

## SCHEDULE 1

### ROKOKAURI GREENWAY NOTICE OF REQUIREMENT REQUIRING AUTHORITY'S CONDITIONS

1. Except as modified by the conditions below and subject to final design, the project works shall be undertaken generally in accordance with the information provided by the Hamilton City Council in its Notice of Requirement and the supporting documents, namely:
  - a) Notice of Requirement for Rotokauri Greenway and Assessment of Environmental Effects dated 4 December 2018 prepared by Beca Limited including the appendices;
  - b) Rotokauri: Hydrogeological Interpretive Report to Support ICMP, CH2M Beca, 2016, as revised 2018 and any subsequent updates;
  - c) Letter from Beca Limited dated 13 June 2019 and attachments responding to a request for further information under section 92 of the Resource Management Act 1991.

The purpose of the designation is for stormwater collection, detention and conveyance purposes.

2. Where there is any inconsistency between the Notice of Requirement documentation and the designation conditions, the designation conditions shall prevail.
3. Pursuant to Section 184(1)(c) of the RMA, the designation shall not lapse for a period of ten years after it is included in the Operative Hamilton City and Operative and Proposed Waikato District Plan.
4. Any reference in these conditions to a New Zealand Standard includes any later New Zealand standard that amends or replaces it.

#### Cultural Impact Assessment

5. The Requiring Authority shall provide Hamilton City Council's and Waikato District Council's Chief Executive Officers or nominees with a copy of the Cultural Impact Assessment prepared by Te Haa O Te Whenua O Kirikiriroa dated 28 November 2019 at least 30 working days prior to any earthworks or construction activity commencing within the designation boundaries (excluding enabling works). The purpose of providing this Cultural Impact Assessment is to demonstrate the engagement and working relationship between the hapū represented by Te Haa and the Requiring Authority and that both parties endorse the Cultural Impact Assessment contents.
6. Prior to the commencement of any construction activities (excluding enabling works), the Requiring Authority, the hapū of Te Haa, and Te Haa O Te Whenua O Kirikiriroa, shall engage in discussions to progress the implementation of any recommendations within the Cultural Impact Assessment report, and in particular to identify opportunities for hapū members to undertake educational and environmental activities, such as environmental monitoring and movement of fish as part of ecological management during and after construction. The outcomes of this engagement shall be reported to both territorial authorities either prior to or in conjunction with, the Outline Plan of Works lodged pursuant to section 176A of the Resource Management Act 1991.

### Discovery of Archaeological Finds or Culturally Significant Finds

7. Any earthworks in the areas of historical, cultural, and spiritual significance identified in the Archaeological Assessment (being the location to the west of Exelby Road as shown at Figure 25) (Sian Keith Archaeology Ltd, 2018) attached to the Notice of Requirement as Appendix F, shall be monitored by a suitably qualified archaeologist.

Any archaeological monitoring will be undertaken in accordance with any authority/s obtained from Heritage New Zealand for the project.

8. The requiring authority shall give at least 20 working days written notice of the date that the construction contractor intends to commence earthworks or construction activity (excluding enabling works) to:
  - a. Te Haa O Te Whenua O Kirikiriroa and Ngāti Māhanga to enable them to:
    - i. Clarify with the contractor the location of sites referred to in the above condition and the procedures that will be observed;
    - ii. Provide the names and contact details of their representatives who are to be contacted for cultural advice and guidance in the event of a discovery of any buried archaeological deposits found during the project; and
    - iii. Arrange for the inspection (should they so desire) of the earthworks in the vicinity of identified areas referred to in Condition 7.
  - b. The project archaeologist, to establish with the contractor a working relationship that will comply with good practice during the earthworks stage of construction.
9. Prior to the commencement of construction, the requiring authority shall provide the territorial authority's Chief Executive Officer or nominees, written evidence that Archaeological Authorities under the Heritage New Zealand Pouhere Taonga Act 2014 have been obtained from Heritage New Zealand as required, to modify, damage or destroy any potential archaeological sites that may be affected during the construction works. Alternatively, the requiring authority shall provide evidence that Archaeological Authorities are not necessary.
10. The following Accidental Discovery Protocol is only applicable to works where a HNZPT archaeological authority is not in place. In the event that any archaeological sites, remains, artefacts, taonga (Māori artefacts) or kōiwi are unearthed, dislodged, uncovered or otherwise found or discovered during the earthworks ('the discovery'), the requiring authority shall implement an Accidental Discovery Protocol (ADP) which shall consist of the following actions:
  - a. Advise Te Haa O Te Whenua O Kirikiriroa, Ngāti Māhanga, the project archaeologist and the appropriate territorial authority for the particular site, within one day of the discovery;
  - b. Cease works in any part of the project site affected by the discovery;
  - c. The archaeologist should attend site to confirm if the material is archaeological in nature and to confirm if kōiwi is discovered;
  - d. Contact the NZ Police, Coroner and Heritage New Zealand as appropriate;
  - e. Undertake specific preservation measures to address any discovery that includes water-logged or wet archaeological materials; and
  - f. Not recommence works in the parts of the project site affected by the discovery until all necessary statutory authorisations or consents have been obtained.

In the event of conflicting provisions where any part of the site is operating under an Archaeological Authority from Heritage New Zealand Pouhere Taonga, the Conditions wording within that authority shall take precedence.

### Management Plans General

11. All works shall be carried out in accordance with the applicable Management Plan(s) and other plans required by these conditions.
12. The following Management Plans must be submitted to the relevant territorial authority for certification that they are consistent with the conditions of the designation:
  - a. Construction Environmental Management Plan;
  - b. Construction Air Quality Management Plan;

- c. Construction Noise and Vibration Management Plan;
  - d. Erosion and Sediment Control Plan;
  - e. Ecological Management Plan;
  - f. Landscape and Urban Design Plan; and
  - g. Geotechnical Effects Management Plan.
13. Within twenty (20) working days of receipt of any Management Plan for certification as required under Condition 12, the territorial authority shall notify the requiring authority as to whether the Management Plan is certified or whether inconsistencies with the relevant designation condition(s) have been identified and what matters are required to be addressed.
  14. Construction Works shall not commence until the requiring authority has received the territorial authority's written certification for the relevant Management Plans.
  15. Any changes proposed to a certified Management Plan shall be confirmed in writing by the requiring authority and certified in writing by the territorial authority's Chief Executive Officer, or nominee within ten (10) working days of receipt of writ ten confirmation, prior to implementation of those changes. Any changes to Management Plans shall remain consistent with the overall objective of the relevant Management Plan.
  16. At all times during construction, the requiring authority shall ensure that a copy of the latest certified version of the Management Plans identified in Condition 12 are kept on site and all key personnel are made aware of each plan's contents.
  17. The CEMP shall be implemented and complied with throughout the construction period.

#### **Construction Environmental Management Plan**

18. At least 20 working days prior to the commencement of any earthworks or construction activity within the designation boundaries (excluding enabling works), the requiring authority shall submit a Construction Environmental Management Plan (CEMP) to the territorial authority Chief Executive or nominee for certification. The CEMP shall be prepared by a suitably qualified and experienced person. The objective of the CEMP is to ensure that appropriate measures are in place to avoid, remedy or mitigate potential adverse effects associated with the construction and commissioning of the project, through methods identified within the CEMP.
19. The CEMP shall include the procedures, methods and measures to be implemented to address the following:
  - a. The provisions to be made where existing fences are affected by the construction works, so as to enable the continued operation of the activities on properties adjacent to the designation;
  - b. Provision of access for emergency vehicles;
  - c. Maintenance of road and property access during construction;
  - d. Movement of construction traffic on local roads;
  - e. Hours of operation of trucks and service vehicles;
  - f. The location, use and reinstatement of local roads to be used as haul roads;
  - g. Measures to ensure that any construction vehicles leaving the land on which works are being carried out do not deposit soil or other debris on local roads, and the remedial measures to be taken should this occur;
  - h. To minimise disruption or delays to bus services; and
  - i. Procedure to be taken in the event of the discovery of unexpected soil contamination during the project works. This requirement shall only be required in the event a resource consent under the National Environmental Standard for Assessing and Managing Contaminants in Soils is not obtained for the whole Greenway corridor prior to the commencement of construction works.
  - j. Weed management such as methods and procedures for washing down machinery and ensuring any topsoil or fill brought onsite is free of weed seeds or fragments

20. At all times throughout works, the requiring authority shall maintain a permanent register of any complaints received alleging adverse effects from, or related to, the works. As far as practicable the register shall include:
- a. The name and address (where this has been provided) of the complainant;
  - b. The nature of the complaint;
  - c. Location, date and time of the complaint and also of the alleged event;
  - d. Weather conditions at the time of the event and including wind direction and approximate wind strength if the complaint relates to air quality or noise;
  - e. The outcome of the requiring authority's investigation into the complaint;
  - f. Measures taken to respond to the complaint; and
  - g. Any other activities in the area, unrelated to the construction, which may have contributed to the complaint (such as non-project construction, fires, traffic accidents or unusually dusty conditions generally).
21. The requiring authority shall:
- a. Acknowledge the complaint within 2 working days;
  - b. Promptly investigate, identify the urgency associated with the complaint and communicate that to the complainant;
  - c. Take reasonable steps to remedy or mitigate the matters giving rise to the complaint if there are reasonable grounds for the complaint within 10 working days of receiving the complaint or such sooner time as may be reasonably necessary in the circumstances;
  - d. Maintain a record of its responses and any remedial actions undertaken; and
  - e. This record shall be maintained on site and shall be made available to the relevant territorial authority and Hamilton City Council upon request.

**Advice Note:**

*The resource consents obtained for the project as granted by the Waikato Regional Council will also include conditions that require the preparation and implementation of a CEMP. It is considered appropriate that one CEMP be prepared by the requiring authority/consent holder which meets the conditions of this designation and the conditions of the resource consents.*

**Construction Air Quality Management Plan**

22. At least 20 working days prior to the commencement of any earthworks or construction activity within the designation boundaries (excluding enabling works), the requiring authority shall submit a Construction Air Quality Management Plan (CAQMP) to the relevant territorial authority Chief Executive or nominee for certification.
- a. The objective of the CAQMP shall be to establish methods to be used to limit dust and odour nuisance beyond the designation boundary, and procedures for responding to any complaints and events in order to comply with the outcomes and standards required under Conditions 28 and 29;
  - b. The CAQMP shall address the matters in Condition 23, 25 & 26.
23. The CAQMP shall, as a minimum, address the following aspects with regard to managing the adverse effects of construction dust and odour:
- a. Identification of the sensitive locations where specific dust mitigation measures may be required;
  - b. Identification of triggers and contingency measures to address identified and verified adverse effects on sensitive receptors. Contingency measures may include options such as:
    - i. Cleaning of water tanks and replenishment of water supplies;
    - ii. Cleaning of houses and roofs of houses where rainwater collection from such roofs is practiced;
    - iii. Cleaning of other buildings and infrastructure; and
    - iv. Cleaning of local roads in agreement with relevant territorial authorities Road Asset Manager.
  - c. Methods for undertaking visual monitoring of dust emissions;

- d. Methods to be used to limit dust and odour nuisance;
  - e. Procedures for responding to process malfunctions and accidental dust discharges;
  - f. Criteria, including consideration of weather conditions and procedures for use of water sprays on stockpiles and construction areas;
  - g. Implementation of continuous monitoring of Total Suspended Particulate (TSP) concentrations;
  - h. Methods for monitoring of the times of offensive odour emissions from the ground;
  - i. Procedures for responding to discharges of odour (including in the event of excavation of contaminated sites);
  - j. Methods for monitoring of construction vehicle maintenance;
  - k. The identification of staff and contractors' responsibilities; and
  - l. Criteria for when a vehicle "no idling" policy will be enforced.
24. The CAQMP shall be reviewed by a suitably qualified independent person, prior to being submitted to the territorial authority Chief Executive's nominee for certification. Any comments and inputs received from the independent reviewer shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why. For the purpose of this condition, "independent person" shall be a suitably qualified and experienced person who is not an employee of the requiring authority or does not work for any of the companies contracted to design and/or construct the project.
25. In managing dust arising from construction activities, the requiring authority shall ensure that earthworks are managed to minimise the amount of dust received offsite.
26. To manage dust arising from construction activities, monitoring of wind strength, wind direction, air temperature and rainfall shall be undertaken:
- a. In general accordance with the Good Practice Guide for Air Quality Monitoring and Data Management, Ministry for Environment, 2009; and
  - b. Continuously for the duration of the construction of the project, at a point that is representative of the local weather conditions across the construction site.
27. The requiring authority shall review the CAQMP at least annually during construction and as a result of any material change to the Work.
28. As a result of the construction of the project the requiring authority shall ensure the Works are managed to minimise noxious, offensive or objectionable odour, dust or fumes beyond the site boundary caused by discharges from the site, in the opinion of an enforcement officer.
29. Beyond the site boundary, there shall be no hazardous air pollutant caused by discharges from the site during construction that causes, or is likely to cause, adverse effects on human health, environment or property.

#### **Construction Noise and Vibration Management Plan**

30. At least 20 working days prior to the commencement of any earthworks or construction activity within the designation boundaries (excluding enabling works), the requiring authority shall submit a Construction Noise and Vibration Management Plan (CNVMP) to the relevant territorial authority Chief Executive or nominee for certification.
- a. The CNVMP shall address the matters in Condition 31 and 32.
  - b. The CNVMP shall be prepared in accordance with the requirements of Annexe E to NZS 6803:1999 'Acoustics –Construction Noise'.
31. The objective of the CNVMP shall be to provide methods to manage noise/vibration appropriately for the variety of circumstances within the project area by outlining the measures, procedures and standards for mitigating the effects of noise and vibration during construction of the project so they will meet:

- a. The noise criteria set out in Condition 33, where practicable. Where it is not practicable to achieve those criteria, alternative strategies should be described to address the effects of construction noise on neighbours;
  - b. The Category A vibration criteria set out in Condition 34, where practicable. Where it is not practicable to achieve those criteria, a suitably qualified expert shall be engaged to assess and manage construction vibration during the activity that exceed the Category A criteria. If predicted construction vibration exceeds the Category B criteria, then activity should, where practicable, only proceed if approved by the territorial authority Chief Executives nominee and if there is appropriate monitoring of vibration levels and effects on those buildings identified as being at risk of exceeding the Category B criteria, by suitably qualified experts;
  - c. Night time (2000h – 0630h) work in the vicinity of any noise sensitive receivers shall be avoided where practicable. Where avoidance is not practicable, measures shall be adopted to minimise or mitigate noise and vibration effects.
32. The CNVMP shall, as a minimum, address the following aspects with regard to managing the adverse effects of construction noise and vibration:
- a. Description of the works, anticipated equipment/processes and their scheduled durations;
  - b. Hours of operation, including times and days when activities causing noise and/or vibration would occur;
  - c. The construction noise and vibration criteria for the project;
  - d. Identification of affected houses and other sensitive locations where noise and vibration criteria apply including a list of Noise Sensitive Receivers (as defined in NZS 6803:1999 'Acoustics – Construction Noise');
  - e. Requirements for building conditions surveys at locations close to activities generating significant vibration, prior to and after completion of construction (including all buildings predicted to exceed Category A vibration criteria in Condition 34) and processes for repair of any damage caused by the Work;
  - f. Procedures for preparation of management schedules containing site specific information including for any activities or locations where it is not practicable to comply with the noise criteria in Condition 33;
  - g. Mitigation options including alternative strategies where full compliance with the relevant noise and/or vibration criteria cannot be achieved;
  - h. Methods and frequency for monitoring and reporting on construction noise and vibration;
  - i. Stakeholder communications;
  - j. Complaints processes;
  - k. A communication plan which shall advise affected residents identified within the CNVMP of the following:
    - a. The timing of proposed works;
    - b. The potential for increased noise/vibration and the associated timing;
    - c. The methods used to mitigate the effects of noise/vibration;
    - d. Contact numbers for key construction staff, staff responsible for noise and/or vibration assessment and council officers; and
  - l. Operator training procedures and expected behaviours under the CEMP.
33. Construction noise shall be measured and assessed in accordance with NZS 6803:1999 'Acoustics – Construction Noise'. The construction noise shall comply with the following criteria for the purposes of the CNVMP:

Time of the week	Time period	dB LAeq(15 min)	dB LAFmax
Residential			
Weekdays	0630-0730	60	75
	0730-1800	75	90
	1800-2000	70	85
	2000-0630	45	75
Saturdays	0630-0730	45	75
	0730-1800	75	90
	1800-2000	45	75
	2000-0630	45	75

Sundays and public holidays	0630-0730	45	75
	0730-1800	55	85
	1800-2000	45	75
	2000-0630	45	75
Industrial and commercial			
All days	0730-1800	75	
	1800-0730	80	

34. Construction vibration shall be measured in accordance with ISO 4866:2010 'Mechanical vibration and shock – Vibration of fixed structures- Guidelines for the measurement of vibrations and evaluation of their effects on structures' and with the German standard DIN 4150-3:1999 Structural vibration - Part 3: Effects of vibration on structures. The construction vibration shall comply with the following criteria for the purposes of the CNVMP:

Type of structure	Short Term Vibration				Long Term Vibration
	Guideline values for velocity, $v_i$ in mm/s				
	Vibration at the foundation at a frequency of				Vibration at horizontal plane of highest floor at all frequencies
	1 Hz to 10 Hz	10 Hz to 50 Hz	50 Hz to 11 Hz*)		
Building uses for commercial purposes, industrial buildings, and buildings of similar design	20	20 to 40	40 to 50	40	10
Dwellings and buildings of similar design and/or occupancy	5	5 to 15	15 to 20	15	5
Structures that, because of their particular sensitivity to vibration, cannot be classified under lines 1 and 2 and are of great intrinsic value (e.g. listed buildings under preservation order)	3	3 to 8	8 to 10	8	2.5
*) At frequencies above 100 Hz, the values given in this column may be used as minimum values					

#### Erosion and Sediment Control Plan

35. At least 20 working days prior to the commencement of any earthworks or construction activity within the designation boundaries (excluding enabling works), the requiring authority shall submit an 'Erosion and Sediment Control Plan' (ESCP) to the relevant territorial authority Chief Executive or nominee for information, with subsequent updates to the ESCP being made available to the relevant territorial authority on request. The objective of the ESCP shall be to minimise sediment discharge from the site to the greatest extent practicable.
36. The erosion and sediment control measures to be included in the ESCP shall as a minimum be based upon and incorporate all the relevant principles and practices for the activity authorised by this consent and contained within the Waikato Regional Council document titled "Erosion and Sediment Control – Guidelines for Soil Disturbing Activities" (Technical Report No. 2009/02 – dated January 2009), and subsequent amendments or replacement documents; and, shall include but not be limited to, the following:
- a. Details of all principles, procedures and practices that will be implemented to undertake erosion and sediment control to minimise the potential for sediment discharge from the site, including flocculation if required;
  - b. The design criteria and dimensions of all key erosion and sediment control structures;
  - c. A site plan of a suitable scale to identify:
    - i. The locations of waterways;
    - ii. The extent of soil disturbance and vegetation removal;
    - iii. Any "no go" and/or buffer areas to be maintained undisturbed adjacent to watercourses;
    - iv. Areas of cut and fill;

- v. Locations of topsoil stockpiles;
  - vi. All key erosion and sediment control structures;
  - vii. The boundaries and area of catchments contributing to all stormwater impoundment structures;
  - viii. The locations of all specific points of discharge to the environment;
  - ix. The location and details of stream stabilisation works in areas of damming, diversion or clearing; and
  - x. Any other relevant site information.
- d. Construction timetable for the erosion and sediment control works and the bulk earthworks proposed;
  - e. Timetable and nature of progressive site rehabilitation and re-vegetation proposed;
  - f. Maintenance, monitoring and reporting procedures;
  - g. Rainfall response and contingency measures including procedures to minimise adverse effects in the event of extreme rainfall events and/or the failure of any key erosion and sediment control structures;
  - h. Procedures and timing for review and/or amendment to the erosion and sediment control measures listed in the ESCP; and
  - i. Identification and contact details of personnel responsible for the operation and maintenance of all key erosion and sediment control structures.

### **Ecological Management Plan**

37. At least 40 working days prior to the commencement of any earthworks or construction activity within the designation boundaries (excluding enabling works) the requiring authority shall submit an Ecological Management Plan (EMP) to the relevant territorial authority Chief Executive or nominee for certification. The objective of the EMP is to provide a management framework to ensure that any adverse ecological effects associated with either the construction or the operation of the Rotokauri Greenway are avoided, remedied or mitigated to the greatest extent practicable. The EMP shall present a detailed methodology for the management of ecology within the Rotokauri drain during construction of the Greenway, in general accordance with the document titled '*Rotokauri Greenway Notice of Requirement: Ecological Assessment*' dated October 2018 submitted with the document titled "Notice of Requirement for Rotokauri Greenway and Assessment of Environmental Effects" dated 4 December 2018.

#### **Advice Note:**

*Should comparable EMP conditions be set by the Waikato Regional Council on the resource consents required for the Rotokauri Greenway project, then it is expected that a Section 181(3) process will be undertaken to remove duplicate conditions, subject to the written concurrence of the local authorities.*

38. The EMP shall include, but not necessarily be limited to, the following:
- a. A stream design plan for the permanently flowing central low flow channel, marginal floodplain and stormwater treatment wetlands. This should cover in-stream physical habitat design and planting plans for the stream, floodplain and wetland areas;
  - b. Fish passage design for all new in-stream infrastructure including proposed culverts, the outlet from the upgraded Exelby Road culvert and proposed check dams;
  - c. Measures to prevent weed invasion due to machinery, top-soil and fill brought on to site;
  - d. Implementation of an initial survey of indigenous lizards during the summer period immediately preceding habitat removal and encompassing the full summer period (October to March). The survey shall be designed and implemented by a suitably qualified and experienced ecologist and shall be submitted to the Hamilton City Council Chief Executive Officer or nominee for certification;
  - e. Should indigenous lizards be confirmed to be present by the survey undertaken in Condition 38(d), a detailed lizard management plan shall be prepared; the objective being to remedy or mitigate the loss of individual lizards during earthworks and the localised loss of habitat features, such as log piles and old stumps. The lizard management plan, if required, shall be completed prior to the commencement of habitat removal;



- f. Implementation of an initial survey of indigenous bats during the spring-summer period at least 24 months prior to the expected start of construction. The survey shall be designed and implemented by a suitably qualified and experienced ecologist and shall be submitted to the Hamilton City Council Chief Executive Officer or nominee for certification;
  - g. Should indigenous bats be confirmed to be present by the survey undertaken in Condition 38(f), a detailed bat management plan shall be prepared; the objective being to avoid, remedy or mitigate the risk of injury and/or mortality during tree clearance, the loss of potential roost habitat, and medium term loss of commuting and foraging habitat. The implementation of the management plan shall begin 12 months prior to the expected start of construction and continue for the duration of the construction period.
39. The EMP shall include a Mudfish Management Plan (MMP). The objective of the MMP is to establish a management framework for the effects on black mudfish and their habitat arising from changes to groundwater levels due to the construction and operation of the Greenway. The MMP shall be designed to integrate with other management plans and initiatives operating within the Rotokauri Catchment (Catchment) which also manage the effects on black mudfish and their habitat arising from land development. The MMP and its integration with other management plans and initiatives will be subject to, and limited by, any relevant private property rights. The MMP will identify measures to remedy, mitigate, offset or compensate for the effects on black mudfish populations within the Rotokauri drainage system within the Catchment shall include, but not be limited to, the following:
- a. Compiling existing mudfish survey records for the Rotokauri Drain catchment;
  - b. Undertaking fish and habitat surveys within the Rotokauri drainage system within the Catchment to fill knowledge gaps on the distribution of black mudfish and black mudfish habitat within the area affected by groundwater drawdown;
  - c. Undertaking consultation with Waikato Regional Council ecologists on survey methodologies and management approaches and reporting on outcomes of this consultation;
  - d. Identifying other management plans and initiatives relating to black mudfish operating within the Catchment;
  - e. Preparation of an Ecological Impact Assessment (EclA) for potential impacts on black mudfish resulting from the implementation of the Greenway. The EclA shall include the identification of measures to manage direct impacts on resident mudfish, identification of options to mitigate, offset and/or compensate for identified mudfish habitat loss effects and development of those options to concept level. This task will involve liaison with developers within the affected area to facilitate alignment of assessment and mitigation approaches;
  - f. Methods for capture and transfer of resident mudfish from potentially impacted habitats including the timing and duration of trapping /monitoring periods and identification of suitable habitat for release of captured mudfish;
  - g. Methods to ensure that black mudfish do not re-enter the construction zone over the duration of construction activities;

The Requiring Authority shall submit the MMP to the relevant territorial authority for certification within 2 years of the confirmation of the designation. The MMP shall be implemented in accordance with any regional consents for any works obtained from Waikato Regional Council and in accordance with any permits and approvals required from the Department of Conservation or Ministry of Primary Industries.

#### **Landscape and Urban Design**

40. At least 40 working days prior to the commencement of any earthworks or construction activity within the designation boundaries (excluding enabling works) the requiring authority shall submit a detailed Landscape and Urban Design Plan

(LUDP) to the relevant territorial authority Chief Executive or nominee for certification. The objective of the LUDP is to provide a robust and integrated design that is attractive, coherent, durable and innovative to ensure that the Rotokauri Greenway is a high quality open space rather than a heavily engineered environment that is unsympathetic to public use. This LUDP shall be in accordance with the Landscape and Visual Effects Report and Urban and Landscape Design Report submitted with the document titled "*Rotokauri Greenway Notice of Requirement and Assessment of Environmental Effects*" dated November 2018.

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

#### **Detailed Design Matters**

42. During detailed design and prior to the lodgement of the Outline Plan of Works the following matters shall be considered and incorporated into the design and its documentation:
- a. A stormwater assessment by a suitably qualified and experienced stormwater engineer shall be provided to confirm that the flood mitigation outcomes from the ICMP are being achieved. Flood model results shall be provided to demonstrate the combined adequacy of the storage (inside and outside the designation) in achieving the ICMP flood storage design criteria;
    - i. The modelling shall be reviewed by a suitably qualified independent person, prior to being submitted to the territorial authority Chief Executives nominee for confirmation that the Rotokauri Integrated Catchment Management Plan objectives can be achieved. Any comments and inputs received from the independent reviewer shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why. For the purpose of this condition, "independent person" shall be a suitably qualified and experienced person who is not an employee of the requiring authority or is not directly

contracted to the design of the phase of work being reviewed.

**Note:** Freeboard for future buildings is not provided within the flood storage basins and will be achieved by developers setting building floor levels above the identified flood levels.

- b. Maintaining existing sub-catchment drainage patterns up until the development of the adjacent sub-catchments;
- c. Allowance for the design of future drainage pipes/channels for the 10-year rainfall event to adequately drain their contributing sub-catchments;
- d. Interfaces with future wetlands (as far as their location and geometry is known) – including allowance for a primary wetland outlet, a flow bypass for flows greater than the 2-year rainfall event and an emergency spillway;
- e. Methods to minimise the risk of blockage of all road culverts due to flood debris;
- f. Maintaining the overland flow route to the north of Basins 3 and 4 along the proposed Arterial Road. Documentation relating to the Rotokauri Arterial Transport Network design shall be provided to confirm this has been allowed for;
- g. Consideration of the erosive effects of the Greenway discharges on the channel between Exelby Road and Lake Rotokauri;
- h. Geotechnical stability of basin side slopes to a long-term factor of safety of 1.5, except where an existing slope is maintained and has a lower factor of safety;
- i. Groundwater drawdown effects on existing occupiable buildings;
- j. A low flow channel including ecological design to create an appropriate and sustainable freshwater environment;
- k. Seepage and erosion from groundwater inflows;
- l. Managing groundwater drawdown effects on Lake Waiwhakareke water levels;
- m. Fish passage through the main basin culverts;
- n. Scour and erosion protection at culverts and drainage inflow points;
- o. Pedestrian access across the Greenway via bridges at chainages 1000, 1600, 2750 and 3200;
- p. Maintenance, pedestrian and cycle access along a shared path between chainage 0 and 3750m and maintenance access tracks down to main basin culvert inlets;
- q. Maintenance, pedestrian and cycle access along a shared path from Exelby Road to the western designation extent at Lake Rotokauri, including completing a traffic safety assessment for the shared path crossing on Exelby Road and implementation of any assessment outcomes;
- r. Maintenance access bays at the interfaces of the maintenance tracks with existing and future Rotokauri Structure Plan public roads;
- s. Landscape and planting consistent with the Landscape and Urban Design Plan;
- t. Stormwater quality treatment provided by the existing Te Wetini Drive pond to be replicated in wetland 2B;
- u. Protection of the Far Western Interceptor wastewater pipe;
- v. Dam break analyses for the main culvert embankments and any consequential dam safety design requirements;
- w. Allowance for road reserve widths at main basin culverts in accordance with the roading hierarchy shown in the Rotokauri Structure Plan;
- x. Allowance for typical services in the embankments of future road crossings of the main culverts;
- y. Allowance for future work (if required) to batter back the sides of the channel downstream of Exelby Road to the western extent of the designation;
- z. Construction issues as required to be addressed by the CEMP. Management methods are to be set out in the CEMP.

The Requiring Authority shall provide the relevant territorial authority's, written evidence that the above matters have been given suitable consideration during detailed design, with a summary of how each matter has been considered and what the eventual outcome is in respect of each.

43. During detailed design the groundwater drawdown effects on the New Zealand Transport Agency infrastructure (including but not limited to bridge structures including Te Kowhai Road Bridge, Local Road Bridge, Te Wetini Drive bridge and Culvert E, embankments, pavement, drainage, road furniture and access/maintenance paths) shall be considered and incorporated into the design and its documentation. The requiring authority shall provide the territorial authorities, written evidence, that includes correspondence from the NZ Transport Agency which outlines its position on the final detailed design of the Greenway Corridor, including any proposed mitigation measures, insofar as it relates to NZ Transport Agency Infrastructure.
44. Prior to the construction of the Greenway Corridor a stormwater assessment shall be undertaken by a suitably qualified and experienced stormwater engineer to inform the detailed design in relation to the New Zealand Transport Agency's Culvert E (chainage 2100) on State Highway 1. The stormwater assessment shall assess the hydraulic effects of the Greenway Corridor on Culvert E, and identify any measures required so that the level of service of Culvert E is not reduced by the Greenway Corridor, both during construction and upon completion of the Greenway Corridor. These measures shall be implemented as part of the construction of the Greenway Corridor. The stormwater assessment shall be submitted to the Hamilton City Council Chief Executive Officer or nominee for certification to confirm the predicted effects have been appropriately managed. Any and all work required to achieve the necessary standard and level of service shall be at the requiring authority's cost.

**Advice Note:**

*Where the land to the north of the Expressway has been developed (and hence Culvert E is redundant because long term drainage is to the north rather than the south of SH1) the stormwater assessment may conclude that no work is required.*

45. All new instream infrastructure shall be designed to achieve the following fish passage objectives:
  - a) The outlet from the upgraded Exelby Road culvert and proposed check dams shall be designed to facilitate upstream passage for moderate to strong climbing fish species while preventing upstream access for goldfish and koi carp; and
  - b) New permanent culverts at the outlets from each main storage basin, shall conform to the "National Fish Passage Guidelines 2018".

**Geotechnical Effects Management Plan**

46. In managing the construction of the Greenway Corridor and its potential effects on ground settlement and increase in seismic hazard, the Requiring Authority shall achieve the following outcomes:
  - a) Provision of a robust assessment of the potential ground settlement and increase in seismic hazard effects on nearby occupiable buildings and infrastructure (including NZ Transport Agency infrastructure) arising from the construction of the Greenway;
  - b) The monitoring of ground settlement in the vicinity of the Greenway Corridor during and following construction to identify whether any effects on adjacent occupiable buildings and infrastructure (including NZ Transport Agency infrastructure), (as defined in Condition 43) are occurring;
  - c) The establishment and implementation of actions to rectify any minor or more than minor adverse effects on such occupiable buildings and infrastructure (including NZ Transport Agency infrastructure) created by ground settlement arising from the construction of the Greenway Corridor.
47. The Requiring Authority shall submit a Geotechnical Effects Management Plan (GEMP) to the relevant territorial authority for certification at least 20 working days prior to work commencing. The objective of the GEMP is to outline the measures to be adopted to manage the effects of potential ground settlements or increase in seismic hazard arising from construction and operation of the Greenway Corridor on the existing occupiable buildings, services and infrastructure (including NZ Transport Agency infrastructure) identified in the risk assessment required under Condition 48(a) in order to achieve the outcomes required under Condition 46.
48. The GEMP shall include, but need not be limited to, information required in other conditions of this consent and details of the following:
  - a. a risk assessment of the potential adverse effects of groundwater drawdown, including potential resultant ground settlement and the increase in seismic hazard on those existing occupiable buildings, services and NZ Transport Agency infrastructure that exists as at 17th February 2020. The risk assessment shall identify those occupiable buildings, services and infrastructure (including NZ Transport Agency infrastructure) which may potentially be affected by an adverse effect which is minor or more than minor. Those occupiable buildings, services and

infrastructure (including NZ Transport Agency infrastructure) identified shall be subject to the GEMP structural condition survey, monitoring and mitigation requirements.

- b. implementation and operational procedures to manage the adverse effects of ground settlement and increase in seismic hazard;
  - c. implementation of additional works to be undertaken within the Greenway, if and where required, to mitigate either adverse ground settlement effects or an increase in seismic hazard to existing occupiable buildings, services and infrastructure (including NZ Transport Agency infrastructure).
  - d. estimated total settlements at end of construction;
  - e. methods to monitor settlement and to assess seismic effects, including liquefaction;
  - f. settlement monitoring locations set out on a plan;
  - g. settlement monitoring frequency;
  - h. settlement reporting requirements;
  - i. settlement alert and action programmes; and
  - j. process for reviewing the settlement implementation and operational procedures where necessary.
49. The GEMP shall be reviewed by a suitably qualified independent person, prior to being submitted to the relevant territorial authority for certification. Any comments and inputs received from the independent reviewer shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why. For the purpose of this condition "independent person" shall be a suitably qualified and experienced person who is not an employee of the Requiring Authority or does not work for any of the companies contracted to design and/or construct the project.
50. The GEMP shall address how the effects on the New Zealand Transport Agency's infrastructure will be monitored and outline any suitable mitigation measures. This shall include evidence of consultation with the New Zealand Transport Agency.
51. Ground settlement near existing NZ Transport Agency infrastructure, occupiable buildings and non NZ Transport Agency infrastructure shall be measured monthly during construction and six monthly following construction completion, for a further five years, to confirm the assessment findings.
52. The consent holder shall undertake a pre-construction structural condition survey of existing occupiable buildings, services and transport infrastructure identified in Condition 48(a), subject to the owner's approval.
53. The consent holder shall provide a copy of the pre-construction structural condition surveys, post-construction and any additional condition assessment reports to the respective property owner within 15 working days of completing the reports.
54. If post construction surveys identify any damage that was determined to be by the existence of the Greenway Corridor, the Requiring Authority shall remediate the damage subject to owner approval.

#### **Slope Stability**

55. The stability of existing slopes adjacent to the Greenway Corridor between CH3650 and CH3750 shall be assessed by a suitably qualified and experienced geotechnical professional to inform the detailed design. Engineered works will be completed within the Greenway Corridor to maintain the existing stability of these adjacent slopes under static and seismic loads, or to meet reasonable engineered slope design standards defined as:
- A Factor of Safety (FOS) = 1.5 under static loads with typical groundwater levels;
  - A Factor of Safety (FOS) = 1.2 under static loads with short term flood groundwater levels;
  - A Factor of Safety (FOS) = 1.0 under ultimate limit state earthquake loads with typical groundwater levels.

#### **Waikato Regional Council Consents**

56. Works authorised by the designation (including construction works but excluding enabling works) ("Works"), shall not commence unless and until all associated resource consents required from Waikato Regional Council for the operation of the Greenway have been obtained. Copies of the resource consent/s shall be provided to each Territorial Authority a minimum of 20 working days prior to construction. The associated WRC resource consents include, but may not be limited

to, permanent damming and diversion of surface water including associated stormwater discharges; diversion of groundwater; and installation of culverts.

### **Definitions**

'Enabling Works' for the purpose of the above conditions includes the following and similar activities: demolition and removal of buildings and structures, site investigation, fencing, tree felling and removal, relocation of underground and overhead services (excluding transmission lines), and the establishment of site entrances.

'Occupiable buildings' for the purpose of the above includes any building typically occupied by people including residential dwellings, commercial and industrial buildings. It does not include buildings such as garden sheds, playhouses or farm sheds as these are not built to any building code or standard.

'Seismic hazard' for the purposes of the above conditions includes liquefaction and lateral spreading.

### **Advice Notes**

- A. Prior to the commencement of any physical works (excluding enabling works) relating to the Rotokauri Greenway project, the requiring authority shall prepare, submit and obtain the following approvals from their appropriate authorities:
- An Outline Plan of Works pursuant to section 176A of the Resource Management Act 1991. If any works are required within the portion of the designation within Waikato District, similarly an Outline Plan of Works pursuant to section 176A of the Resource Management Act 1991 shall be submitted to Waikato District Council as consent authority.
  - A Detailed Site Investigation is required to be done prior to any site development occurring, to establish if any potential soil contamination is present, to determine whether resource consent or whether any controls or restrictions are required under the Resource Management (National Environmental Standards for Assessing and Managing Contaminants to Soil to Protect Human Health) Regulation 2011 (referred to as the NESCS).
  - Any necessary archaeological authorities under the Heritage New Zealand Pouhere Taonga Act 2014 from Heritage New Zealand, to modify, damage or destroy any potential archaeological sites that may be affected during the construction works.
  - Any necessary wildlife permits under the Wildlife Act 1953 from Department of Conservation.
- B. The proposed designation subject to this notice of requirement lies directly adjacent to the New Zealand Transport Agency designation for the Te Rapa Section of the Waikato Expressway (E99). The New Zealand Transport Agency are currently removing two portions of this designation pursuant to section 182 of the Resource Management Act 1991, but at the time of lodgement of the notice of requirement for the Rotokauri Greenway this process was not completed. Accordingly, overlapping designations pursuant to section 177 of the Resource Management Act 1991 will occur, until such time as the New Zealand Transport Agency complete the removal of designation process. In addition, the requiring authority is in discussions with the New Zealand Transport Agency regarding obtaining access to land within the E99 designation during construction of basin 3 of the project. This will be agreed through a License to Occupy agreement between the parties, generally in accordance with the terms set out in the letter provided by the New Zealand Transport Agency dated 12 September 2018.