112 (English elm) straddles the boundary between the footpath and 73 Rutherford Street;

c. Notable Tree, #96 (pohutukawa) in the road reserve on the corner of Raroa Road, and 338 High Street;

d. Notable Trees #31 (black beech) and #32 (black beech) are in the road reserve outside 14 Harbour View Road; and

e. Notable Trees #33 (silver fir) and #34 (pohutukawa) are in the road reserve at the corner of Harbour View Road and SH2;

iv. an historic place along Andrews Avenue (the former post office building);

v. historic homes currently accessed directly off SH2 including Lochaber House (125 Western Hutt Rd) and Casa Loma (760 Western Hutt Road);

vi. a Significant Cultural Resource Site between Mills Street and Harcourt Werry Drive (Maraenuku Pā); and

vii. land zoned for general recreation adjacent to the river at Civic-Riddiford Gardens, the Boulcott Golf Course, Avalon Park and Belmont Recreation Reserve and along the western hills including larger areas at Speedys Reserve, alongside Pomare and Harbour View Road and at Jubilee Park.

76. The **2016 Draft Technical Assessment** for HCC included a process to identify draft Outstanding Natural Features and Landscapes[17] (ONFL) areas under Policy 25 of the GWRC RPS including:

i. South Coast (coastal environment extent);

ii. Turakirae Head;

iii. Baring Head/Ōrua -Pouanui;

iv. Parangārahu Lakes;

v. Matiu Island;

[16] https://maps.huttcity.govt.nz/portal/apps/webappviewer/index.html?id=769c6bc31ca74d44b6513f8112458525

[17] ONFL are identified under Section 6(b) of the RMA and the operative Regional Policy Statement (RPS) Policy 25.

vi. Mākaro Island; and

vii. Remutaka Range[18].

77. None of these areas are in close proximity to the Project site.

78. Draft Special Amenity Landscapes[19] (SALs), as may be identified under the Regional Policy Statement (RPS), were also identified in the 2016 Draft Technical Assessment. However, HCC has decided not to progress these areas further through a District Plan Change[20].

79. Draft SAL areas identified included the Te Awa Kairangi flood bank extent of the Project site and the Belmont Hills, which extends along Speedys Stream close to SH2 near the Kennedy Good Bridge. While these areas were not progressed through a proposed plan change it is relevant to consider the natural science, sensory and shared and recognised values, as identified through the technical study, in this assessment.

80. Draft Significant Natural Areas (SNAs)[21] were also investigated through the rolling District Plan review process and consultation with potentially impacted landowners. Generally, these identify areas similar to that of the previously mapped SNR. In addition, draft SNA areas have been identified that include Te Awa Kairangi and its banks within the Project designation boundary (SNA LH004). Areas along the western hills, to the edge of SH2, are also relevant and are generally associated with steep sided gullies and streams including the Kelson Forest Remnants(LH011) that extend north of the Kennedy Good Bridge, Pomare Road Forest and Harbour View Forest B (SNA LF017 and LH18) opposite the Boulcott Golf Course, the Harbour View Road Forest extension (SNA LH020) near the existing Melling Bridge and Jubilee Park Forest (SNA LH022) at Normandale, west of Ewen Bridge.

81. **Non-Statutory Documents** of relevance to the Project (refer also to the Project ULDF) include:

i. GWRC's **Te Awa Kairangi / Hutt River Environmental Strategy and Action Plan** August 2018, sets out aims and objectives identified by the community for the management and enhancement of the river corridor environment. The focus is on the enhancement and management of the river and meeting natural, social, and cultural requirements while providing flood protection. Relevant to landscape character and amenity values, this includes three key goals for the protection and enhancement of the river's natural environment, encouraging and enabling improved connections between the river corridor and adjoining communities, and providing spaces and facilities to support recreation opportunities. This environmental strategy sits within the wider **Hutt River Flood Management Plan**, October 2001, and enables the environmental, community and recreation objectives to be achieved.

ii. HCC's **Central City Transformation Plan** March 2019. Relevant to landscape character and values, this plan defines the development and design context for Hutt City Centre and its immediate environs, and a framework to inform development and infrastructure change. It integrates the RiverLink proposal with the city centre and

[18] Hutt City Landscape Evaluation, Draft Technical Assessment. 2016 (2016 draft technical assessment). Report prepared by Boffa Miskell Limited for Hutt City Council. Note: the Remutaka has been previously, incorrectly, named Rimutaka.

[19] Special Amenity Landscapes may be identified under Policy 27 of RPS.

[20] Council staff have recommended that the values of SALs are able to be addressed satisfactorily through other provisions of the District Plan and no additional overlay is required http://www.huttcity.govt.nz/Your-Council/Have-your-say/past-consultations/ecology-and-landscapes-consultation/ecology-and-landscapes-update-4-november-20182/

[21] Review of Significant Natural Resource Provisions for Hutt City District Plan: Desktop Study and Roadside Field Assessments. 2018. Wildlands for Hutt City Council.

western riverbank area, and identifies key linkages in transportation, ecological, recreation, accessibility, and a city enhanced through cultural expression of both Māori and later settlement patterns and stories. In keeping with the Project objectives it includes the vision for an attractive urban riverfront:

"A river edge promenade that engages with city centre street system. Easy access to recreational networks. A high quality visual setting. Publicly relevant activities – food & beverage, retail, commercial."

iii. HCC's **Making Places 2030 City Centre Vision** June 2009 considers improving connections to the Hutt River and along the River Trail as a key approach to revitalising the CBD. Key initiatives include sealing the River Trail pathway from Melling Bridge to Connolly Street, creating artificial wetlands and stormwater outfalls, and recreational access to the river.

6 EXISTING ENVIRONMENT

82. This section provides an overview of the broadscale context for the Project relevant to landscape matters and describes the existing environment (the baseline landscape), as likely to be impacted by the Project works in each sector.

6.1 Broadscale context – Te Awa Kairangi Catchment

83. The broad scale context of the Project is diverse and dynamic. Natural processes have resulted in a landscape characterised by tectonic and hydrological processes; of a broad river valley contained by uplifted ranges with tributaries that flow into the braided Te Awa Kairangi (the Hutt River).

84. The Project site is in the lower reaches of the river which extends over 56km (and total catchment of 655km^2) from its headwaters in the Remutaka[22] and Tararua Ranges. The flood plain valley is contained by the distinct north-west south-east tending escarpment and Pareraho (Belmont) Hills and Wellington fault line to the west, and the Ōrongorongo Ranges and Remutaka Ranges to the east. The mouth of the river has moved over time, from the west (Pito-One, Petone) to the east, and is now located between the historic Pā at Hīkoikoi and Owhiti.

85. Prior to urban settlement and containment for flood protection, the braided river ranged between the hills, establishing a sinuous path with temporary islands and shingle beaches to the banks with sections of the river (reaches) varying in level (aggrading and degrading) depending on the flow and sediment levels. Traces of these historic patterns are still able to be distinguished. For example, detailed contours under Hutt City (Te Awa Kairangi ki Tai[23]) show the historic path of the tributary Opahu - Okautū Stream (which now flows through Civic - Riddiford Park). Place names provide further reference to varied paths of water in the landscape, now replaced by urban development, such as the

22 Previously mis-spelt Rimutaka

23 District names as referenced by Matiu Jennings, Principal Māori Advisor, HCC. Ki tai meaning 'to the sea' and ki uta 'to the shore' or inland.

wetland Te Momi[24] and the oxbow lakes, left when the river changed direction, such as at Rotokakahi[25].

86. Major tectonic events, haowhenua (earthquakes), in the 15th Century and 1855 (the Wairarapa earthquake) have had a significant impact on both the path and depth of the watercourse. Up until 1855, Te Awa Kairangi was the main transportation route for waka and other shallow hulled craft, being navigable through to Upper Hutt (Te Awa Kairangi ki Uta) as far as the settlement now known as Pakuratahi (and by early European ships to Whirinaki, Silverstream). Extensive areas of wetland that featured in the valley historically, and 'cut- off' oxbow lakes that once characterised the landscape (now largely drained and built over), also have their origins in the reverse hydrological flow resulting from these events.

87. This broadscale landscape, created by the encircling ranges, a broad shifting river plain and steeply sloped escarpment and tributaries, set the stage for a diverse range of habitats for flora and fauna. Now significantly modified and degraded by landuse patterns following settlement, the broad context for the site is characterised by distinct terrestrial, riparian and freshwater habitats including significant areas managed by GWRC as key native ecosystems (KNE) and for water catchment (in Te Awa Kairangi ki Uta). GWRC's Belmont Park (including the Belmont-Korokoro, Belmont-Speedy, Kelson Bush and Belmont Dry Creek KNE) and the Keith George Memorial Park over the Pareraho western hills and the Remutaka Forest Park (Pakuratahi KNE) are the larger areas of remaining indigenous vegetation in the valley. The once densely vegetated kahikatea dominant forests of the river plains and harakeke wetlands have now been largely cleared through settlement with the most significant lowland bush area retained at Trentham Memorial Park. Rich environments, supporting a diverse range of freshwater fish, shellfish and invertebrates have also been impacted by development, although the river is still recognised for its role in supporting rare and threatened species (as described in more detail in the Freshwater Ecology Assessment, refer to Technical Assessment No. 6) and for its role in the migration of fish species such as tuna[26] (long fin eel). A diverse range of bird species are supported by the forested habitats of the escarpment and hills, and within the river corridor, a range of coastal and inland birds make use of the varied wading, foraging, and nesting sites, including at risk and threatened species such as the black shag colony near Melling Bridge. [27]

88. In the Māori world view, Te Awa Kairangi landscape has been created by Māui and the Tupua Whātaitai and Ngāke. Ngāke literally meaning to rip or tear and Whātaitai to fold; reflective of the tectonic process and differing landforms found in the wider Project context. This narrative is integral to the creation story of Aotearoa and of the earliest ancestors of Taranaki Whānui ki Te Upoko o Te Ika (Taranaki Whānui) and Ngāti Toa Rangatira.

---

24 Te Momi, now the residential area to the south west of the Ewen Bridge, was previously a significant wetland area. The Great Harbour of Tara. Adkin 1956

25 Rotokakahi – literally meaning lake of kakahi- freshwater mussels. Also a stream that once flowed into Opahu stream now filled in under High Street. Rotokakahi is also associated with the defensible 'line' (between the river and Waiwhetū stream) that was cut by the Ngāti Tama leader Taringa Kuri (an ancestor of Taranaki Whānui), to distinguish land not covered in the Port Nicholson agreement.

26 Tuna migrate up the river as elvers in spring and when mature swim back down the river in autumn to return to the Pacific where they breed and then die. Inanga, whitebait spawn near the mouth of the river, where it is tidal.

27 https://www.gw.govt.nz/assets/Our-Environment/Environmental-monitoring/Environmental-Reporting/Baseline-monitoring-of-the-birds-of-the-Otaki-Waikanae-and-Hutt-Rivers-2012-2015.pdf

89. The river is the central lifeline in this landscape; from the mountains to the sea (ki uta ki tai). One of the meanings for the name Te Awa Kairangi comes from the type of greenstone called the kairangi. That greenstone is the very highest quality of stone used to make taonga/jewellery and the finest of implements (refer to Technical Assessment No. 17 Cultural Impact). Continuing associations reinforce the values of the river kairangi - literally meaning 'esteemed or precious'.

90. Following the time of Kupe, Toi, Whatonga and Ngāi Tara[28] the coastal areas near the mouth were settled first by Māori[29] and the river landscape and hills were used for transport, trade and to provide mahinga kai (food) and other resources to support their communities. As the river valley was densely forested, early travel routes were via the river using waka with tracks through to Pauatahanui following natural breaks in the escarpment along the Korokoro Stream, via the spur now marked by Hill Rd next to Speedy's Stream and Haywards Hill dropping down to Pauatahanui Stream. Routes further afield, to the Wairarapa via the Remutaka saddle and Kāpiti Coast via the Whakatikei and Akatarawa Rivers also branched off Te Awa Kairangi.

91. Settlement inland came later in the history of iwi contact with the Te Awa Kairangi and followed the migrations of Ngai Ira, Rangitane and Kahungungu (from the east coast and Wairarapa). From around the 1820s taua (war parties) and heke (migrations) brought Ngāti Toa Rangitira (originally from Kāwhia and then Kāpiti) and Taranaki Whānui ki te Upoko o te Ika[30] to the district (Taranaki Whānui being the collective name given to people who originated from Taranaki including Te Ātiawa, Taranaki, Ngāti Ruanui, Ngati Tama and others including Ngāti Mutunga).

92. Events following the heke have established Taranaki Whānui and Ngāti Toa as mana whenua in the valley. Near the Project site this ahi kā (burning fires of occupation) was associated with two transitional Pā sites at Maraenuku (near the Boulcott golf course) and Motutawa (near Avalon Park) which were settled by hapu of Ngāti Tama (linked to the well-known chief Te Kaeaea, also known as Taringa Kuri) and Ngāti Rangatahi[31] with gardens established over the fertile soils and produce traded up and down the river. Ngāti Toa had a connection to these Pā, through their whakapapa with Ngāti Rangatahi and association to Ngāti Toa chief's Te Rauparaha and Te Rangiheaeta. Both settlements were abandoned by the late 1840s and following the arrival of the New Zealand Company and conflict resulting from the establishment of European settlement including early land purchase by the Boulcott family, the Rotokakahi 'Line' established by Te Kaeaea following the establishment of the Port Nicholson Block, the military blockades at Fort Richmond (near the site of the Ewen Bridge) and on the Boulcott Farm. The latter being the site of the 1846 Boulcott Battle, part of the wider Hutt Valley Campaign that ended with Te Rauparaha's detainment, Te Rangihaeata's flight to Foxton and Te Kaeaea leaving the district until lands were returned further up the valley. The significance of these Pā and these events that shaped values to tangata whenua in this landscape and the new nation are further detailed in the Archaeology and Heritage Assessment (refer Technical Assessment No. 12).

---

[28] Kupe being acknowledged as one of the earliest explorers to the region, who was followed by his grandsonToi and two further generations, Whatonga and after which the harbour is named, Te Whanganui a Tara, with the iwi Ngāi Tara (the people of Tara) and other descendents of Whatonga (Muapoko and Ngāti Apa) linked to the first settlements near the harbour.

[29] With early Pā at Pito-One, Hīkoikoi and Owhiti.

[30] https://www.linz.govt.nz/crown-property/acquisition-and-disposal-land/crown-property-disposal-process/right-first-refusal-rfr/right-first-refusal-guides/port-nicholson-block-taranaki-wh%C4%81nui-ki-te-upoko-o-te-ika

31 Other Pā sites were located alongside the river in Te Awa Kairangi ki Uta- Upper Hutt

93. In modern times the area is connected with the people of Te Tatau o te Po Marae along with the members of the Port Nicholson Block Settlement (Taranaki Whānui ki te Upoko o te Ika) Trust and the Wellington Tenths Trust (the Trusts).

94. As discussed above, Statutory Acknowledgments over the awa are also recognised for Ngāti Toa Rangitira and Taranaki Whānui.

95. Following the arrival of the New Zealand Company and military events in the valley, the area was successively opened up for settlement with early transport mainly along the river. The 1855 earthquake initiated a step change in the development of road and rail infrastructure development. The first Wairarapa line (now the Remutaka rail trail) opened in 1878 allowing large scale timber milling and clearance of the valley floor. Road connections to Fort Richmond were established in 1844 and the first vehicular bridge opened in 1847[32] and was successively replaced and named the Ewen Bridge (opened in 1927). The original Melling suspension bridge, located upstream of its current location, dates to 1909, and the Melling Station opened in 1908; which was located on the main Wairarapa line and was rebuilt in 1954 as part of the deviation. To the north, the Project site is marked by the Kennedy Good Bridge opened in 1979 and named after the sitting mayor of the city. Previously there had been a ferry crossing in this location, linked to the historic trail over the Belmont Hills and ranges behind Te Raho o te Kapowa, and temporary encampment Pareraho.

96. Tensions between the drive to settle the Hutt Valley and the flood patterns of the river were first felt by Europeans in 1840 at the mouth of the river, then near Pito -One, resulting in the settlement named Britannia being abandoned some 6 months later. Around this time the river, and the road to Fort Richmond, was also renamed Hutt, after the founder of the New Zealand Company.

97. Work to protect the growing population from flooding events began in 1901 and were progressed over time in conjunction with rail and road development. Today these works are managed by GWRC through the Hutt River Floodplain Management Plan which sets the stage for structural (stopbanks, rocks, removing gravel from the riverbed, planting for erosion control and other built works including bridge replacements) and non-structural methods (land management to reduce flooding) that will be used to reduce the risk of flooding over the plans life to 2040. Predicted flood levels are the primary driver for the Riverlink Project including the need to replace the Melling Bridge. Sitting alongside this plan is the Hutt River Environmental Strategy and Action Plan (now in its second edition) which sets the stage for how people are able to access and experience the river as a 'linear park' and for the management of habitats. At a broad scale this has meant the establishment of a linear recreation resource with walking and cycling river trails, formal amenities such as the skate park and golf courses, car park areas, managed access points to and from the water and other improvements that be accommodated without increasing flood risk. For example, the recent establishment of wetland areas on the true right bank (TRB) below Kennedy Good Bridge, the Belmont wetland, were established as part of the Environmental Strategy Action Plan.

98. Alongside the river, Hutt City is organised off the main central business district grid of Daly-Rutherford St and High St - Queens Dr grid between Ewen and Melling Bridge. With the main streets of the central business district and residential properties located just beyond the true left bank (TLB) and commercial and residential activities directly adjacent to the TRB, and in a particularly confined section of the river, the proposed RiverLink works are integral to the city. Having achieved city status in 1941 the population is growing steadily; it reached 104,532 in the 2018 census. In its plans for a resilient and

32 https://library.huttcity.mebooks.co.nz/text/LowHutt/t1-body-d10.html

vibrant city, the river environs are integral to the Central City Transformation Plan (2019) and Making Places 2030 City Centre Vision (2009) which envisages greater connectivity and amenity and the character of works that will activate the city's interface with the river and enable development.

99. The character and quality of the natural, cultural and urban landscape that forms the immediate context for the Project, and environment effected by the River Landscape, City and Transport connection works, is described in more detail below.

6.2 Project context – Te Momi ki Motutawa Pā

100. The receiving environment for the Project, where the works will generate the majority of the potential landscape, visual and natural character effects, includes the proposed designation footprint, the visual catchment of these works (as described in more detail below) and the immediate spatial context, where natural and urban landscape systems will be influenced.

101. The spatial scope of potential landscape, visual and natural character effects relates to the scale of the works (which extend along approximately 3.7km and include large scale earthworks and structures), and the Project's location; alongside a commercial centre, densely populated areas, and important regional and national transport infrastructure. This means that the construction works (over 4 years) and the outcomes of the river landscape, transport and city connections works will be experienced by many.

102. The spatial scope of potential adverse and positive effects for natural and urban systems will include the visual catchment, where the works may be visible, and an area beyond this, due to the scale of the works and the site's prominence. There will be an area of Project landscape influence that extends beyond the visual, up and down the river and into the surrounding landscape (right and left of the flood banks). These broader scale landscape effects (in addition to visual amenity effects) result from the way in which the Project has the potential to transform the characteristics and quality of a significant length and prominent section of Te Awa Kairangi. Further, the Project's scale and status increases the works' potential for both adverse and positive effects on natural and urban landscape matters. For example, the works will have a greater influence on perceptions of natural character and the quality and character of the river environment than if they were to occur in other sections of the district. As the site is experienced by a greater number and wider range of people, and has a direct interface with the cities commercial centre, it acts as a more general point of reference for how people experience the river in the area.

103. Due to perception and the Project's prominence the landscape and natural character effects of the Project will extend beyond Ewen and Kennedy Good Bridges. Effects of the works will also extend out into the adjoining residential and commercial communities. This is due to the way in which the Project has the potential to transform people’s relationship with the river. In addition to the immediate effects on views, the works will result in changes to the character and quality of these environments, including how the community moves to, from and along the river, transport corridor and surrounding city environment.

104. Considering the above (potential spatial scope of adverse and positive effects), relevant existing environment matters are described further below, by river reach. These subheadings provide a useful analysis tool, as they help distinguish existing patterns of landscape character that relate well to the proposed Project works see **Figure 1** above:

    i. **Sector 1** Upper Reach – Kennedy Good Bridge to Mills Street; and

    ii. **Sector 2** Lower Reach – Mills Street to Ewen Bridge.

105. The description of the existing environment addresses natural and urban components of the immediate River Landscape (the area between the landward toe of the proposed stopbanks), transport and the city connections, as is consistent with the definition of landscape and the main parts of the proposed works. The Project landscape is a synthesis of the river, transport corridor and city connections, of the natural and urban (built) components and the physical, sensory, and shared and recognised factors they contribute.

106. Both the lower and upper reach (sectors of the Project) include the backdrop of the Wellington Fault escarpment which rises abruptly approximately 100m alongside the transport and river corridor and extends for tens of kilometres. The scale of the escarpment with the Pareraho hills behind, and the Project setting to the broad river plain and Remutaka ranges, create a bold landscape as the context for the finer features discussed below. The narrative of Ngāke and Whātaitai, sites of significance, past settlement, and continued ahi kā are further associative characteristics of this landscape and signify its importance to Taranaki Whānui and Ngāti Toa.

107. Photographs shown in **Appendix C**, including existing views selected for the photo-simulations and context photographs, provide illustrations of the character and qualities of the existing site context.

6.3 Sector 1 Upper Reach - Kennedy Good Bridge to Mills Street

108. This section describes the existing environment associated with works in Upper Reach - from Kennedy Good Bridge to Mills Street including the larger scale open space areas and residential communities alongside this (refer to **Appendix C** Viewpoints 1-6 and 18-19).

109. A summary of the Project works in this area is that it will widen, deepen, and shift the active channel and lower and widen the lower berm. The new riverbanks will generally be planted with willows and indigenous species, to provide a more flexible edge (rock lining is required to protect the Transpower sub-station and Harcourt Werry Drive). This will provide the opportunity for further adaptive management, to remove and reduce the pattern of willows overtime[33]. The design will establish a reconfigured path network and ūranga[34], marking the historic site of Maraenuku Pā, near the sub station. There will be larger areas of planting in this reach including contoured biodiversity mahinga gardens and the Belmont wetland will be retained. The existing stop banks will be retained along with the Boulcott Golf Course, Kennedy Good Bridge and existing SH2 and local road connections.

6.3.1 Landscape character – Upper Reach

110. The riverscape of the upper reach is more braided and has a broader active channel set in parallel to SH2. Stopbanks arch out, on the TLB, to the edges of the Boulcott Golf Course, where the fairway landforms have been shaped by past floods. To the TRB, protection measures define the edges of SH2 (the highway is located on top of the stopbank).

111. Broader areas of naturalised open space are on both edges of the active channel. Within the proposed designation there is a recently planted Belmont wetland area on the TRB near Kennedy Good Bridge and, in addition to the Boulcott Golf Course there are the

[33] It is understood that the opportunities for adaptive management are still being worked through (as are included in the ULDF) and that this may require the use of some additional rock groyne structures in the active channel and the use of willows in response to a flood event, over short sections to restabilise the bank that could then be taken out.
[34] Ūranga, literally means landing place in te reo Māori.

playing fields associated with the Belmont School and Church. Upstream of the bridge is the destination play space off Fairway Dr at Avalon Park (the historic site of the Motutawa Pā) and, between SH2 and the river, the Belmont Recreation Reserve with tennis courts and playground.

112. Rail connections do not feature in this sector nor does industrial or commercial landuse, other than the storage facility and Transpower substation at the boundary to the lower reach. The residential communities comprise the Boulcott suburb edge of the golf course and Belmont community along the western hills, accessed off Pomare and Wairere Road, Grounsell Cres- Park Road- Hill Road and Major Drive.

113. Contrasting characteristics of the upper reach River Landscape, city and community connections and transport corridor (compared to the lower reach), are summarised as follows:

i. The active channel has a broad meandering flow with wide gravel beaches along both banks and distinct instream riffles (in-stream gravel deposits that braid the river). In contrast to the lower sector, the active channel aggrades over time, and is regularly cleared of excess gravels under existing resource consents. Controlled vehicle access points are common in this reach; where excavation equipment and trucks work on the gravel beaches.

ii. The edges of the existing active channel are flexible, and predominantly planted in willows, excluding a short section of rock lining upstream of the Block Road carpark. Upriver of the bridge there is a pattern of willows (with and without debris fences) to the back of the beaches, and rock lining or groynes with willows protecting the pool edge.

iii. While most of the active channel is willow lined, there is a more open environment downstream of the Kennedy Good Bridge. This area features a public carpark, the wetland planting and three watercourses (including that flowing into the wetland) that are partially daylighted through the berm. All other streams/stormwater flows in the Project site are piped through the flood banks and berms, to an outfall in the active channel.

iv. The pattern of streams flowing off the hills and regenerating indigenous vegetation in the gullies is continuous through this sector (although this is broken up by development). This includes the only named stream (Speedys, that flows through the reserve to the west of SH2) which has a partly daylighted outlet, just below the Kennedy Good Bridge.

v. Existing public amenities in this sector extend the downstream pattern of narrow upper and lower unpaved paths which can be accessed off from the Block Road and Kennedy Good Bridge carparks, on the TRB, and numerous points along Harcourt Werry Drive including an informal car park . Formal recreation amenities do not feature in this reach, although its wider setting includes the golf course and other recreation facilities such as Avalon Park.

vi. There are more open and close views of the River Landscape from SH2 and local roads in the upper sector. In contrast to Sector 1, there is no development between SH2 and the river, the highway is elevated (on the stop bank) and there is a public road (Harcourt Werry Drive) in the river corridor (below the stop bank).

vii. Development patterns alongside the River Landscape on the TLB comprise residential areas of the Boulcott suburb. The Harcourt Werry Drive-Connolly Street links the residential community to the River Landscape and reduces the severance created by the private golf course. The street network servicing this residential area includes High

Street, the arterial route into the centre of the city, and cul de sac end roads with access to the existing path on top of the stop bank, at Ariki and Boulcott Streets. There is no access to the River Landscape (golf course) off Military Road, Kingston or Stellin Street, or along the edges of the GNS Science centre.

viii. Residential activities are located at a further distance from the active river channel in the upper reach. While the landforms of the golf course express historic river flows in birds eye view contour maps, this is not so apparent on the ground. While the golf course provides an open space view for some residences with groomed topography and specimen trees, it further separates the residential community from the river. Harcourt Werry Drive and the existing road end links to the flood bank paths mitigate this severance, to some extent.

ix. Large-scale (non-residential) built development is limited in this reach, and, excluding golf course clubrooms, does not have a positive or front facing relationship to the active river channel. Boulcott Primary School has an active edge to Boulcott Rd and GNS Science Campus, Fairway Drive.

x. On the TRB, entry points to the River Landscape are limited to the Block Road and Kennedy Good Bridge ends and include a number of bollard-controlled vehicle access points, used for management of the active river channel.

xi. Public amenities along this bank are limited to the narrow paths; gravel to the willow edge and a wide paved upper path, also used for maintenance vehicle access, to the base of the SH2 bank.

xii. In contrast to the lower reach, there is an absence of close residential and industrial building forms and activities. The landscape experience combines a willow, bank and escarpment lined corridor with more open areas and views across the water near Kennedy Good Bridge.

xiii. Residential activity directly alongside the Project site is elevated in the Belmont area. This is illustrated in a number of the context photographs included in **Appendix C**. The Project's potential visual catchment is addressed in more detail below.

xiv. The Belmont school community will have some of the closest views of the proposed works, from its playing fields that face the river. The residential community, located off Owen St, are also likely regular users of the downstream path network but will have limited views of the site as it is screened by existing vegetation. The new Summerset Boulcott Village (located off Boulcott Street, behind the Boulcott Primary School) will have elevated views from apartments on the edge of the golf course.

xv. In contrast to the lower reach, there will be no direct impacts on residential or commercial property resulting from the Project.

xvi. The SH2 transport corridor and steep escarpment slopes includes small-scaled areas of revegetating bush set to the tributary gullies, including Speedy's Stream Reserve. The most distinct features of the transport corridor are the parallel connection of Groundsell Crescent that accesses Park Grove, Palm Grove and Hill Roads and the signalised connection of Major Drive, offset from Kennedy Good Bridge. These existing connections will be retained by the Project.

114. Aspects of this landscape character are highlighted below, as key matters that are relevant to the assessment of landscape, visual and natural character effects:

i. *Existing habitats* - as further detailed in the Freshwater and Terrestrial Ecology Assessments (refer to Technical Reports No. 6 and No. 7). Specific habitats relevant

to both reaches of the river include Threatened and At-Risk fish species, high-quality macroinvertebrate habitats and a wide range of Threatened and At-Risk bird species.

ii. *Sites of significance to mana whenua* - as detailed in the Cultural Impact Assessment Report (refer to Technical Report No. 17). The broadscale cultural narrative continues in this sector; of the Tupua, ahi kā and mahinga kai, in part recognised through statutory acknowledgement and identified sites on the district plan and PNRP planning maps. The River Landscape spans the wider context of the Maraenuku Pā site (located in Sector 1), the Boulcott Battle site (the golf course) and Motutawa Pā (Avalon Park). Mana whenua connections in the wider landscape are further marked by the historic trail to Porirua aligned to Hill Road (and Pareraho Pā/lookout located above Speedys Reserve).

iii. *Amenities* - the River Landscape (throughout the District) has been identified as a SAL under the RPS due to natural science, sensory and shared and recognised values (noting, as discussed above, that these areas are not proposed to be mapped in the District Plan and will be managed through underlying zoning). Public amenities in this reach, that contribute to these values, are low key, in keeping with its open space character and use for informal recreation.

iv. *Cycling, walking, river and multimode connections* - existing connections to and from the river are limited by the surrounding land uses (outside the proposed designation boundary) of the Boulcott golf course and SH2. Within the existing River Landscape there are narrow shared paths and unformed car parks which are not in keeping with current standards for safe widths, and include areas of potential conflict between cyclists, pedestrians and vehicles.

v. *Visual amenity and visual catchment* - the existing visual amenity of the River Landscape is enhanced in this sector (compared to the existing environment in Sector 2). This is due to both more naturalised and open space characteristics of the River Landscape and borrowed views of the hills beyond; that are not screened by the backs of tall commercial buildings. The more naturalised flow of the river and open areas where this can be viewed from are further amenity contributing factors, along with the presence of wetland planting, and the way in which the highway is partially screened from the path network by existing vegetation and level changes. The visual catchment and range of viewing audiences is reduced in this sector due to the absence of commercial and industrial activities, the width of the existing floodbanks and the heights of surrounding residential buildings. Distant views of the works from Pareraho Hill residences continue through this sector, for properties with an open outlook off Tirohanga Road and Major Drive. Outside of the Project designation boundary, close views of the works will impact on a much smaller viewing audience than in the lower reach, from areas within Belmont School and the Boulcott Golf Course.

6.3.2 Natural character – Upper Reach

115. This reach of the river is highly modified although it has a broader active channel and less built forms within and to the edges of the stopbanks. The active channel is regularly dug out to manage gravel aggradation and willows control a more flexible edge. Existing habitats are diverse (related to pools, riffle and beach environments) and there are greater areas of planted indigenous vegetation (compared to Sector 2) including recently constructed wetland areas. Daylighted tributaries connected to these features also contribute to natural character.

116. Overall, considering section 6(a) RMA matters and the River Landscape throughout the Hutt City and Upper Hutt Districts, the natural character of the upper reach is, at most, moderate (on a 7-point scale).

6.4 Sector 2 Lower Reach - Mills Street to Ewen Bridge

117. This section addresses the Lower Reach sector – from Mills St to the Ewen Bridge and the city centre, commercial and residential communities alongside this as shown in the representative views in **Appendix C** (refer to Viewpoints 7-17 and 20-34).

118. The Project will include new stop banks on both sides of the river. Works in the River Landscape (between the landward toes of the stop banks) will integrate a reconfigured path network, indigenous planting for amenity and activities for a wide range of users including ramped accessible routes and access to the water's edge. The proposed new transport and city connections will be located in this reach, including the new vehicle interchange and bridge, pedestrian and cycle bridge and new train station. There will be a number of private properties required and changes to local roads including new cycle and pedestrian links. These will establish active transport links between SH2, the relocated train station and the new pedestrian and cycle bridge.

6.4.1 Landscape character – Lower Reach

119. The landscape of the lower reach is typified by a confined river corridor which sweeps away from the western hills en route to the outfall at Hīkoikoi-Seaview. Existing stop banks are closer to the active channel in this sector and include vertical retaining walls approximately 2m in height on the TLB, that have increased the area available for development within the Hutt City Centre. Service and light industrial activity also features directly alongside the stop banks on Pharazyn Street. Residential communities in this reach combine those located near Te Awa Kairangi, off Marsden Street -Pharazyn Street and Connolly Street- Mills Street, and elevated properties on the western hills of Belmont, Pareraho, off Normandale Road, Harbour View Road and Tirohanga Road.

120. The active channel of the river flows more quickly through this sector compared to the upper reach (has a less braided flow) including increased areas of active bank erosion, particularly along the outer TRB (deeper water) edges of the bend approaching Ewen Bridge. These areas are currently protected by rock lining. Rock and rubble lining continues downstream, beyond the designation, excluding a section of willows alongside the gravel beach near the St Albans Grove and the rock groynes, indigenous planting and willows on the TRB either side of the rail bridge.

121. Gravel beaches in this sector are deposited on the inner edges of the river and meander on the TLB. These can be accessed via the River Landscape carparks, off Daly Street and Queen Street Carparks and Melling Road. A broad gravel beach also features under the existing Melling Bridge, and all beaches are periodically accessed by vehicles for maintenance (clearing river gravels). Riffles (instream gravel deposits that braid the river) are not a significant feature of this reach, due to its confinement and flow speed. The exception being the riffle banks located below the Ewen Bridge which also acts as a resting site for gulls.

122. The edges of river are lined with willow through much of this reach and this limits views of and physical access to the active river channel through much of the year. Narrow openings in the flood protection planting, and informal tracks to the river channel, are associated with stream and stormwater outlets. The most open views of the active channel are possible from areas near Ewen Bridge (downstream of Andrews Avenue). Open vantage points include the popular city river beach off the Daly Street Carpark and

berm areas downstream, where low indigenous planting features. Areas of regenerating indigenous vegetation are associated with the stream gullies in the site's wider context (which are piped under the highway, stop bank and berm to active channel outlets). As discussed in the Planning Context above (refer to Section 5), a number of these areas are recognised through the District Plan SNRs, Open Space zoning and proposed SNAs.

123. Shared paths in the existing landscape support the network of river trails from the river mouth to the Remutaka Rail route. These narrow paths are generally less than 2m in width and paved to the TLB and compacted gravel along the TLB. At Bridge Street this network connects with the under-construction Pito-One (Petone) to Melling (P2M) and the planned Ngā Ūranga to Pito-One shared path along the coast (both Waka Kotahi Projects). From the river mouth, the trails are linked to other paths, such as the HCC planned upgrade of the Eastern Bays shared path to Eastbourne.

124. Other than the trail network, there are limited public amenities provided in this river landscape. The beaches are accessed for swimming and as picnic spots and the river channel by kayaks and other non-motorised craft. The popular Saturday Riverbank market and other 'pop up' events are held in Queens Drive carpark. An open sided shelter seating and broad steps are located on the TLB near the Ewen Bridge (featuring plaques commemorating C. Laing-Meason, a past Hutt River Board Engineer, the 1904 bridge construction and 1996 flood protection works). There is limited seating elsewhere along the lower and upper (flood bank crest) or shared paths in this reach.

125. Connections between the river landscape and the surrounding community are provided at the existing bridges via accessible ramps and steps, including the underpass through the Melling Bridge on-ramp to the back of the Harvey Norman building. There are open paths under the Melling Bridge on the TRB and on both sides of the Ewen Bridge.

126. On the TLB, mid bridge access is via road end carparks off Daly Street, Queens Drive, Melling Road and Mills Street with additional ramps/steps off High St, four locations along Daly Street and one on Rutherford Street, opposite the Countdown supermarket and pedestrian crossing. Existing heights of stopbanks limit views of the river corridor from the city side of these access points and the design flood bank edge varies. From Andrews Avenue to Queens Drive, there is a vertical concrete retaining wall used to limit the footprint of the stop bank along Daly Street and Rutherford Street and this is where the crest of the stop bank has a greater RL (relative level). Typically, the vertical retaining wall is less than 1m high, with sloped embankment rising above this to a consistent RL. Near the intersection of Daly Street with Margaret Street the wall is approximately 2m in height, with the top of the stop bank rising approximately 2m above this.

127. Development patterns alongside the TLB comprise the Hutt City Centre and residential communities of Hutt Central and Boulcott. The retail and civic centre is compact, bound by Fraser Street-Laings Road and Queens Diver with Margaret - Bunny Streets establishing the central axis and grid off Queens and High Streets. The wider commercial precinct, including big box and service industries, extends to Brunswick Street with a stepped transition to residential landuse along Myrtle Street, Cornwall Street and across Pretoria and Downer Streets in line with Bristol Square. As is relevant to the Project, the street network servicing this core business district includes a 'back loop' (that will be removed by the widened river corridor) along High-Daly-Margaret and Rutherford Streets, directly alongside the river stop banks, which is accessed from Andrews Avenue. Arterial routes into the centre along Woburn, Knights and Waterloo Roads, Kings Crescent and High Street are connected by busy, often multi lane roundabouts which are struggling to service current levels of traffic.

128. Building ages, heights and footprints vary within the wider commercial precinct with some buildings along High Street such as the McKay House over eight stories, however most, including those directly along the stop bank, are generally less than four stories tall with the Chamber of Commerce, along Daly Street, six stories. Commercial activities with a front face to the river are service related such as TBI Health (Crowe Howarth) and Millies Preschool. While there is some residential activity above the street and a restaurant along Daly Street, these are low-key compared to other city-river environments and often the existing businesses face other streets creating a further 'wall' along the river landscape, for example, the back of the Harvey Norman Building. Buildings of architectural merit are not a feature of the immediate backdrop to the river, except for early 1900s development along Andrews Ave, including the four storey Post Office Building (John Mair architect, 1906) on the corner of High Street now converted to retail and apartments.

129. To the upstream edges of this sector, beyond Melling Road, there is an area of residential development directly alongside the flood banks, accessed off Connolly and Mills Streets including where there is recent two storey townhouse development. This is generally the location where the proposed flood banks will tie into the existing, and there will be several residential properties removed as a result.

130. On the TRB of the lower sector, there are fewer entry points to the river landscape as residential and light industrial and service activities are located to the edges of the flood banks. In addition to the Ewen Bridge cycle and pedestrian 'off ramps' the public can access the river path network at the end of Bridge Street (the P2M Project connections) and off Block Road, including informal vehicle access to the beach below the existing Melling Bridge.

131. Public amenities in the river landscape within this sector are low-key, excluding the existing skatepark next to Melling Station and seats upstream of this next to the Block Road carpark. With the backdrop of buildings set behind and below the stop banks, the dense willow planting over much of this sector and limited views of SH2 or other roads, there is a greater perception of natural character along the TRB.

132. The river landscape experience has the characteristics of a confined 'back of city' urbanised corridor, of a grass berm lined by willows, foodbanks, buildings and the escarpment, which offers narrow glimpses of the water through the trees.

133. Activities directly alongside the river landscape include residential and commercial activities of the Melling area (between the river and SH2) set off Marsden and Pharazyn Streets. Landuse features industrial and service businesses such as Dixon Dunlop Engineering and Best Start and Early Years Childcare Centre.

134. The SH2 and rail transport corridor and steep escarpment slopes including revegetating areas across Jubilee Park and residential areas of Normandale and Harbour View provide a distinct boundary to the TRB river landscape. The most distinct features of the corridor are that of the Melling Line and Station (circa 1954) which is something of a landmark in the area. SH2 is traversed by the Normandale Road overbridge landing at the Greenaway Park on Bridge Street and signalised intersections at Harbour View, directly opposite Melling Bridge and Tirohanga Road.

135. While at some distance from the Project, connections with the Pareraho community increases the area of potential users of the Project. The elevated setting of the residential homes also expands the visual catchment for the construction works and completed Project - as illustrated in a number of the context photographs included in **Appendix C**. The Projects potential visual catchment is addressed in more detail below.

136. Aspects of this landscape character are highlighted below, as key matters that are relevant to the assessment of landscape, visual and natural character effects:

i. *Existing habitats* - as further detailed in the Freshwater and Terrestrial Ecology Assessment Reports (refer to Technical Assessments No. 6 and No. 7). In addition to the habitats described above (common to the upper and lower reach sectors) specific habitats relevant to this reach include the black shag colony identified near Melling Bridge. Regenerating indigenous broad-leaved forest and scrub also features across the escarpment, often associated with river tributaries such as the Harbour View stream. A potential īnanga spawning habitat is identified in the Freshwater Assessment, located on the TLB extending upstream of Ewen Bridge.

ii. *Sites of significance to mana whenua*- as further detailed in the Archaeology and Heritage and Cultural Impact Assessment Reports (refer to Technical Assessments No. 12 and No. 17). The values of the area relate to its association with the broader creation narrative and historic transportation route, as noted above. Named features include Rotokakahi (near Ewen Bridge) and Te ahi o Manono Kainga (in the vicinity of the intersection of Daly Street-High Street and Ewen Bridge, possibly now in the riverbed) and Maraenuku Pā, located upstream of Mills Street at the boundary between the two Project sectors.

iii. *Notable trees* – as detailed in Section 5 above, are all located within or directly adjacent to Sector 2 of the Project works.

iv. *Archaeology and Heritage sites*- as noted in the assessment report (refer to Technical Assessment No. 12). In addition to the Pā sites, this includes pre 1900 buildings along High Street, Fraser Street and Andrews Avenue, the Wesleyan Methodist Cemetery at the river end of Bridge Street, evidence of pre 1900 development along Marsden and Pharazyn Streets and the iconic 1950s Melling Station building. The historic homes of Lochabar (125 Western Hutt Road) and Casa Loma (760 Western Hutt Road), currently accessed direcltly off SH2, and their surrounds are also noted.

v. *Amenity and access* – the river landscape (throughout the District) was identified as a Special Amenity Landscape under the RPS in the recent technical study, due to natural science, sensory and shared and recognised values. However, considering the context of this reach (relationship to the populated areas of the Hutt and the city centre) the condition and quality of the amenities this landscape offers are very low key and dated. Amenities in this landscape are of a poor condition with a focus on vehicle amenity- car parking.

vi. *River – City and Community connections*. In the lower reach, connections are of poor quality and the character of the surrounding streetscapes and built environment contributes to severance between the river and city and residential environments. While the public access points, to and from the river, are generally well aligned with road ends (logical routes) and provide accessible ramps, they are narrow (below current shared path or segregated path standards) and are of a design quality that is inconsistent with their context, particularly where they contribute to the overall character and experience of the central city, along the TLB. The existing vertical retaining walls, which are over 1.4m high (typical line of sight height) along Daly St has a dated/low quality finish and this further detracts from the quality of the river - city connections. As a 'wall' rather than a sloped embankment it also increases perceptions of severance; of the river being separate to and blocked off from the city[35]. This severance is further enhanced by the vehicle priority established along the

[35] In contrast, an embankment helps to moderate or spread the change in level, moderating the transition

base of the stop banks, along Daly Street and Rutherford Street, and the way in which built development generally front faces other streets, rather than the river. Further, the civic precinct along Laings Road including Riddiford Gardens has poor connections to the river landscape, despite being less than five minutes walking distance.

vii. *City – Multimode Connections* (rail, road, active transport and micro mobility). There are several historic circulation patterns which are not currently serving efficient movement in the lower sector of the Project (and are a key driver for the integration of the Melling Interchange). In terms of urban design these patterns detract from the city's vision of a vibrant, active interconnected river - city landscape. For the most part these movement and circulation issues relate to vehicle priority and poor connections between modes of transport. In particular, upstream of the Ewen Bridge:

   a. The roading network encourages a 'rat run' for vehicles along the riverbank, Daly St. This is one of the factors that generates less active 'back of house' development patterns and it reduces options for greater public amenity due to severance.

   b. Andrews Avenue has good streetscape amenity with broader footpaths, areas of planting and street trees.

   c. The Melling Bridge connection, while close to the rail station, enters the city beyond the immediate retail precinct (anecdotally visitors or new residents often end up in the river carpark by mistake).

   d. Roundabouts feature at a number of intersections within the commercial centre. These are more difficult for pedestrians and cyclists to navigate than signalised crossings, particularly where they are stacked closely together (making it more difficult for cyclists to get into the correct lane). Current and increasing traffic flows are not well served by roundabouts. This increases issues of severance and safety, making the city less permeable to people using other modes of transport.

   e. The civic, Laings Road precinct and Riddiford Gardens area of the city has good levels of amenity but poor connections with the River Landscape. The existing environment lacks clear, prioritised nonvehicle routes between these two open spaces. The existing urban landscape patterns detract from perceptions of a quality city environment by severing two of its important open spaces and reducing the prominence of its key natural feature - the river.

viii. *Visual amenity and visual catchment* – factors that contribute visual amenity in this sector relate primarily to its natural features rather than existing built forms which feature serviceable dated structures and buildings without a positive relationship to the river. While the willow planting provides a consistent greened edge to the river, it is a strong visual barrier, limiting views of the active channel, the main feature contributing visual amenity.

ix. The visual catchment, or area where the Project will be visible, is limited on the TLB by the height of the existing stop banks, flat topography behind and existing buildings which will screen the site. Private views from existing multi storey buildings are available, where there is a clear line of sight to the river. These properties will view the construction works and outcomes, in close proximity. On the TRB there is a greater

in height to make it appear less dominant. Within reason, an embankment can provide access at any point, for the able bodied, and, as earth - worked forms, can include other measures such as planting that spill over into the city, integrating the two environments.

visual catchment and range of audiences, including residential properties across the Pareraho Hills, from Normandale Road to Tirohanga Road.

6.4.2 Natural character – Lower Reach

137. This reach of the river is highly modified and confined. Existing habitats have been reduced over time through the impacts of adjacent landuse and flood protection and there are only minor areas of indigenous vegetation and naturalised features such as the gravel beaches retained. There are significant built works within the river landscape and designation area including the existing bridges, car park areas, retaining walls, streetscapes and built development.

138. Overall, considering Section 6(a) RMA matters and the river landscape throughout the Hutt City and Upper Hutt Districts, the natural character of the lower reach is low (on a seven-point scale).

7 ASSESSMENT OF OPERATIONAL LANDSCAPE AND VISUAL EFFECTS

139. The operational (permanent) effects are assessed for each of the Project's geographic sectors, as relevant to the proposed works and the distinct characteristics of the existing environment (see Figure 1 above):

i. **Sector 1 Upper Reach** - Kennedy Good Bridge to Mills Street, and

ii. **Sector 2 Lower Reach** - Mills Street to Ewen Bridge.

140. The effects assessed assume successful establishment of a final design guided by the outcomes and opportunities set out in the ULDF. This includes an extended maintenance period (typically 4-6 years) that would be required to establish the proposed naturalised planting and planting for flood protection.

141. Within each sector I assessed the effects in terms of the following topics, noting that these address interrelated aspects of landscape. This process is useful in terms of analysis; to inform the overall effects assessment set out in my conclusion and any further recommendations for design measures and mitigation (set out in Section 9).

142. Effects on **landscape**, addressed under the following subheadings:

i. *natural landscape*, relating to existing natural landforms, waterways, and vegetation

ii. *urban landscape*, including a consideration of cultural expression, amenity, safety, accessibility and quality of experience and design articulation including matters relevant to urban design, and

iii. views and *visual amenity*, for different viewing audience groups in both sectors.

143. Effects on **natural character**, contributed to by biophysical and perceptual factors (refer also to the definition for natural character in Section 4, methodology). Opportunities to maintain and enhance natural character relevant to the Project works are further analysed in **Appendix A**.

144. Effects on **public access** to Te Awa Kairangi. Overall, the Project will have significant positive effects on access to and along the river. There will be a greater range of improved access points along the edges of the River Landscape, to and from the city and

nearby communities, and to the active channel within this. Further, outcomes anticipated in the ULDF are to enhance through a varied user experience within the River Landscape including safe and accessible routes, informal recreation facilities and 'adventurous' access along the active river channel. Detailed access matters are addressed below, as they are also relevant to the urban landscape and perception of natural character, and are distinct to each sector.

145. Construction effects are addressed in Section 8 below.

7.1 Sector 1 Upper Reach - Kennedy Good Bridge to Mills Street

146. The Project will have both adverse and positive effects on the area.

7.1.1 Natural landscape

147. The natural landscape of this sector includes the existing naturalised (flood impacted) landforms of the lower berm and the active channel, braided water movement, areas of vegetation and the habitats these features support.

148. Habitat matters are addressed in detail in the Freshwater and Terrestrial Ecology Assessment Reports (refer to Technical Assessment No. 6 and No. 7) and effects on natural water movement from a technical hydrological perspective are addressed in the Geomorphology Assessment (refer to Technical Assessment No. 5). I have considered the findings of these assessments here in landscape terms, as contributing to the physical components of landscape.

149. High value freshwater and avifauna habitats are acknowledged in the ecology assessment reports, including habitats for At Risk and Threatened species, along the full extent of the Project.

150. There are few remaining natural landforms within the Project designation boundary. This is a highly modified environment managed for the purpose of flood protection. As the channel is wider and less confined in this reach, it has established a more braided or naturalised pattern. However, these patterns are subject to management works, as required to ensure flood protection. This includes consented removal of gravel, as this section of the river aggrades. Exotic willows with an understorey of exotic weeds, minor patterns of naturalised indigenous species and lawn areas contribute naturalised features in this landscape. These are maintained as part of the flood protection works including managed removal and replacement of willows, to retain a more flexible river edge (in contrast to an edge lined with rock or where there are groynes). That being said, the river is still confined within the existing stop banks (as it will be once the work is completed).

151. On the TRB near the Kennedy Good Bridge, there are a number of short sections of channelised watercourses which are daylighted. There is a minor pattern of indigenous vegetation associated with these features and one is linked to the recently planted biodiversity wetland (the Belmont Wetland).

152. These naturalised features will be removed during the construction stage (as assessed below), as required to establish a deeper, wider and realigned channel and lower berms.

153. As relevant to the natural landscape, design measures integrated and set as intended outcomes and opportunities in the ULDF will:

    i. reinstate a broader active channel with a flexible edge including constructed gravel beaches, riffles and deep pools that are characteristic of natural braided rivers;

    ii. retain the Belmont wetland planting, and include further opportunities to naturalise watercourse outlets upstream of the proposed vehicle bridge. An offset for the loss of

stream habitat in the Harbour View Stream is also proposed, with details for the offset to be pursuant to a condition of consent;

iii. integrate indigenous planting within the lower berm for flood protection, providing an opportunity for an adaptive management plan (where willows are successively removed from the lower berm) and transition to a greater pattern of indigenous species. Where successfully established, including successional species such as totara and kahikatea, indigenous plants will have a greater life span than willows, reducing disruption required through replanting;

iv. include other areas of indigenous planting for amenity and biodiversity including species relevant to traditional uses for mana whenua and tohu (markers) for significant sites such as at Maraenuku (near the substation). Contoured mahinga gardens, on the TLB, will also assist in the management of stormwater flows through the site. Together with the bioengineering planting, for flood protection, this will establish a significant pattern of indigenous planting and enhanced biodiversity;

v. over time, and as confirmed by the Freshwater and Terrestrial Ecologist Assessment (refer to Technical Assessments No. 6 and No. 7), lead to enhanced terrestrial habitats, due to the indigenous planting and approach to limit beach disturbance through public access in some areas. Similar aquatic habitat types (to the existing environment) will be reinstated;

vi. have no impact on the naturalised landforms of the Boulcott Golf Course, and

vii. have no impact on the surrounding regenerating areas, identified as SNRs and proposed SNAs.

154. Taking these factors into account, design measures have prioritised an enhanced pattern of naturalised features. Given time for constructed active channel features to naturalise, the broader areas of indigenous planting, daylighted and naturalised water course outlets and the plan to reduce the use of willows, I assess the long term effects on the **natural landscape** as, **moderate-low positive**. This is a highly modified environment, and the proposal is to reinstate and enhance naturalised features. These positive effects could be further enhanced by providing further certainty on the use of indigenous species as part of the flood protection management and further transition to reduce the pattern of willows over time. Effects on the natural landscape through the construction phase are addressed in the next section of this report.

7.1.2 Urban landscape

155. The Project will provide for an enhanced experience of this urban recreational landscape. Design measures set as outcomes and opportunities in the ULDF are to achieve an integrated approach to cultural expression and marked improvement in the condition and quality of the path network, gathering spaces and river access points. Specifically, urban landscape matters are addressed by:

i. connections retained to the surrounding communities at Kennedy Good Bridge, Mills Street, Harcourt Werry Drive and the cycle and shared path links from the Melling Interchange;

ii. the pedestrian and cycle priority achieved by the rationalised carpark areas off Kennedy Good Drive and Harcourt Werry Drive and the network of wider paths including accessible routes to the water's edge;

iii. measures used to ensure high levels of amenity and safety are prioritised in the ULDF outcomes, as illustrated in the proposed design, including provision for shade,

sheltering elements, seating and bike parks proposed to be integrated at gathering spaces, through to required details for some seating to have back and arm rests;

iv. the path network links differing scaled gathering spaces including river edge access points to beach, deep pool and riffle environs. In contrast to the existing journey, along narrow paths to a willow edge, the design establishes a more varied landscape experience, contributing to improved amenity;

v. the varied planting approach, combining a mix of indigenous species (rather than a monoculture of willows), areas of grass and trees in lawn, further enhance landscape experience and offer opportunities to use plants as wayfinding devices and as markers or tohu. For example, to help interpret the ūranga area near the substation as part of the Maraenuku Pā. The species selection proposed includes plants valued as past and present mahinga kai, which offer further options for interpretation and traditional use (where in line with flood protection management) that have the potential to further enahnce connections between people and the River Landscape;

vi. design measures to ensure safe movement along the path network integrates relevant shared and dedicated cycle path design standards, required access for maintenance vehicles and broader CPTED principles. Specifically, the outcomes proposed limit areas of potential entrapment and provide, through a clear sequenced journey, natural wayfinding measures; where users have a clear sense of their location along the trail, and exit points are intuitive; and

vii. principles to establish an integrated palette for built elements, and outcomes sought for the quality of finish and articulation, which will add further to amenity and effects on the urban landscape.

156. Together these measures provide for the articulation of spaces, palette and experience and are more in keeping with the mana and mauri of Te Awa Kairangi and an integrated approach to cultural expression. The proposed design establishes a strong framework and ‘canvas’ for the korowai narrative to be developed in the next stages of the Project. As set out in the ULDF design strategy, this anticipates such measures as the naming of ūranga, streams and other important sites in this sector and further work to confirm the use of graphic and sculptural elements. A key focus, for example, in detailed design would be at Maraenuku Pā and contributing to a site wide approach to establish clear cues for pedestrian and cycle movement through an integrated wayfinding and signage strategy.

157. Components of the Project works in this sector most likely to be associated with adverse urban landscape effects relate to existing connections for the community, the provision for safe and reduced conflict management and operations for flood protection and CPTED. In particular, River Landscape users are likely to continue to arrive by car (as SH2 and the Boulcott golf course cuts off logical alternative pedestrian routes) and the provision for a low-key carpark on both banks should be retained through detailed design. Extensive planting proposed may also have the potential to reduce sightlines to and from vantage points in the surrounding environment or may detract from natural wayfinding and clear entry and exit points within the River Landscape. This is an important matter to consider in the detailed design for planting. The confined area around the Maraenuku Pā ūranga (below the Transpower substation) is an obvious focus for this work.

158. In summary, the Project will provide for a significant uplift in the quality of the experience in this sector, as a naturalised River Landscape and informal recreation resource. Compared to the existing environment, and as a result of the design measures integrated to provide a varied, safe experience and integrated cultural narrative this will result in **moderate positive urban landscape** effects.

7.1.3 Visual effects

159. The Project will transform the visual characteristics of the River Landscape and have marked changes on the nature and extent of visual access to the active channel which contribute to visual amenity.

160. The photo-simulations and context photographs in **Appendix C** illustrate views of the Project in Sector 1- Upper Reach (note, the photo-simulations and context photographs have been labelled sequentially following the TRB and then the TLB).

161. Photo-simulations prepared in the upper reach include:

    i. **Viewpoint 1:** A view from Kennedy Good Bridge, the upper reach extent of the Project, looking downstream (south-west) along Te Awa Kairangi/Hutt river towards the existing and proposed Melling Bridge (not visible).

    ii. Context photographs **Viewpoint 2-6** (from the TRB) and **18-19** (from TLB) show views of Sector 1, the upper reach. **Viewpoint 2** shows a representative view upstream of Kennedy Good Bridge and **Viewpoints 3 &4** represent elevated views of the Project site from streets along the Parerahu hills (Belmont suburb).

162. Potential adverse and positive visual amenity effects are relevant to:

    i. pedestrians and cyclists using the River Landscape paths;

    ii. motorists travelling on SH2 and Harcourt Werry Drive;

    iii. motorists travelling on the Kennedy Good Bridge;

    iv. cyclists and pedestrians travelling on the Kennedy Good Bridge;

163. The following paragraphs describe the effects for these different viewing audiences:

    v. pedestrians and cyclists travelling along the proposed path network will enter the proposed River Landscape from similarly located access points along Harcourt Werry Drive and Mills St on the TLB and Kennedy Good Bridge, Groundsell Cres crossing of SH2 and the path network under the new interchange on the TRB. In contrast, however, their visual experience will be markedly different from that of the existing environment, due to the proposed varied planting featuring indigenous species, articulation of gathering spaces, enhanced path options and access (also providing viewshafts) provided to the river's edge pools and beaches, including the ūranga at Maraenuku. Potential adverse visual amenity effects relate primarily to perceived safety, as addressed above, including provision for ongoing flood protection management and maintenance and CPTED principles. Overall there will be a marked visual amenity uplift for users of the River Landscape compared to the existing envrionment;

    vi. motorists and cyclists travelling along SH2 and Harcourt Werry Drive will have a similar experience (although varied by speed) and pass through this sector relatively quickly with generally more open views of the proposed works where there are trees and lawn areas proposed next to the golf course. Over time, existing views of the river may be varied due to the proposed planting of indigenous species (which are predominantly evergreen), however the views will also offer further elements of visual interest including flowering species and a greater quality of edge treatment including proposed development of a coherent signage strategy, also supporting the Korowai narrative. Overall, and compared to the existing environment, the outlook will be improved, and there will be positive visual amenity effects;

vii. effects for cyclists, pedestrians and motorists travelling along Kennedy Good Bridge will be similar (although moderated by speed). Although there will be no changes to the bridge structure itself this will provide relatively open views of the new works through to the substation (the ūranga and new vehicle bridge will not be visible). Given time for establishment this will feature the naturalised planting of the river edge with indigenous species, the reinstated Belmont wetland and the points of access including those aligned with beach elements. In the distance viewers may be able to distinguish the rock lining alongside the sub station, and proposed planting over the banks adjacent to SH2 may provide further screening of vehicles over time. Pedestrians may also have some appreciation of the daylighted stream. Overall and, given time for the vegetation to establish, the visual amenity effects will be, on balance, positive for this audience although noting there will be a loss of outlook to existing open space areas on the TRB that currently add visual interest;

viii. staff, students and visitors to the Belmont School grounds will have an elevated view of the proposed works and look out over the lower berm to the proposed bioengineering planting of mixed indigenous species and willows and the reinstated Belmont wetland. Over time, an extent of their open outlook to the active channel may be reduced by the planting required for flood protection, where this closes off an existing open edge to the river (south of the first carpark), as it would for pedestrians and cyclists in River Landscape below. However, these current open views would only feature from the end of the playing fields and the varied planting proposed will provide a measure of mitigation. Overall, the visual amenity effects for the school will be positive.

ix. residential properties in Belmont, who have an open outlook towards the Project will observe the works from a distance as part of a much wider view of the valley floor and ranges beyond. With more of a birds eye view, residents and their visitors will be able to track the progress of the construction works and establishment of the new approach to flood protection planting over time including a view of the canopy of trees specified with a flowering habit such as kowhai and rata. This pattern of vegetation will be in marked contrast to the willows upstream. While the existing features of views from individual residences are likely to vary due to height, aspect and intervening buildings it is unlikely that valued features in the background of views will be screened. For example, residents along Major Drive will retain their view of the Boulcott Golf in the mid ground and of the ranges and harbour in the distance. Overtime, the diverse planting strategy including indigenous flowering plants will generate positive visual amenity effects.

164. In summary, and while the effects will vary for particular viewing audiences, the Project will improve visual amenity. Overall, there will be **moderate-high positive visual amenity** effects resulting from the works in this sector, when compared to the existing environment. Measures to restore natural character, lift the quality of built components and enhance visual access to the active channel contribute to positive effects. Design outcomes set out in the ULDF will limit the potential loss of visual access to the river for motorists and cyclists who continue to use SH2. There are no changes to the stop bank levels in this sector which mean that existing views from close residential properties will not be further confined or limited. Over time, and where it is possible to further reduce the pattern of willows to the edge of the active channel, indigenous plants will add further to the visual quality of the area; including for example flowering rata and kowhai.

7.1.4 Effects on Natural Character

165. The Project will require significant earthworks and vegetation removal to establish a newly aligned, deepened and widened active channel and lower berm removing all existing vegetation. This will impact on all existing features that contribute to natural character. The scale of these works, and RMA policy context relevant to natural character, brings a focus on design for restoration and enhancement rather than mitigation or return to the status quo.

166. Design measures set as outcomes and opportunities to restore natural character in the ULDF relevant to this sector, include:

    i. widening and deepening of the active channel (to achieve flood protection), which also ensures naturalised water movement with braided patterns retained including constructed beaches, pools and riffles;

    ii. provision for a flexible edge to the active channel, with plants used to protect the edge, rather than use of rock lining and/or groynes which would increase the dominance of built forms, compared to the existing environment;

    iii. design and management strategies to restore and enhance terrestrial, riparian and aquatic habitats, including design to manage disturbance by people and dogs on selected beaches (where the backs of the beaches are planted – the beaches can only be accessed by water). Reduced access to some beaches increases the potential for these areas to be used by bird species;

    iv. integrating greater areas of indigenous planting in the lower berm at construction completion and, through adaptive management, reducing or removing the willows over time. This may require the use of some rock groynes in targeted locations to improve establishment rates, however, far less than if there was an approach to use only indigenous planting from the outset;

    v. detailed design opportunities to naturalise the design of any rock groynes, if required (in future adaptive management regimes), and the constructed beaches;

    vi. measures to increase visual and physical access through to the river edge including experience of pool, beach and riffle environs and to vantage points where sweeps of the reach are visible;

    vii. proposed simplified design palette to enhance experience of a naturalised River Landscape with reduced built forms (compared to Sector 2); and

    viii. integration of cultural expression within the overall articulation of spaces and path network, to heighten the experience of the River Landscape and past and present mana whenua connections. This includes the proposed palette of indigenous plants which are to include species that are valued as mahinga, resources. Outcomes set for detailed design to include opportunities for interpretation of the Maraenuku Pā site environs, further contribute to natural character, where they bring a focus on users developing a greater understanding of connections to, and the physical and habitat characteristics of the river.

167. Matters that could potentially detract from natural character restoration gains relate to the:

    i. future management required for active channel works including the interface of operating machinery with members of the public along the path network and in beach areas. The provision of clear, safe working areas and separated or screened stockpile areas will ensure that the restoration measures have the greatest impact;

ii. extent of naturalised indigenous planting that can be achieved at the outset and the way in which this will be perceived from the path network and the river. For example, as set by the intended outcomes and as illustrated in the ULDF, the lower berm flood protection planting is to include a complete undercover planting of primary indigenous species such as harakeke and pukio and rows of primary and successional tree species such as mahoe and kahikatea. An undercover of grass would detract from natural character benefits; and

iii. failure of the commitment to an indigenous flood protection solution through adaptive management, such that the vegetation is not allowed to revert (through successive replanting) back to willows. That is, over time and in perpetuity, willow trees will be successively phased out, as the dominant cover. It is understood that willows may be needed as an interim measure in particular locations as part of the immediate response and medium-term flood protection, where the only other alternative would be to use rock lining (which would have greater adverse natural character effects).

168. In summary, the outcomes sought, will establish a naturalised River Landscape with enhanced natural character compared to the status quo. The design of the active channel will provide for greater variation in water movement and natural character gains are ensured by a range of other design elements. Measures to ensure long term operational requirements can be integrated to reduce their perceived dominance and the intended indigenous planting for flood protection and adaptive management, to limit the use of willows long term, are key to natural character restoration and enhancement. Overall, with these measures in place, I assess that the Project will establish **moderate natural character benefits** in this sector and these positive effects would increase where there was greater certainty of ongoing transition to indigenous cover. Effects on natural character during construction are addressed in the next section of this report.

7.1.5 Public access

169. The Project will deliver much improved access, to and along Te Awa Kairangi in Sector 1 through:

i. the proposed path network, including enhanced widths, accessible routes, gathering spaces throughout the River Landscape and on edges of the active channel with continued beach access;

ii. pedestrian and cycle priority, achieved by rationalising public car park areas and maintenance vehicle routes; and

iii. planting for improved visual access to the active channel including the retained Belmont wetland, opportunities for naturalised watercourse outlets (creating visual breaks through the flood protection planting) and the use of varied height indigenous species to the edges of the active channel, which provides greater visual permeability.

7.1.6 Sector 1 summary and conclusion

170. The Project will establish a naturalised River Landscape with integrated cultural expression and improved amenity.

171. Post-construction and given time to establish, the Project will have positive effects on the area as follows:

i. **Natural landscape** effects will be **moderate-low** positive due to the way in which the design integrates further naturalised features in the active channel and on the lower berm.

ii. **Urban landscape** effects will be **moderate positive** due to enhanced user experience including opportunities for cultural expression.

iii. **Visual amenity** will be **moderate-high positive** due to enhanced quality of the materials used in the River Landscape and the use of varied indigenous planting, including flowering species and wetland areas with more open views to the water.

iv. **Natural character** effects will be **moderate positive** due to the proposed active channel and lower berm works.

v. **Public access** along and to the river will be enhanced. The existing connections from the community are retained, and there is improved visual and physical access to the active channel.

172. The balance of **landscape, visual and natural character effects in Sector 1** will be **moderate and positive.** The Project will integrate further naturalised features and provide the opportunity to better connect the community with the river and contribute to a wider network of improved cycling and walking connections supporting the urban landscape. Measures integrated to restore natural character and establish a quality River Landscape experience that integrates cultural expression are consistent with the overall vision for the Project and the Korowai narrative and kaitiaki principles.

7.2 Sector 2 - Mills Street to Ewen Bridge

173. The Project will have both adverse and positive effects on the area.

7.2.1 Natural landscape

174. The natural landscape of this sector comprises the existing naturalised (flood impacted) landforms on the active channel, although the river is much more confined in this section and less braided than in the upper reach and the existing edges feature rock lining. Vegetation patterns feature flood protection willows and a minor pattern of recently planted indigenous species near the Ewen Bridge.

175. Habitat matters are addressed in detail in the Freshwater and Terrestrial Ecology Assessments (refer to Technical Assessments No. 6 and No. 7). These reports note three features which are relevant to the assessment of natural landscape matters. This includes the black shag colony near the existing Melling Bridge, vegetation patterns including indigenous notable trees, as described above, and the regenerating mixed broad leaved forest and scrub over the western escarpment near Harbour View Drive and the open tributary in that location (which will be piped over an additional 25m).

176. Landforms in existing River Landscape of this reach are highly modified including limited riffles within the active channel. Sections of the active channel edge are rock lined, large areas of the lower berm on the TLB are occupied by car parking and the interface with the city streets features retaining wall structures from Fraser St to Melling Bridge.

177. This minor pattern of naturalised features in the River Landscape will be removed during construction. The construction of the interchange works will require earthworks and vegetation removal along the edge of SH2, which will have an impact of the escarpment landform and the habitats it supports along with 3 notable trees (31# black beech, #33 silver fir and #34 pohutukawa). There will be works along other roads where notable trees are located (where the kerb lines will remain unchanged).

178. As relevant to the natural landscape, design measures integrated and set as intended outcomes in the ULDF will:

i. reinstate a wider active channel (5-10m greater than the existing) with constructed gravel beaches, although there will be greater areas of rock lining than along the existing edge;

ii. in widening the stop banks, avoid the use of high retaining walls to street and city edge. There will be a number of walls, as set out in the project description, used to limit further changes to properties and local roads, however, these will be generally no more than 1m in height where these face the city and over relatively short distances (the longest being along Marsden St which is approximately 150m). There will be a retaining wall along the river edge of the Harvey Norman building that is approximately 170m long with a maximum height of 3m;

iii. include opportunities for biodiversity mahinga gardens to be established (for example, on the TLB near Mills Street) and naturalised stream/stormwater outlets (upstream of the new vehicle bridge);

iv. integrate indigenous planting within the lower and upper berm including on sloped banks between the rock lined sections of the active edge channel;

v. over time, and as confirmed by the Freshwater and Terrestrial Ecologist assessment (refer to Technical Assessments No. 6 and No. 7), enhance terrestrial and aquatic habitats associated with the changes in the River Landscape. These positive effects may, however, be reduced as a result of additional recreation facilities, where this is intended to increase user numbers which may then increase habitat disturbance;

vi. use vertical and steeply battered retaining walls along the western edge of SH2 and to construct the extension of Tirohanga Road and new access driveways (to Lochaber and Casa Loma historic homes), to limit earthworks and modification of the escarpment landform and vegetation patterns;

vii. include indigenous planting in naturalised groupings over the fill and batter banks of the interchange, and through the use of 'green' mechanically stabilised earth, MSE, type retaining systems for all retaining walls above SH2. This could include the opportunity to integrate large grade black beech species in fill batter areas above the (this would provide some mitigation for the loss of the notable beech tree);

179. In summary, the design has provided for additional naturalised features in the River Landscape, however, it also removes existing unmodified natural landforms and vegetation along SH2 and reduces the daylighted length of the Habour View Drive stream. Given time for establishment, the proposed planting will mitigate for some of these effects, however there will be a permanent **moderate-high adverse** effect on the natural landscape features around the interchange including the removal of two large notable indigenous trees and a culverted watercourse. Overall, considering all components of the works, the effects on the natural landscape in this Sector will be **moderate-low adverse**.

7.2.2 Urban landscape

180. The Project will provide an enhanced experience and amenities to further activate the River Landscape and improvements in the city-community-river connections and to the multimodal transport patterns that contribute to the urban fabric of the city and district. Design measures integrated and set as outcomes in the ULDF will continue the integrated approach to cultural expression marked by specific elements such as the pedestrian and cycle bridge and sequence of ūranga at the edges of the river. The proposal is for a significant shift from a vehicle dominated River Landscape and city edge environment to one that supports varied informal recreation activities, future development

opportunities that front face the river and pedestrian and cycle priority. Specifically, urban landscape matters are addressed by:

i. the proposed new vehicular bridge connection at Queens Drive which provides a logical connection into the city's commercial area;

ii. the proposed cycle and pedestrian bridge, including its relationship with Margaret Street, the new train station and closure of Daly Street;

iii. the provision of logical connections to and from the river including through the Laings Road extension, Andrew Ave and Margaret Street and integrating improved accessibility. The removal of buildings river side at Marsden and Pharazyn Streets also helps reduce existing severance from the river for the remaining community (noting there will be a change in character due to the removal of residential properties in the Marsden St area and some changes to the use of the roading network);

iv. the proposed network of shared and segregated paths that link with these community and city entry/exit points and to the interchange connections. This framework provides numerous varied journeys and commuting cyclist improvements, including the connection via Pharazyn Street and along the edge of the rail corridor to the recently opened Pito-One to Normandale cycle path;

v. the combination of the above measures, which will reduce vehicle dominance, providing an enhanced streetscape and experience of the River Landscape. This includes reducing the car parking area on the TLB, signalising intersections, provision of on road cycle paths and the closure of Daly Street;

vi. opportunities for future urban regeneration to the edges of the river, on the TLB along Daly St is enabled by the Project. Measures to ensure diverse and quality urban development scenarios are prioritised in the ULDF outcomes including consideration of temporary uses (beyond the construction phase) that ensure activation and pedestrian priority. Large-scale open air permanent or long term car parking areas, close to the city edge of the River Landscape (in the Daly St area) would undermine the proposed pedestrian priority, quality of streetscape and aspirations to realise a new city-river-edge identity;

vii. measures used to ensure good levels of amenity and safety are prioritised as outcomes in the ULDF, as illustrated in the proposed design. This includes opportunities for informal recreation activities, market spaces, multifunctional courts and a new skatepark (to replace the isolated low amenity existing facility near the Melling Station). Enhanced river edge access via ūranga and stepped beach access is continued through this reach, along with further paved gathering spaces on the lower and upper berms and larger scaled bleacher type seating, consistent with a more urban, central city waterfront public space while not precluding low key informal activities such as swimming off the city edge beaches and kayaking along the river;

viii. the pattern of indigenous planting is modified through this sector to include lower height species and groves of specimen trees. This includes planting to support varied scaled gathering spaces and activities in the River Landscape and to establish new and enhanced connections with the commercial and residential areas beyond this. While more formal in approach, and excluding planting for flood protection, this is consistent with the overall palette and anticipated outcomes to show case and connect with natural patterns used in Sector 1. Use of indigenous planting in formal public spaces adds further to the character and quality of the urban landscape, as being connected to Te Awa Kairangi; of an urban landscape that has a unique identity and connection to its context;

ix. a reduction of car parking spaces within the River Landscape and as required to provide additional cycle paths in the local road network. This further reduces vehicle dominance and a shift to a multimodal transport node, combined with the new carpark proposed at the train station and the network of paths within the River Landscape and proposed connections across the river and SH2. This network will include two underpass connections through the proposed on and off ramps for a cycle path to and from the station. Car-park configuration, path alignment through confined areas and in close proximity to retaining walls and underpass design will need to be a focus of detailed design to ensure CPTED principles and best practice urban design are well integrated;

x. principles to establish an integrated palette for built elements, as a coherent whānau of structures with simple lines and forms. This includes the sinuous folded form of the proposed pedestrian and cycle bridge and the simpler structure of the vehicle bridge, both integrating architectural and cultural expression. In line with the ULDF anticipated outcomes, the bridge structures provide for an important opportunity to establish landmark features for the Project (as illustrated in the photo simulations in **Appendix C**) that contribute strongly to the korowai narrative and the quality of the urban landscape including opportunities for naming and interpretation. Given their prominent locations and anticipated daily use, they are key structures that will contribute to the experience and identity of the city and River Landscape.

xi. a similar understated architectural design for the new train station is set by the outcomes anticipated in the ULDF. This contributes further to the shift in how residents and visitors will experience the city and the River Landscape. The proposed station precinct is located in close proximity to the new bridges within a new carpark that integrates pedestrian and cycle priority and indigenous planting, including larger grade specimen trees. In contrast to the serviceable isolated park and ride experience of the current station, this provides a well-connected node in the new multimode network proposed by the Project with a quality of design that is in keeping with a city waterfront. The station provides a further opportunity for cultural expression to be investigated in the future, including naming to support the korowai narrative. The proposed design does not preclude the opportunity for the existing station building at Melling to be integrated within the new station, should ongoing investigation conclude this is appropriate in heritage and functional terms (refer to the Archaeology and Heritage Assessment: Technical Assessment No. 12).

xii. ULDF principles addressing the retaining walls along the edges of flood banks are to ensure these are well integrated with the River Landscape and palette of materials used for the step and ramp accessways. In contrast to the serviceable finish and scale of the existing retaining walls (for example along Daly St where the wall is over 2m in height) this approach will reduce severance and establish a city edge and connections that are fit for an urban civic landscape;

xiii. outcomes set that address the design and finish of the retaining walls required along SH2 and to support the interchange off and on ramps, Tirohanga Road extension and new access driveways that are intended to reduce visual dominance and ensure coherency with the overall approach for larger scaled structures of the Project. A simple quality of finish and articulation is anticipated for the concrete faced vertical retaining walls directly adjacent to the highway and where the bridge structure lands in the city, at Queens Drive. This includes, as set out in the ULDF outcomes, the integration of a TL5 barrier to the base of the wall alongside the highway and the extension of the retaining wall panels above this, to screen or integrate vehicle barriers required along the on and off ramps. A simple finish will mean these

structures do not compete with the cultural expression integrated on the bridge elements. Such an approach will also limit adverse visual amenity and natural character effects that can be associated with overly patterned treatments (including those that mimic natural stone) and the layering of different types of vehicle barriers above the highway which results in visual clutter;

xiv. retaining walls required to the west, above Tirohanga Rd (that will establish the access driveways to Lochaber House (125 Western Hutt Rd) and Casa Loma House (760 Western Hutt Road) are proposed to combine vertical concrete faced walls and sloped embankments that can be revegetated (possibly through the use of 'green' MSE walls; Terramesh type systems) and there is scope to further limit the use of concrete facing in these locations in detailed design. In addition, naturalised planting will be established on the batter slopes (that tie the walls and interchange ramps together). Such an approach will help integrate these structures into the existing urban fabric; where concrete faced walls are limited to the immediate edges of the highway and ramp edges (are associated with the transport corridor and urban city context) and there are revegetated retaining walls above this and to establish access driveways (which over time blend with and are associated with the escarpment). Further, by limiting concrete facing to the edges of the escarpment, this will reduce the dominance and the potential for adverse visual amenity effects of these structures (see below, assessment of visual amenity) noting that the use of exposed rock nails on naturally faced cuts should be avoided, as this would limit the mitigating effects of any 'green' wall option;

xv. measures used to reconfigure the streetscapes along Margaret Street, Andrews Ave and Laings Road which reinforce the shift to pedestrian priority and an enhanced streetscape quality including wider footpaths and street tree species that is in keeping with activated commercial areas in other parts of Aotearoa;

xvi. realignment of Marsden St, and the removal of buildings required to achieve this, provide the opportunity for an improved urban landscape around the Wesleyan Methodist cemetery.

xvii. principles to ensure CPTED are carried through this sector with the addition of a lighting strategy for paths and spaces to appropriate lighting levels. Feature lighting is proposed to add further visual interest and increase lighting levels over prioritised routes such as the pedestrian bridge; and

xviii. principles to establish improved access and accessibility to and from the river and the surrounding commercial and residential communities. In particular, to replace the serviceable steps and ramps off Daly Street with elements that contribute to a quality streetscape environment. As in Sector 1, the integrated palette for built elements, and outcomes sought for the quality of finish and articulation, will add further to amenity and positive effects on the urban landscape.

181. Together these features provide an urban landscape of a very different and much-improved quality and character to that of the existing. While this environment will include additional built elements, it provides significant opportunities that contribute to the narrative of Te Awa Kairangi and ongoing mana whenua connections. The korowai narrative, as intended to be developed in more detail in further stages of the Project, will be further highlighted in this sector using both typical details and in the confirmed design of the bridge structures.

182. The potential for adverse urban landscape effects relates to particular project components. On the TRB there will be a loss of some early 1900s residential homes that contribute to the character of the community in the area. These will be replaced by the

grassed embankment of the new stop banks and will include a low retaining wall (opposite the cemetery and commercial properties retained to the western edge of Marsden St). On the other hand, the new stop banks will also mean that residents have improved access to the River Landscape, where the embankment slope can be better accessed by able pedestrians and there is a new accessible route proposed at the corner of Marsden and Pharazyn Streets along with amenity planting.

183. The Project requires the removal of all buildings to the river side of Pharazyn Street to make way for the new stop banks and flood protection with a new pedestrian and cycle bridge constructed that links the proposed train station. In terms of urban landscape effects these changes are positive. They mitigate for the loss of the older residential homes in this area, and together establish greater connectivity and improved amenity for the residential neighbourhood.

184. Works to create the interchange development have the potential to generate adverse urban landscape effects, as it will introduce large scale new structures into this environment (that contrast markedly with the existing character of the urban landscape) and requires the removal of the existing train station. On the other hand, large scale interchanges are common in the broader landscape, including the recently constructed SH58 interchange, and the connectivity gains, for the local community and the region, as relevant to urban landscape matters, will be significant. There are detailed design measures relating to the final form and finish of the interchange structures and CPTED principles, as set as outcomes in the ULDF, that will be important to ensure these elements are well integrated into this environment. In particular, retaining walls and embankment facings will need to form part of a coherent palette of structures for the Project. The use of concrete facing should be limited and have a simple form and finish to ensure the interchange structures do not dominate over the proposed cultural expression elements on the bridges. As noted above, ‘green’ walls should be used and revegetated where possible above Tirohanga Rd and River Landscape edge, and avoid the use of rock/soil nails (so that the natural landscape is as prominent as possible).

185. Overfilling should be used to tie embankments into natural contours and the stop bank structures, where this can avoid further modification of the escarpment landform, and to avoid hollows between the stop bank crest and the embankments which are unsafe. Where possible, the extent and heights of the vertical retaining walls should be limited, including through the use of sloped planted embankments above reduced height walls to the edges of the highway.

186. Cycle and pedestrian connections through the interchange are to prioritise safety through the use of CPTED principles. for example, where there is a requirement for cycle underpass connections (currently shown under both the on and off ramps to the river edge of the highway). Detailed design measures will need to ensure good sightlines, widths, lighting, and design detailing (in keeping with the overall palette of built materials). Opportunities to extend the 2-way cycleway alongside the railway corridor as proposed in the design would add further logic to the underpass connections in terms of urban landscape patterns. Best practice urban design and CPTED principles will also apply to the refinement of the car park design in the River Landscape, to investigate opportunities to remove parking spaces directly under the new vehicle bridge. Despite the bridge height above at approximately 8m, open areas of paving and/or lawn and low planting would be recommended in this area to improve visual amenity and sight lines.

187. On the TLB the potential for adverse urban landscape effects is associated with the interface of the new stop banks with existing buildings along Daly Street and the ramps

required where the new bridge lands along Queens Drive and its intersection with Rutherford Street.

188. Along Daly Street, much of these potential adverse effects have been mitigated by the proposal to future proof options for urban regeneration, including possible removal of existing low-level poor condition buildings and options for internal new-build access over the stop banks. Technical design of the stop banks integrates structural measures to allow the option for new buildings (on the potential urban regeneration sites) to be set into the stop bank, so that they could have a direct Level 1 connection out on to the crest. This Level 1 area could be integrated with a city edge ūranga, or linear gathering space (promenade), as shown in the Indicative Landscape Plan. This structural 'enabling' works would provide the potential for commercial activities such as cafes and bars and, or residential properties to have 'walk out' access to the River Landscape. However, until such time as this is realised, there may be temporary uses proposed for the urban regeneration sites; as will be resolved through detailed design. The ULDF sets outcomes to ensure that this will contribute to the quality of the streetscape and activation in these areas. At such time there is a plan for new build (urban regeneration) on these sites this will need to be progressed through best practice urban design evaluation and to demonstrate consideration of the ULMP. These measures will ensure potential adverse urban landscape effects have been appropriately mitigated.

189. In contrast, the proposed shift to a two way access along Dudley St, which I understand is still under investigation, is not considered to promote best practice urban design. A shift to a two way typology would have an adverse effect on pedestrian priority and character and, by establishing a through route to Rutherford St, is unlikely to support aspirations for conversion to residential development. Enhanced traffic volumes along High St, that might result from Dudley St being retained as one way, is not seen as a disadvantage in terms of urban design given that there are alternative routes provided to the east for genuine through traffic.

190. Retaining walls required for the TLB tie in of the new vehicle bridge also have the potential to generate adverse urban landscape effects. Effects on properties in this area are addressed in the Social Impact and Recreation Assessment report. In terms of urban landscape matters the main potential issues to address include the interface of the bridge ramps with the stop banks and other required retaining walls in this area such that CPTED matters are addressed. For example, it will be important, in the detailed design stage of the Project, to resolve and remove any dips between the crest and the ramp embankments (as discussed above for the TRB).

191. Detailed design for the retaining walls required to the edges of the private properties in the Rutherford St area, impacted by bridge embankments, will also be important to consider. Given their scale and prominent location, these structures will contribute to the character of this urban landscape and be perceived as part of the built palette for the Project. For example, as a more coherent approach, detailed design could consider a retaining wall edge (appropriately detailed) or an earth embankment to all private properties rather than the combined vertical walls and planted embankments currently shown. I understand that a design for a consistent approach is being progressed in consultation with the property owners.

192. In summary, the Project will provide a significant uplift in the quality and character of the urban landscape in this sector, as important waterfront environment for surrounding communities and multimodal transport node. The works proposed will start to transform the way that the city interacts with the River and in particular set the scene for a more front facing relationship with the commercial centre along the TLB. Compared to the

existing environment, the Project works including landmark structures and an integrated korowai narrative, there will be **high urban landscape** benefits associated with the River Landscape works, **moderate - high** urban landscape positive effects associated with the City-Community Connections and **moderate** urban landscape benefits associated with the transport works. While there is the potential for some adverse urban landscape effects associated with these works, these are able to be mitigated appropriately including by additional measures described in Section 9 below.

7.2.3 Visual amenity

193. The Project will transform the visual characteristics of the River Landscape, surrounding commercial and residential communities and the Melling SH2 environment. It will result in marked changes to the nature and extent of visual access to the active channel which contributes to visual amenity.

194. The following photo-simulations in **Appendix** C illustrate views of the Project in the Sector 2 - Lower Reach (note, the photo-simulations and context photographs are numbered sequentially from Kennedy Good Bridge to Ewen Bridge along the TLB and then the TRB).

i. **Viewpoint 7:** A view from State Highway 2, Block Rd and Tirohanga Road intersection looking south west towards the proposed interchange.

ii. **Viewpoint 9:** A view from the existing Melling Bridge looking south west towards the Lower Hutt CBD and the proposed new vehicle and pedestrian-cycle bridge.

iii. **Viewpoint 23:** A view from Rutherford St looking north towards the proposed vehicle bridge connection at Queens Drive.

iv. **Viewpoint 25:** A view from the existing stop banks at the end of Daly St- Margaret St looking south west towards the proposed cycle-pedestrian bridge.

195. Context photographs **Viewpoint 8, 10-17** (along the TRB) and **20-22, 24** and **26-34** (along the TLB) show views of Sector 2, the lower reach. **Viewpoints 11, 14 and 17** represent elevated views of the Project site from streets along the Parerahu hills (Belmont suburb) and **Viewpoint 34** shows a representative view downstream from the Ewen Bridge.

196. Potential adverse and positive visual amenity effects are relevant to:

v. cyclists and pedestrians that are using the river, paths and activities within the River Landscape;

vi. cyclists and pedestrians that are moving to and from the city via the new connection points and upgraded streetscapes, including those using the new pedestrian - cycle bridge to and from the train station;

vii. cyclists and pedestrians that are using the new transport connections, moving on and off SH2, across the new vehicular bridge and who are travelling along the local roads that will be changed by the Project;

viii. motorists travelling along SH2 and the existing and proposed vehicle bridge connections;

ix. commercial properties with a close and open outlook towards the river including from multi-level buildings such as from the Chamber of Commerce building and No2 -26 Rutherford St;

x. motorists travelling along the local road network within the proposed designation boundary and immediate surrounds;

xi. residential properties with a close and open outlook to the River Landscape off Mills Street and Connolly St No1-19;

xii. residential properties with a close and open outlook toward the River Landscape off Marsden Street; and

xiii. residential properties with an open, more distant view of the proposed works, primarily from the western hills and suburbs.

197. The following paragraphs describe the effects for these different viewing audiences:

i. cyclists and pedestrians within the River Landscape will experience a diverse landscape with greatly enhanced features contributing to visual interest and quality. The positive visual amenity benefits will relate to both the sequence of experiences that are curated through the path network, the varied planting approach show casing indigenous species, improved visual and physical access to the river and the articulation of specific gathering spaces such as the ūranga and upper linear promenade. Outcomes set in the ULDF for varied play spaces and the skatepark will add to this experience along with specific features integrated to highlight the Korowai narrative, through the forms and large-scale artwork on the bridge structures and opportunities to express the Cultural Design Strategy in paving and seating etc (as will be confirmed in detailed design). Integration of a smaller scaled carpark with planting breaking up the expanse of paving and improved lighting fixtures and seating elements are further contributors to visual quality and ensuring there is refinement to review the design based on CPTED principles (as noted above – particularly where there is a requirement to locate car parks under the vehicle bridge and cycle paths set to the base of high retaining walls) there will be significant positive effects for the users of the new River Landscape.

ii. cyclists and pedestrians will connect with the River Landscape on the TLB through a network of improved streetscapes including the proposed non-vehicular connection at the end of the extended Laings Rd with stepped access, the ramps and steps off the end of Andrews Ave, Margaret St (to the new pedestrian and vehicle bridge) and Mills St where further planting is proposed, and sloped paths off Rutherford St. On the TRB access routes are proposed in amended and additional locations, where Pharazyn St intersects with Marsden St and via the proposed signalised crossing from the train station or the underpass connections from this area to the River Landscape, north of the new vehicle bridge. While the stop banks in this sector have been increased in height by 0.5m to 1.5m the edges to this landscape are generally sloped or are faced by low vertical retaining walls (less than 5m). Together with the proposed design palette, as set in the ULDF outcomes, these measures combine to mitigate for potential adverse visual amenity effects due to dominance and the integration of large-scale structures for the purpose of flood protection. While sloped to the back of the buildings on the TLB and the edges of Marsden and Pharazyn St on the TRB, the design proposed provides improved visual access and a positive visual relationship to the River Landscape including where planting ‘spills over’ the banks into the city and is carried through the streetscape environment and the gentler slopes of the stop banks provide can also be used to gain a vantage point. Further outcomes set in the ULDF provide for a significant uplift in design quality of both the step and ramp access areas and streetscapes and of the pedestrian and cycle bridge, a further landmark and key feature intended to express the Korowai narrative. While there is some potential for adverse visual amenity effects should the temporary car park areas, required for construction, be retained and as a result of the possible conversion of Dudley St to a 2-way connection (which, if required, undermines pedestrian priority),

overall, the visual amenity effects of cycle and pedestrian 'arrival and departure' experience will be significantly positive. The proposed design and relevant outcomes set in the ULDF will provide for improved streetscapes, legibility of connection points, quality of ramp and stair access ways and visual integration with the city and nearby neighbourhoods. Possible future urban regeneration sites as provided for in the proposed designation are likely to increase these positive effects where they provide a high-quality built form to the edge of the upper ūranga and promenade on the TLB and where the detailed proposals are evaluated using best practice urban design principles and are consistent with the ULMP.

iii. cyclists and pedestrians will connect into the River Landscape streetscapes via SH2 (cyclists only), the new train station, vehicle bridge (the new pedestrian and cycle bridge is addressed above) and local roads connections modified by the Project. As an urban landscape matter these changes will offer a new and multimodal prioritised way of moving around the city. Potential adverse and positive visual amenity effects will relate to how these connections are detailed and included in the overall palette to improve the quality of the urban landscape. For example, detailed design will need to focus on specific design measures to avoid adverse effects that could result from the retaining walls associated with the Queens Drive – Rutherford St area and their interface with any temporary and permanent uses for the future development sites. Specific measures outlined in the ULDF outcomes, to consider further integration of the korowai narrative in the final look and feel of the station and the vehicle bridge will make an important contribution to visual amenity and, overall, the effects for this user group will be high and positive compared to the existing environment.

iv. motorists travelling along SH2, through the interchange and over proposed vehicle bridge connections will experience the proposed works over a relatively short time and likely proportion of their journey. However, the large-scale nature of the structures proposed, and focus required to navigate the interchange options will increase the potential for adverse visual amenity effects, as will the removal of existing features that contribute visual amenity; the views into the existing River Landscape open space areas, the naturalised vegetation including notable trees, the escarpment landforms and the landmark Melling train station. Measures integrated to mitigate for these adverse effects (noted above, as relevant to natural and urban landscape matters), relate to the proposed approach to face retaining walls and embankment planting and the inclusion of simple articulated forms (and reference to the korowai narrative) while reducing visual clutter and dominance. Overall, the potential adverse visual amenity effects are assessed as low for this audience and detailed design refinement, to reduce vertical concrete facing to retaining walls above Tirohanga with an effective 'green' wall solution, will reduce these effects further.

v. motorists travelling along the local road network within the proposed designation boundary and immediate surrounds will experience low visual amenity benefits associated with improved legibility and replacement of now dated and sub- standard roading elements;

vi. commercial properties with a close and open outlook towards the river including from multi-level buildings such as from the Chamber of Commerce building and No2 -26 Rutherford St will experience significant positive visual amenity effects post construction. Currently these properties look out on a car dominated landscape with willows blocking views of the river for much of the year. This environment will be transformed into a civic urban River Landscape by the proposed works with the facing sloped embankments of the stop banks, and low retaining walls, limiting any adverse effects that might result from the increase in height and proximity to property

boundaries. Elevated properties in the streets surrounding (including residential apartments), that have open views towards the river, will also be able to appreciate the changes in their visual environment. Without knowing the details of the proposed development on the sites to be designated, this may further enclose views for some properties that are located directly behind (where the existing buildings of a lower height). Such matters, are, however, best assessed in response to a confirmed development proposal for these areas. On the other hand there will be other properties which benefit from the proposed works in the River Landscape and nearby streetscapes, which will result in a marked uplift in visual amenity;

vii. residential properties with a close and open outlook to the River Landscape off Mills Street and Connolly St No1-19 will be impacted by the increase in height of the stop bank (approximately 1m) sloped back to the property boundaries which were previously located behind another house. The properties most affected by this change will be at the end of the street No.'s 39a and 54a, although 39a will be offset from the stop banks by the maintenance accessway that will be retained by GWRC to the rear lot (where the 2 storey townhouses will be removed). Adverse visual amenity effects resulting from these changes relate to potential privacy effects, where the properties are now adjoined by open space and the loss of visual diversity; an outlook now featuring a sloped embankment rather than the borrowed views of neighbours' gardens. Improvements to the surrounding streetscape and access to the River Landscape mitigate for these adverse effects in part, that is, there will be an improvement to the residents immediate surrounding environment and the proposed slope of the stop bank will ensure the proposed path is separated from the property boundary by approximately 20m. Overall, the adverse effects in this area will relate to a small number of properties that now have an open outlook towards the new stop bank and experience low-moderate adverse privacy effects. For other properties along Connolly St already view the stop bank, the effects will be, on balance neutral or very low positive. While increased in height by approximately 1m, the path along the crest will be located at a greater distance from their back boundary reducing the potential for overlooking that currently exists.

viii. residential properties with a close and open outlook toward the River Landscape off Marsden Street including those properties along Williams Grove will have their near neighbourhood transformed by the removal of buildings along the river side of the street. The potential for adverse visual amenity effects due to this change relates to this change in character and the architectural qualities of the existing houses and their amenity gardens. Traffic modelling does not predict a marked change in traffic flows in this area (if anything a reduction in the use of Marsden St in preference for Pharazyn St) so, in that sense, residential character will be maintained. Further, the proposed changes in the immediate surrounds include a significant visual amenity uplift (positive effect), including the new station and areas of low planting, to the new River Landscape access point at the corner of Pharazyn St (which will form the immediate outlook for some properties) and on the banks opposite the cemetery with a gentle sloped bank in between. Overall, while the proposal results in a change to outlook, the potential for adverse visual amenity effects is limited, low, at worst.

ix. residential properties with an open, more distant view of the proposed works, primarily from the western hills and suburbs. Effects for this viewing audience will be similar to that in Sector 1 and positive. While the proposed planting approach will remove the existing 'wall of willows' that features in views of the river from these elevated locations, specimen trees are integrated that will visually distinguish the river and

there will be the potential for greater visibility of the water surface (as there is currently upstream of Ewen Bridge).

198. In summary, and while the effects will vary for viewing audiences, the Project will improve visual amenity. Overall, there will be **high positive visual amenity** gains resulting from the works in this sector, when compared to the existing environment. The design proposal will lift the quality and diversity of the built environment, integrate additional naturalised features, and mitigate for effects on the escarpment landform, vegetation and stream. It will enhance visual access to the River Landscape for nearby communities and users of the landscape including a new pedestrian bridge over the river. Design outcomes set out in the ULDF will limit the potential loss of privacy and visual access to the river for residents close to the new stop banks, off Mills Street and, overall, the visual environment for Marsden St residential environs will be improved. Elevated residential properties on the Pareraho Hills will also benefit. The landmark bridges of the Project will be able to be appreciated by some households and there will be general positive visual amenity effects due the way the landscape will be articulated including more varied and activated gathering spaces and additional areas of mass planting with flowering species likely visible at a distance. The potential for adverse visual amenity effects associated with the height of the stop banks and its interface with the city centre is able to be mitigated by the design outcomes set out in the ULDF. Similarly, there is opportunity to further refine the final form and finish of the large-scale retaining walls required for the Transportation connection works such that their adverse effects will be mitigated.

7.2.4 Effects on natural character

199. The Project will require significant earthworks and vegetation removal to establish a newly aligned, deepened and widened active channel, lower and upper berm and this will remove all existing vegetation in the River Landscape. Works associated with the SH2 interchange will require modification to the natural escarpment landform and the removal of regenerating vegetation and a further section of the Harbour View Drive stream to be culverted. As in Sector 1, the scale of these works, and RMA policy context relevant to natural character, brings a focus on design for restoration and enhancement rather than mitigation or return to the status quo.

200. Design measures integrated in the proposed design and set as outcomes to restore natural character in the ULDF are also relevant to this Sector, although less prominent given its urban context. In particular:

i. the active channel has been widened and deepened in this sector (although not to the same extent as Sector 1) and in general a sloped stop bank design has been used with retaining walls to the edges typically limited to 1m in height (where they are currently over 2.5m at Daly Street near the intersection with Margaret Street);

ii. the extent of rock lining along this reach will be increased compared to Sector 1; the willows will be removed and embankments to the active channel edge will integrate indigenous species;

iii. the design provides for the removal of a significant area of car parking in favour of public gathering spaces with areas of planting (all indigenous species) and a built materials palette to enhance experience of the River Landscape;

iv. the design provides for greatly improved visual and physical access to the active river channel including new vantage points from the pedestrian and cycle bridge, as a result of willows being removed and along the new linear ūranga (promenade) that possible future urban regeneration can integrate with;

v. the bridge structures are designed to include extended spans and simple sinuous forms limiting the adverse effects on perceptions of natural character with cultural expression proposed linking to the korowai narrative and wider natural landscape;

vi. design and management strategies to enhance freshwater and terrestrial habitats are proposed, including limiting public access to some beach areas (for example, on the TRB near Ewen Bridge). Noting that increased disturbance is a likely consequence of activating the River Landscape, which is partly addressed by these measures.

vii. the design proposed for steps and ramps to access the River Landscape is less industrial or brutal in its character compared to the existing retaining walls, steps, and ramps. This includes the opportunity for indigenous planting to spill up and over the banks into the streetscapes. Both will increase perceptions of natural character.

viii. similarly, the approach to limit the extent, height and dominance of the interchange retaining walls and ramp embankments will have an impact on the perceived balance of natural and built elements. These structures will be appreciated from the River Landscape, so while not on the margins of the River, they contribute to perceptions of natural character.

ix. an approach to integrate cultural expression, as set in the ULDF outcomes throughout the Project, will include clear references to the natural world and narrative of Te Ara Tupua.

201. In summary, the outcomes sought, as included in the proposed design and ULDF will enhance natural character. The active channel will feature greater variation in water movement and, although there will be additional structures in and on the edge of the river, natural character gains are ensured by their quality and articulation. Measures to ensure operational requirements can be integrated will also be important in this sector along with habitat management; to limit the effects of likely greater disturbance by people. Overall, the Project will establish **moderate-low natural character benefits** in this sector and these effects would increase once detailed design measures are confirmed.

7.2.5 Effects on public access

202. As a summary of the matters addressed above, the Project will deliver enhanced access to and along the river. While the stop bank heights have been increased, the connections to and from the surrounding communities are improved compared to the existing, are increased in number and are in more logical locations. The new pedestrian bridge and vehicle bridge proposed on the design and ULDF outcomes will provide new and enhanced vantage points as will the path network and sequence of ūranga. Overall, the effects on **public access** will be **high and positive**.

203. **The balance of landscape, visual and natural character effects in Sector 2 will be moderate-high and positive.** The Project will transform a car dominated River Landscape to a varied informal recreation resource and re connect the community with the river, including landmark architecturally designed bridges. Measures integrated to improve the connections to the city and residential communities set the stage for a more front facing, active relationship including future development opportunities. The proposed transport connections, network of paths and train station make an important shift to a multimodal node that will further encourage activation and has been an important steppingstone to positive development in other cities. The integrated cultural expression design and korowai narrative is central to these positive landscape effects and the overall vision for the Project and kaitiaki principles.

7.2.6 Overall summary of operational effects

204. In summary, on a seven-point scale, the effects of the proposal as guided by the outcomes and opportunities in the ULDF, are set out below in table below.

Table 2: Operational effects summary

	Sector 1 – upper reach	Sector 2 – lower reach
Natural landscape	moderate-low positive	moderate-low positive overall moderate -high adverse due to Transport connections
Urban landscape	moderate positive	high positive due to the River Landscape works moderate-high positive due to the City-River-Community Connections moderate positive due to Transport connections
Visual amenity	moderate-high positive overall	high positive overall range will include adverse effects for SH2 motorists, a small number of Mills St and Marsden St residences and in views of the Queens Drive surrounds
Natural character	moderate positive	moderate-low positive
Public access	moderate positive	high positive
Summative effects of permanent works once established	**moderate positive**	**moderate-high positive**

8 ASSESSMENT OF CONSTRUCTION LANDSCAPE AND VISUAL EFFECTS

205. Proposed construction methodology matters that are relevant to landscape, visual and natural character construction effects are analysed further in **Appendix B**. These effects relate to the constructions phase of the Project, over the indicative 4 year construction programme, and the staging approach proposed which limits the extent of works at any one time. As such, they are considered temporary effects.

8.1 Sector 1 - Kennedy Good Bridge to Mills Street

206. Effects on the natural landscape will be very high adverse in the disturbance reach and active stage, as all existing naturalised features will be removed. Measures put in place to reinstate naturalised features as quickly as possible, including constructed beaches and riffles and early implementation of planting will limit these effects, as is included in the proposed construction methodology.

207. Effects on the urban landscape relate mainly to the way in which public use is provided for and any changes to vehicle circulation that might be required. The proposed methodology includes measures to limit disruption, including avoiding conflict and to keep as much of the River Landscape and surrounding connections open. As such, these

effects will be, at worst, low-moderate adverse and limited in time and area in line with the staging plan.

208. Similarly, effects on visual amenity will be very high at the 'active face' of the construction where there will be earthworks, vegetation removal and large scale machinery. Staging will limit adverse visual amenity effects and, as proposed in the methodology, it will be important to ensure that rehabilitation measures are actioned quickly, for example, to establish planting as soon as possible.

209. Natural character effects in this reach are likely to be greater, as this reach has higher existing values. Once again staging and rapid rehabilitation will contribute to mitigation, including measures to reduce downstream sedimentation.

210. Overall, the **construction** effects in **Sector 1** for landscape, visual and natural character have the potential to be at least low to moderate adverse and, for natural landscape and natural character aspects of landscape, **very high adverse** at the active face; in the area impacted by the current stage of works. These effects can be mitigated by careful staging to limit the extent of the works and disruption to existing activities along with downstream river discoloration and potential habitat effects (a natural science matter) resulting from sedimentation. Further, early implementation of planting and reinstatement of safe access for the public will be key to the construction management. Key mitigation measures included in the proposed construction methodology (that relate to both sectors) include limited the disturbance reach to no more than 500m and construction within the River Landscape by bank, such that the opposite side remains accessible to the public.

8.2 Sector 2 - Mills Street to Ewen Bridge

211. Effects on the natural landscape in this sector will be very high adverse over the construction phase and where there are active works; all existing naturalised features will be removed.

212. Effects on the urban landscape have the potential to be high adverse. There are a number of residential communities and the main commercial centre in close proximity to the Project designation boundary. The proposal requires the removal of a significant number of houses and changes to local roads that will have an impact beyond the boundary. While the existing construction methodology considers logical staging and early implementation of features that will benefit the community, the Construction Environmental Management Plan will include a more detailed plan for minimising nuisance-loss of privacy and existing circulation patterns- as matters that are relevant to the amenity and an integrated urban landscape. These effects will be the greatest along the TLB for the commercial properties directly interfacing with the new stop banks and where several larger scaled buildings will be removed. The proposed provision for temporary car parking in the future development sites off Andrews Ave will provide mitigation for the loss of parking in the River Landscape during construction and this is positive where it is limited to a transitionary measure; not retained once the car park in the River Landscape is reinstated.

213. Similarly, there is potential for high and very high adverse visual amenity effects in the lower reach for the remaining Mills Street and Marsden Street community that will look out at the works and the commercial properties interfacing with the stop bank works.

214. Careful staging, disruption management and early implementation of useable sections of the River Landscape, including access to and from the city will be important to mitigate for these effects. For example, should it be possible to establish the Mills Road connection or Laings Road connection and ūranga near Ewen Bridge for public access early on in the

construction programme (or at another city edge location), this would mitigate adverse construction effects.

215. In summary, the effects **construction** in **Sector 2** are likely to be high and very high adverse for most aspects of landscape where there are active works, due to the proximity of surrounding commercial and residential properties. Careful staging and disruption management, as proposed will help manage these effects, along with early implementation of the permanent works such that they are mitigated overall to **moderate adverse** in Sector 1- the upper reach- and **moderate-high** in the Sector 2- the lower reach. Detailed plans to manage these effects including working closely with the local communities, are to be developed in future stages of the Project.

Table 3: Construction effects summary

	Sector 1 - upper reach ** immediate area effects*	Sector 2 - lower reach ** immediate area effects*
Natural Landscape	very high adverse *	very high adverse *
Urban Landscape	low adverse*	high adverse *
Visual Amenity	moderate-high adverse *	very high adverse *
Natural Character	very high adverse *	very high adverse *
Public access	high adverse *	high adverse *
Summative effects of construction overall, with proposed staging and mitigation	**moderate adverse**	**moderate-high adverse**

9 MEASURES TO AVOID, REMEDY OR MITIGATE ACTUAL OR POTENTIAL ADVERSE EFFECTS

216. The assessment of effects above is summative; including the design measures integrated into the proposal and the outcomes and opportunities set out in the ULDF. This section sets out additional recommendations; to ensure that adverse effects are further mitigated and long-term positive landscape, visual and natural character positive effects are carried through into detailed design and enhanced where possible.

217. In relation to both sectors, I recommend:

i. the detailed design process be guided by the ULDF, to ensure the overall vision and anticipated natural and urban landscape, natural character and public access outcomes for the Project are included in future Project planning;

ii. further consideration be given, in the River Landscape detailed design masterplan (ULMP), to long term ongoing management and operations required to ensure flood protection maintenance works; including the need for temporary laydown and turn around areas (these areas could have other functions when not in use for operations).

This is to ensure that conflict with public users is minimised and the dominance of these works is reduced;

iii. there be further detailed design development to provide for the integration of the cultural expression narrative, as set out in the ULDF, as an integral part of the management of natural landscape, urban landscape, visual amenity and natural character effects for the Project. This work would aim to implement a whole landscape approach including naming, wayfinding, typical details for paving and seating, plant species and specific elements such as the bridges and new Melling Line station;

iv. in terms of natural character, further work with the Project ecologists and mana whenua be undertaken, through the development of the detailed masterplan and management plans, to define measures to enhance freshwater and terrestrial habitats including for migratory fish, roosting, nesting and foraging birds and plant species that maximise mahinga kai opportunities. This investigation would include such detailed measures as required to confirm planting schedules and opportunities to naturalise stream outlets;

v. construction management plans be developed as proposed, to provide for staging and sequencing to:

   a. limit the scale of the active earthworks face and minimise time to rehabilitation;

   b. develop access and activity solutions with affected communities to limit loss of privacy and temporary access, including for residential and commercial businesses;

   c. include early implementation and opening of parts of the River Landscape with high amenity, as this will help mitigate for the ongoing disruption elsewhere. For example, it may be possible to prioritise the completion of the upper reach River Landscape early in the construction programme to bring the community back to the river. Similarly, early opening of part of the lower reach city access connections, such as the new connection through Laings Road, Mills St or at the end of Andrews Ave, will reduce adverse effects of construction;

   d. prioritise early planting of both amenity and flood protection planting, even where these areas continue to be off limits to the public; and

   e. integrate best practice arboriculture measures to protect existing street trees and the notable trees along local roads included in the Project designation boundary.

9.1 Sector 1 - Kennedy Good Bridge to Mills Street

218. In relation to the upper reach of the Project, I recommend:

i. the detailed design drawings and masterplan provide for:

   a. an off street-car park area within the River Landscape on the TLB and TRB, along Harcourt Werry Drive and off Kennedy Good bridge. These carparks are required to retain connectivity, as existing severance for the local community cannot be addressed through an alternative connection within the scope of the design. Arrival by car will continue to be a reality for families and other user groups;

   b. opportunities to refine the path and planting proposed around the Maraenuku ūranga to ensure CPTED principles are integrated;

c. daylighted flows into the Belmont wetland are retained. Opportunities to naturalise further stream and stormwater outlets, as could be confirmed through detailed design, would further enhance natural character benefits;

ii. the detailed construction management plan:

a. provide for a detailed implementation plan to establish indigenous plants as part of the flood protection works in line with the outcomes sought in the ULDF including provision for willows to be removed over time.

9.2 Sector 2 - Mills Street to Ewen Bridge

219. In relation to the lower reach of the Project, I recommend that the detailed design drawings and masterplan provide for:

i. improved integration of the SH2 retaining walls and bridge embankments including the:

a. location, height, final form and finish of concrete faced walls;

b. opportunities to replace proposed concrete faced walls with 'green' MSE walls above Tirohanga Rd (as required to access Lochaber and Casa Loma House) and to the edges of the River Landscape ;

c. avoid the use of exposed/visible rock nails;

d. ensure smooth tie ins with the stop bank crest and the interchange embankments to avoid CPTED issues and adverse visual amenity effects;

ii. detailed design measures to ensure the retaining walls *or* earth embankments to private properties alongside the Queens Drive/Rutherford Street connections are integrated into the Project wide palette with reference to the outcomes prioritised in the ULDF, to avoid adverse urban character and visual amenity effects. I understand a coherent approach is being investigated and will be confirmed in detailed design;

i. potential temporary or tactical uses of the future development sites, along Daly Street, that complement long term pedestrian priority and positive front facing relationships with the River Landscape and avoid permanent use for open air car parking;

ii. urban design evaluation of the permanent future uses of the potential urban regeneration sites, as included in the designation; to address relevant ULDF outcomes (in addition to District Plan requirements) and to consider the ULMP;

iii. review of the proposed two-way vehicle connection along Dudley St, as this has negative urban landscape effects. This street should be retained as a one-way connection to ensure pedestrian priority is maintained and greater opportunities for the aspirations of a diverse, resident friendly, inner city environment to be achieved. I understand investigations are ongoing to retain the one-way connection; and

iv. opportunities to ensure CPTED measures and appropriate design quality are provided for where underpass connections are required for cyclists through the interchange (underpass connections are not required for pedestrians), where cycle or pedestrian paths are required at the base of high retaining walls and carparking areas are required under bridge abutments. In addition to safety concerns, these elements have the potential to result in adverse urban design and visual amenity effects.

10 CONCLUSION AND RECOMMENDATIONS

10.1 Conclusions

220. The Project works proposed will have both adverse and positive landscape, visual amenity, and natural character[36] effects. These effects will vary by sector and relate to the main Project components - the River Landscape works, the new City-Community-River Connections and the proposed Transport Connections.

221. During the construction phase of the Project, the effects will be high and very high adverse where there are active works, for most aspects of landscape. This is a significant infrastructure project over 3.8km and four years. Detailed construction management and sequencing will be required to manage these effects, to limit the extent of adverse effects at any one time and place to moderate or moderate-high, and to ensure the long-term positive effects of the Project are realised as soon as possible in the programme.

222. Overall, and given time for the naturalised patterns in the active channel and the significant areas of planting to establish, the effects of the Project will be significantly positive. In the lower reach of the river the character and quality of the landscape will shift from a car and willow dominated landscape to an active River Landscape with integrated City-River-Community and Multimodal Transport Connections. In the upper reach there will be marked natural landscape and natural character benefits due to the use of indigenous planting for flood protection and its informal recreation character will be enhanced.

223. The Project will transform the landscape along this section of Te Awa Kairangi and greatly improve how the community experiences this environment and moves to and from the wider transport connections and the central city streets.

224. The korowai narrative and integrated approach to cultural expression is central to these positive effects, as will be developed further in future stages of the Project.

23 July 2021
Lisa Rimmer

[36] refer also to the assessment methodology Section 4 of this report for the definition of natural character used in this assessment for Te Awa Kairangi and its tributaries, under Section 6a of the RMA and in line with the Department of Conservation (DOC) Guidance Note on natural character. This includes the consideration of both natural science (biophysical) and matters of human perception associated with Te Awa Kairangi and its tributaries (the River Landscape) drawing on the work contained in Technical Assessments 2,6 and 7.

Appendix A – Natural Character Analysis

Opportunities to maintain and enhance **natural character** through the Project works relate to:

i. widening the active channel, to allow for more natural water flows and movement of water through naturalised meanders, riffles, pools and beaches;

ii. design for varied [naturalised] edge and range of flow conditions within the active channel and to support diverse habitats for bird, fish, reptile and invertebrate species;

iii. specific measures to reduce habitat disturbance, for example, by limiting beach access in some areas;

iv. design to support fish passage and water quality gains through proprietary and bioremediation options for stormwater and tributary connections and naturalised outfalls to the river;

v. use of earth-worked stop banks (in contrast to vertical retaining walls) including opportunities for greater physical access including integrated surface treatments. For example, similar approaches to planting and seating can be used to 'step' the design and over the banks (and this will strengthen the physical connections made by steps and ramps);

vi. the use of indigenous vegetation, in naturalised groupings and more formal/low/amenity planting, including those linked to past and possible future mahinga kai uses. The Project will result in very high adverse effects on natural character during construction (as the majority of the existing river landscape will be demolished and excavated). Following the 4-year construction period, it will take time for planted areas to re-establish. Both matters (extent and duration of adverse effects) bring a focus on measures to enhance natural character rather than reinstate a modified condition with, at best moderate, natural character. Indigenous plants selected will increase perceptions of natural character in contrast to the existing exotic monoculture of willows and can support new terrestrial habitats;

vii. improved visual and physical access to the active channel. For example, glimpses of the water, through indigenous planting (with varied heights and including clear stem species), will increase perceptions of natural character compared to narrow view shafts through the willows (which retain branches to the ground throughout their life cycle). Built features, such as the proposed new bridges, ūranga and constructed beaches will enhance both physical and visual access to the water, as they provide a viewpoint forward of the main banks and more immersive experience of the way water movement varies along the reach. They will provide a vantage point where the sequence of naturalised pools, riffles and beaches will be more obvious;

viii. design limits the number of engineered forms, particularly in the active river channel, including bridge piers, rock lining and regularised groynes. For example, a reduced number of piers in the active channel has reduced adverse natural character effects, as it avoids further influence on how the water flows;

ix. design features, including general arrangement and materials, that bring greater prominence and encourage greater understanding of natural features. For example, the path alignment can be used to emphasise view shafts along the river and to provide a sequenced experience of its naturalised forms (pool, riffle and beach environments). Natural processes and patterns can also be referenced in the form and finish of built structures, such as the pedestrian and cycle bridge (which is proposed to have a sinuous naturalised form, as if emerging from the water) including artwork and interpretation; and

x. an integrated approach to cultural expression and narrative will further support perceptions of natural character, where it is linked to the kaitiaki strategy for the Project. The intent for the Project, as set out in the ULDF, is to realise a korowai narrative (of Project that cloaks both

sides of the river). This speaks of the Project's wider significance in the creation narrative for Aotearoa, its natural landscape setting as part of the Te Awa Kairangi catchment and of the opportunity to acknowledge past and possible future connections with the river; as a valued place of settlement and source of mahinga kai.

Appendix B Indicative Construction Methodology Analysis

1. Effects during construction will relate to its overall indicative duration (4 years) and aspects of staging that will have an impact on landscape and visual matters. As described in the methodology, these relate to:
    i. the staging approach to maintain operational levels for existing multimodal transport and flood protection;
    ii. measures used to limit loss of public access to parking and riverside recreational areas, by fencing off only the required 'active works/safety' zones;
    iii. coordinating gravel extraction (reshaping of the active channel) with earthworks on the berms wherever practicable;
    iv. measures to reduce silt loading and erosion, for example, minimising work in flowing water and progressive bank control stabilisation;
    v. stop bank construction methods to use site won material and existing stop bank material, encapsulating existing stop banks where possible; minimising disturbance;
    vi. final finish and slopes of the stopbanks to include suitable growing materials;
    vii. close stockpiling with maximum heights, and
    viii. likely use of precast components to construct the bridges, limiting construction times and further disruption of the riverbed.
2. The main construction stages working upstream from Ewen Bridge will enable early construction of the pedestrian-cycle bridge and operation of the new Melling Station (in Stage 3). Objectives to minimise transport disruption and continued flood protection will support reduced disruption to nearby communities.
3. Construction compounds and site offices will be located to the edges of the highway on the TRB and generally river side of the stop banks on the TLB. This will limit their visibility for more sensitive viewing audiences.
4. Haul routes are a further matter to consider in terms of landscape and visual effects and the details of these are yet to be confirmed through detailed design- other than the main haul route off the northern end of the Block Road carpark to the proposed construction compound for aggregate processing.
5. A tool kit approach to manage erosion and sediment control, along with dust nuisance and other hazards, which would contribute adversely to landscape character and experience of areas close to the works.
6. Traffic management measures, the details of which will be confirmed in future stages, that will limit disruption to existing urban patterns including existing movement patterns and access including to commercial activities and residences; as factors that contribute to existing landscape character and values.

Appendix C – Photo Simulations and Context Photographs

See separate document for Photosimulations