

**Before Independent Hearing Commissioners  
At Lower Hutt**

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Under the Resource Management Act 1991 (the Act)

In the matter of a notice of requirement for a designation by Wellington Water Limited ('WWL'), on behalf of Hutt City Council ('HCC'), in accordance with section 168A of the Act, for the construction, operation and maintenance of a water supply reservoir at Summit Road, Fairfield, Lower Hutt.

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**Statement of evidence of Catherine Lucy Swan Crooks for Wellington Water Limited (Planning)**

Dated 14 November 2024

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# Statement of Evidence of Catherine Lucy Swan Crooks

## 1 Introduction

- 1.1 My full name is Catherine Lucy Swan Crooks.
- 1.2 I am a Principal Planner at WSP New Zealand Limited. I have been in this position since January 2022. I am responsible for providing resource management and planning services to public and private sector clients, including government departments and regional and territorial authorities.
- 1.3 This evidence relates to a notice of requirement (**'NOR'**) for a designation issued by Hutt City Council (**'HCC'**), in accordance with section 168A of the Resource Management Act 1991 (**'RMA'**), for the construction, operation and maintenance of the proposed Eastern Hills Reservoir adjacent to the existing Naenae Reservoir at Summit Road, Fairfield, Lower Hutt (**'Project'**). In particular, my evidence relates to planning matters.
- 1.4 I have been asked to provide evidence by Wellington Water Limited.
- 1.5 I am familiar with the area that the Project covers and have been involved with the Project in a planning role since March 2022. I have undertaken a site visit to the site, and its surrounds. I have also attended a number of meetings and workshops with Council staff, Subject Matter Experts and Contractors. I was responsible for preparing the NoR.

## 2 Qualifications and experience

- 2.1 My qualifications include a Bachelor of Arts with Honours in Geography and Earth Sciences awarded by Victoria University of Wellington in 2000. I am a full Member of the New Zealand Planning Institute.
- 2.2 I have worked as a Planner on infrastructure projects for 24 years in New Zealand and the United Kingdom. My previous infrastructure experience includes the following:
  - a Author of assessments of effects on the environment (**'AEEs'**) to support various consents for Wellington Water for multiple three waters projects which include river works, earthworks, discharges and contaminated land disturbance.

- b Author of AEEs to support an alteration to an existing designation and resource consent for Wellington Water to enable design changes prior to construction of the Aotea Reservoir in Porirua.
- c Author of AEEs to support alterations to an existing designation and resource consents for NZ Transport Agency Waka Kotahi to enable design changes during construction of the Peka Peka to North Ōtaki Expressway.
- d Author of AEEs to support various regional council consents for NZ Transport Agency Waka Kotahi for maintenance of State Highway structures such as bridges, tunnels, seawalls and culverts in the Wellington Region.

### **3 Code of Conduct**

- 3.1 While the NOR is not before the Environment Court, I have read and am familiar with the Code of Conduct for Expert Witnesses in the current Environment Court Practice Note (2023). Accordingly, I have complied with the Code in the preparation of this evidence and will follow it when presenting evidence at the hearing.
- 3.2 The data, information, facts and assumptions I have considered in forming my opinions are set out in my evidence to follow. The reasons for the opinions expressed are also set out in my evidence to follow.
- 3.3 Unless I state otherwise, my evidence is within my sphere of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

### **4 Scope of evidence**

- 4.1 My evidence addresses the following:
  - a Project description and construction;
  - b The existing environment;
  - c Statutory Framework;
  - d Summary of the Project's effects on the environment;
  - e Alternatives assessment;
  - f Whether the designation is reasonably necessary to achieve the project objectives;

- g Engagement and consultation;
- h Planning and policy framework;
- i Responses to submissions;
- j Response to the Section 42A Officer's Report ('**Officer's Report**');
- k Proposed mitigation and conditions; and
- l Other matters.

## **5 Executive summary**

- 5.1 The Project comprises the construction, operation and maintenance of a new 15 ML above ground, concrete reservoir to the south of the existing reservoir at the top of Summit Road, Fairfield. The new reservoir will significantly increase water supply storage and resilience.
- 5.2 My evidence considers the effects that could be generated by the construction, operation and maintenance of the Project. I conclude that through the proposed conditions that the adverse effects of the Project are able to be appropriately avoided, remedied or mitigated.
- 5.3 I have read and am familiar with the Officer's Report and the proposed set of designation conditions. I have included Wellington Water's proposed changes in **Appendix 2** of my evidence and will refer to these where relevant to my evidence. I have read the submissions and respond to those that are relevant to my area of expertise.
- 5.4 The Project will create a range of positive benefits including increasing resilient water storage volumes, and habitat improvements through replanting with appropriate plant species and improved recreational opportunities.
- 5.5 I consider that there has been a robust consideration of alternative site and options and that the work and designation are reasonably necessary to achieve the objectives of the Project.
- 5.6 Based on the conclusions reached in the evidence below, that of the other witnesses, and the AEE, I consider that the purpose of the RMA will be achieved, and that the designation can be confirmed so that the Project may be delivered by Wellington Water on behalf of Hutt City Council.

## 6 Project description and construction

- 6.1 The Project is comprehensively described in the AEE. The purpose of the Project is to enable the construction, operation and maintenance of a new 15 million litre concrete potable water reservoir, and associated pipework, at the end of Summit Road in Fairfield, Lower Hutt.
- 6.2 To summarise, at a high level the objectives of the project aim to:
- a address the current storage shortfall and ensure sufficient storage for future growth in the Lower Hutt and Taita Water Storage Areas;
  - b deliver a secure, safe and reliable water storage solution that has a 100-year design life; and
  - c integrate the chose solution into the lower Hutt Central Water Storage Area in a cost-effective manner.
- 6.3 The full text of the objectives is provided in paragraph 11.2. These are discussed in further detail in section 9 of the evidence of **Mr Laurence Edwards**.
- 6.4 HCC is the requiring authority with financial responsibility for the Project, and in its role as a Council Controlled Organisation Wellington Water will carry out the construction, operation and maintenance of the Project.
- 6.5 HCC has not sought a waiver in relation to the requirement to prepare an outline plan. Accordingly, if the NOR is confirmed, Wellington Water (on behalf of HCC) will finalise the Project's design and submit outline plans to HCC (in its regulatory capacity) prior to commencement of works onsite for all relevant aspects of the Project.
- a Two outline plans are proposed, as detailed in the conditions in **Appendix 2** of my evidence and discussed in paragraphs 16.11 and 16.12.
    - i The Enabling Works<sup>1</sup> Outline Plan which is would include preliminary works such as geotechnical testing and site establishment activities, and excludes the construction works; and

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<sup>1</sup> The definition of Enabling Works is provided in the Definitions table of Appendix 2 of my evidence.

- ii The Project Construction Outline Plan covering construction works<sup>2</sup> and activities necessary to construct the Eastern Hills Reservoir and excludes Enabling Works.
- 6.6 The activities to be undertaken under the designation (and the Hutt City District Plan rules they would typically be assessed under) include the construction of a reservoir (Rule 13.3.1.33), associated pipework (Rule 13.3.1.14 and 13.3.1.15), earthworks and vegetation clearance (Rule 14E 2.2(b)) and construction noise (Rule 14C 2.2).
- 6.7 The Project is currently being processed non-notified as a suite of resource consents from Greater Wellington Regional Council for earthworks clearance exceeding 3000 m<sup>2</sup>, works in the bed of Waiwhetū stream, dewatering, discharge of stormwater and geotechnical investigations in excess of 5m deep above an aquifer.
- 6.8 From a planning perspective, the key features of the Project are:
- a Geotechnical investigations including boreholes to inform the detailed design of the reservoir;
  - b Vegetation removal and approximately 90,000 m<sup>3</sup> of earthworks to create a construction platform for the reservoir and to install associated pipes;
  - c Construction and then the subsequent operation and maintenance of a 15 ML, 55 m diameter circular, above ground concrete reservoir. Valves and control equipment will be housed in a new valvehouse connected to the reservoir;
  - d Installation of a 1.1km long DN 750 delivery pipeline connecting the new reservoir to the bulk water supply network which will run down the hill to the north and under Waiwhetū Stream to deliver water from the reservoir to the water supply network;
  - e Installation of a DN 500 combined overflowpipe following the same alignment that will be used to discharge water from the reservoir in an emergency or maintenance overflow, as well as stormwater, into Waiwhetū Stream; and
  - f Remediation works including landscape planting.

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<sup>2</sup> The definition of Construction Works is provided in the Definitions table of Appendix 2 of my evidence

- 6.9 A minimum 3m buffer around the reservoir has been allowed for, with no backfill around the walls. This is to provide for slope stability, as well as providing vehicle access around the outside of the reservoir during and post construction. It is not anticipated that backfill will be placed around the reservoir.
- 6.10 A designation boundary has been proposed that allows for construction activities such as construction yards and erosion and sediment control devices. A pipeline corridor of 30m wide has been proposed down the slope to the north of the site toward Balgownie Grove for the overflow and delivery pipelines. Their exact alignment within this corridor will not be known until geotechnical testing and detailed design have been carried out. Following completion of the construction of the Project, the designation boundaries will be altered ('rolled-back' under section 182 RMA) so that the designation only contains the land required to reasonably operate and maintain the reservoir and pipelines. The proposed designation boundaries are shown in the drawings and plans contained in Appendix A of the AEE.

### **Construction of the Reservoir**

- 6.11 The construction method of the Project has been prepared following consultation with two contracting firms during the preliminary design. The contractor to carry out the detailed design has not yet been appointed so there may be some minor changes and alterations when the detailed design is underway. The NOR has taken into account the need for a degree of flexibility in this regard. For the full construction methodology and further detail refer to Appendix D – Construction Methodology of the AEE.
- 6.12 The construction of the reservoir will include the following activities:
- a Geotechnical investigations;
  - b Vegetation clearance and bulk earthworks for construction of the reservoir and pipelines;
  - c A construction yard;
  - d Construction of a 15 ML circular reservoir (55m diameter) and valve house;
  - e Installation of delivery/outlet pipe and overflow pipe;
  - f A new outfall to Waiwhetū Stream with an energy dissipation structure;



- g A below stream bed crossing under Waiwhetū Stream for the delivery pipe connection to the existing bulk network within Balgownie Grove; and
  - h Installation of connections to the bulk supply main and existing reservoir.
- 6.13 An indicative construction programme is included in Appendix A of the Construction Methodology (Appendix D of the AEE). The total programme is approximately 3 years with at least two summer periods to allow earthworks and stream works in the drier months.
- 6.14 Geotechnical works will include physical site investigations to inform the detailed design of the reservoir.
- 6.15 The main reservoir site at the top of Summit Road will be established by initial clearing of vegetation and minor earthworks to provide flat laydown areas and space. Site fencing and signage will be erected around the site and noise barriers installed. Space will be cleared for laydown areas, vehicle turning areas and sedimentation ponds. Temporary site offices and containers will be brought to site.
- 6.16 A satellite site at the end of Balgownie Grove will be used for approximately 4-6 months on Hutt City Council land in between 5 and 6 Balgownie Grove. This will be used for the works on the banks of Waiwhetū Stream and the pipeline works down the hill. Some on-street parks on Balgownie Grove may need to be temporarily removed for the short-term storage of construction materials. The site will be disestablished once works down in the area have been completed.
- 6.17 There is an existing fire break that runs past the existing Naenae reservoir and through the Project site. No public access will be allowed during the entire construction period. Signage will warn track users of the closure.
- 6.18 Bulk earthworks of approximately 83,000 m<sup>3</sup> will be the first significant construction activity. Clean fill will be transported off site to a landfill or other construction site.
- 6.19 Erosion and sediment control measures will be used to reduce erosion and prevent sediment-laden water from entering the Waiwhetū Stream or stormwater network at the top of Summit Road.
- 6.20 The concrete reservoir will be constructed using a mixture of precast panels, transported to site on trucks and placed using crawler cranes, and in-situ concrete pours.

- 6.21 In general, construction will occur during the day. Lighting may be required for some activities which require night works, such as reservoir base slab and roof concrete pours.
- 6.22 Work is anticipated across approximately four nights to pour the concrete for the reservoir floor slab and roof capping layer. Work will need to commence at approximately 3am to allow sufficient time for a contiguous concrete pour, curing and partial stressing of the wire tendons into the second night to ensure structural integrity. Both physical and managerial mitigations, involving noise barriers and community engagement will be in place for the night works as discussed in the Noise and Vibration Assessment included in Appendix H of the AEE and in the evidence of **Mr Leonard Terry**.
- 6.23 There are various pipelines and a valve chamber that require excavations, concrete pours, backfilling, and placement of equipment within the Project reservoir site.
- 6.24 The delivery pipeline is being installed down the hill from the reservoir platform towards Balgonie Grove. A 14m wide working corridor is required down to Balgownie Grove. This will allow for a pipe trench, working area either side, a haul road, space for excavators and trucks and perimeter fencing.
- 6.25 The delivery pipeline is being installed using open trenching, working from the reservoir platform downwards. Directional drilling was considered but was discounted at this stage due to the steep pipeline route and potential disruption from a launch/receive pit located within Balgownie Grove.
- 6.26 The delivery pipeline will cross the Waiwhetū Stream below ground and connect to the network within Balgownie Grove. The adjacent wetlands will to be avoided. An above-ground crossing for the delivery pipe was ruled out due to the impediment of flows, health and safety concerns from having a large pipe approximately 4m above water level and the visual and amenity impacts on the local community.
- 6.27 An outfall to Waiwhetū Stream will be constructed to discharge site stormwater and to allow controlled discharge of potable water from the reservoir during maintenance activities.
- 6.28 Materials that are required for construction on the hill side of the stream will be craned in from Balgownie Grove and construction machinery and equipment brought across via a temporary staging bridge. The bridge will be a prefabricated deck, crossing to the base of the hill. The bridge can only be located along a

similar alignment to the delivery pipe stream crossing so will be removed prior to construction of the stream crossing.

- 6.29 Testing and commissioning of the reservoir and associated pipework and equipment will be carried out before commissioning the reservoir.
- 6.30 The site will be landscaped as per the Landscape Planting Plan included in Appendix A and E. This includes planting around the reservoirs, along the delivery pipeline corridor and a section of riparian planting along Waiwhetū Stream.
- 6.31 The site will be disestablished by removing fencing, noise barriers, signage, laydown areas and sheds. The connection to the existing walking track will be reopened and any damage to access roads made good.

## **7 The existing environment**

- 7.1 The area of the Project, its surrounding environment, and the relevant planning provisions are described in full in Section 5 of the AEE.
- 7.2 The site for the new reservoir is adjacent to the existing Naenae reservoir which is located at the top of Summit Road in Fairfield, Lower Hutt. The existing reservoir was built in 1946 and is a partially buried square reservoir with a capacity of 11.3 ML. The reservoir has a remaining design life of 20 years.
- 7.3 Access to the site is via a driveway from Summit Road; this has a lockable gate to prevent unauthorised vehicle access, but pedestrian and cycle access is possible.
- 7.4 Under the Hutt City District Plan ('**HCDP**') part of the site is zoned as 'Medium Density Residential' and part is zoned 'Passive Recreation', with a Significant Natural Resource ('**SNR:12**') overlay. SNR 12: Eastern Hills Bush is described in the District Plan as "*lowland forest on hill country. Contains a fire-induced regionally representative regenerating vegetation mosaic, including areas of pre-European Podocarps and Hard Beech. Nearly two-thirds of the forest is 90-110 years old. Plants – Arthropodium cirrhatum, Fuchsia excorticata and Podocarpus totara. Large species diversity due to different topography. Many bird species, including NZ pigeon.*"
- 7.5 SNR:12 comes under the wider definition of 'Significant Natural, Cultural and Archaeological Resources' in the HCDP, which is described as having significant indigenous vegetation/habitat values. SNR:12 has the status of a 'Significant

Natural Area' (**'SNA'**) under the transitional provisions of the National Policy Statement for Indigenous Biodiversity (**'NBPS-IB'**).

- 7.6 The existing reservoir is not designated, and there are no other notations on the site such as historic places, natural hazards or protected trees. There are no interests registered on the records of title.
- 7.7 The site is predominantly covered in regenerating indigenous and exotic vegetation, typical of the Eastern Hills landscape. A firebreak/track passes through the site where the proposed reservoir will be located, and there is an existing trig station within the likely reservoir footprint. The site is sloped, with steep slopes in places.
- 7.8 The proposed location of the new reservoir within the site provides a minimum separation distance from the Naenae reservoir for construction and operational needs (20 m allowed). The location is predominantly driven by founding the reservoir on competent rock and to minimise ground improvements required. The site extends down the ridge line to the north of the reservoir towards Waiwhetū Stream at the foot of the hill. The overall site includes both the southern and northern banks of the Waiwhetū Stream at the end of Balgownie Grove, where the delivery pipe will cross to distribute into the network. On the southern bank of the Waiwhetū Stream, four wetlands were identified. The proposed construction site will maintain minimum separation of 10 m from the edge of the wetlands.
- 7.9 The site is surrounded by residential land uses, with Fairfield to the west and Naenae to the north-east. These areas are characterised by cul-de-sacs nearest to the works and borders on the reserve area. For those located in Naenae, the Waiwhetū Stream provides a boundary between the Project site and residential area.
- 7.10 The site is part of a network of connected public open spaces which provide a range of recreation uses. It features an existing track known as the Summit Road Firebreak Track, which links Summit Road with the Te Whiti Riser track. This track and the wider network are popular with mountain bikers, walkers and trail runners.
- 7.11 A desktop contaminated land study has determined that the proposed Reservoir site is not listed on Greater Wellington Regional Council (**'GWRC'**)'s Selected Land Use Register (**'SLUR'**) as potentially contaminated.
- 7.12 A desktop archaeological assessment found that the archaeological risk is low as the nearest recorded site is over 500 m from the proposed reservoir. A Cultural

Impact Assessment prepared by Taranaki Whānui confirmed that the site has no identified Māori site of significance in the vicinity.<sup>3</sup>

- 7.13 Ecological investigations rated the site as 'Moderate' for bird habitat, 'High' for lizard habitat, 'Moderate' for invertebrate habitat and rated the value of vegetation as 'Moderate'. No bats were detected during surveys, however a number of mammalian pests and predators were observed transiting through the site.
- 7.14 The Waiwhetū Stream runs through the northern extent of the site. Riparian vegetation in this area provides little to no shading and includes indigenous and exotic vegetation including grass and weeds. Various infrastructure is present along the stream's reach including culverts and weirs. Upstream, the Waiwhetū Stream is highly modified. Three unnamed tributaries of the Waiwhetū Stream are present on site. During site visits four wetlands were identified within the Waiwhetū Stream floodplain at the northern extent of the site.

## **8 Statutory Framework**

- 8.1 Under section 168A(3) of the RMA, when considering a requirement and any submissions received, a territorial authority must, subject to Part 2, consider the effects on the environment of allowing the requirement, having particular regard to—

*(a) any relevant provisions of—*

*(i) a national policy statement:*

*(ii) New Zealand coastal policy statement:*

*(iii) regional policy statement or proposed regional policy statement:*

*(iv) plan or proposed plan; and*

*(b) whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if—*

*(i) the requiring authority does not have an interest in the land sufficient for undertaking the work; or*

*(ii) it is likely that the work will have a significant adverse effect on the environment; and*

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<sup>3</sup> AEE, Appendix K (Cultural Impact Assessment).

*(c) whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought; and*

*(d) any other matter the territorial authority considers reasonably necessary in order to make a decision on the requirement.*

8.2 These matters are covered in my evidence as follows:

- a Effects on the environment of allowing the requirement are summarised in section 9.
- b Consideration of relevant provisions of relevant national policy statements, the Regional Policy Statement for the Wellington Region and the Hutt City District Plan, as well as Part 2 of the RMA, are discussed in section 13.
- c Consideration of alternative sites is discussed in section 10 and in the evidence of **Mr Paul Carran**.
- d The 'reasonable necessity' of the work and the designation is discussed in Section 11.

## **9 Summary of the Project's effects on the environment**

- 9.1 The actual and potential positive and adverse effects of the Project are comprehensively assessed in Section 9 of the AEE, accompanying technical reports, information provided in response to the section 92 further information requests, and subsequent emails to Council's officer.
- 9.2 I rely on expert assessment and evidence (where given) of the technical specialists who have evaluated the Project's effects for HCC and provide a summary below of their conclusions, together with the measures that are proposed to avoid, remedy or mitigate any adverse effects.

### **Positive Effects**

- 9.3 I consider that the Project will deliver positive effects (benefits) in the form of a significant regional public benefit, as discussed in the evidence of **Mr Laurence Edwards**, as it will contribute towards the Hutt Valley's water resilience following a significant natural hazard event as well as increasing potable water storage volumes in the Lower Hutt and Taita Water Storage Areas. The rapid re-establishment of portions of the water supply network will enable the functioning and recovery of services within the community. Additionally, the Summit Road Firebreak Track will be reinstated to the eastern side of the Eastern Hills

Reservoir post construction and seating and signage provided, resulting in improved recreational outcomes<sup>4</sup>.

- 9.4 In my opinion positive effects will also result from planting with eco-sourced vegetation suitable for the site conditions and consistent with the values of SNR12 resulting in improving the underlying character and composition of vegetation on-site. Revegetation of the Waiwhetū Stream banks near the outlet pipe, with native vegetation, will improve habitat along the stream. This is discussed further in paragraph 11.2 of the evidence of **Mr Mark Hansen**.
- 9.5 It is my view that there will also be improved amenity of the recreation areas associated with the Project areas including reinstatement of the firebreak track, seating and signage.

### **Recreation, Amenity, Landscape and Natural Character**

- 9.6 Overall, the recreation assessment concludes that minor adverse effects on recreational use and values will be generated during the construction phase as a result of restrictions on access to the Firebreak Track and Waiwhetū streamside at Balgownie Grove cul-de-sac, and noise effects for recreational users of trails. Following mitigation, and during the operational phase of the Project, I consider that the impacts on recreational use and values will be positive. This is due to the improved amenity of the recreation areas associated with the Project areas.
- 9.7 The proposed construction of the reservoir and pipelines will result in a change in the natural character and landscape, as discussed in section 9 of the evidence of **Dr Wendy Hoddinott**. It is my view that the effects will reduce over time with mitigation proposed in the form of planting.

### **Cultural Impacts**

- 9.8 A Cultural Impact Assessment ('**CIA**') was attached to the AEE as Appendix K that assessed the potential cultural impacts associated with the proposal. The CIA confirmed that the proposed reservoir site has no identified Māori sites of significance in the vicinity with no known pa, kainga, urupā or ngakinga (traditional garden clearings) nearby. I note that in paragraph 5.6 of **Mr Paul Carran**'s evidence, that the preferred Naenae 2 site had the lowest risk of significant impacts on mana whenua values of the three sites shortlisted. Overall, I do not consider that there will be any impacts on cultural values as a result of the Project.

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<sup>4</sup> AEE, Appendix O (Recreation Assessment).

## Social Impacts

- 9.9 During construction, social impacts will be experienced by residents in close proximity to the construction works along Tilbury Street, Summit Road and Balgownie Grove. These will include perceptions of restricted traffic movements, disruption to daily movements due to changes in parking, and reduced quality of the environment due to construction noise and loss of access to recreational opportunities. The level of social impact experienced by receivers is restricted to a small portion of nearby receivers and these effects will be temporary as they are only for the duration of the Construction phase of the Project. I consider that the loss of access to recreational facilities, increased road safety risk and reduced wellbeing will be reduced or mitigated with the application of identified mitigation measures. However, some impacts will be moderate following mitigation, namely perceptions of restricted traffic movement, disruption to daily movements and loss of parking, and reduced quality of the environment.
- 9.10 It is my opinion that the operational phase will be characterised by positive social effects as the reservoir will result in improved future water security and resilience, enhanced enjoyment of the reserve area and overall positive visual impact as a result of the proposed landscape planting.

## Erosion and Sediment Control

- 9.11 As part of the construction of the Project, best practice erosion and sediment controls are proposed to be implemented within the works footprint to manage the discharge of sediment and potential generation of dust as result of the earthworks. These are detailed in the draft Erosion and Sediment Control Plan ('**ESCP**')<sup>5</sup> submitted with the NOR. This demonstrates how erosion and sediment control will minimise and/or mitigate effects associated with sediment mobilisation.
- 9.12 Erosion and sediment control measures will be developed in accordance with Greater Wellington Regional Council's Erosion and Sediment Control Guide for Land Disturbing Activities in the Wellington Region<sup>6</sup>. This is required by proposed condition 9, 10 and 11 specify that this plan is to be supplied to achieve the purpose of the Construction Environmental Management Plan ('**CEMP**'). Condition 13 in **Appendix 2** requires that the ESCP be provided to HCC prior to construction commencing once it has been certified by Greater Wellington Regional Council. I consider that implementation of erosion and sediment control

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<sup>5</sup> AEE, Appendix F (Erosion and Sediment Control Plan).

<sup>6</sup> Greater Wellington Regional Council, 2021, 'Erosion and Sediment Control Guideline for Land Disturbing Activities in the Wellington Region



measures in accordance with these guidelines during construction of the Project will result in adverse effects associated with the discharge of sediment during construction being no more than minor.

- 9.13 The draft ESCP sets out a number of core principles to manage erosion and sediment control including the use of silt fences, sediment retention ponds, and a clean water diversion system. It is my opinion that with the implementation of the measures in the ESCP any effects associated with sediment discharges during construction will be appropriately managed.
- 9.14 In summary, the actual or potential effects of the Project have been considered by each of the witnesses for Wellington Water. The Project will have some temporary effects during the construction period. I have recommended mitigation measures to manage potential effects that have been identified and have used these mitigation measures to form the basis of the conditions I have proposed. It is my view that once operational there will be no significant adverse effects on the environment.

## **10 Alternatives assessment**

- 10.1 The alternatives assessment that was undertaken as part of the Project has been comprehensively set out in Section 8 of the AEE, the Site Selection Report<sup>7</sup> and in the evidence of **Mr Paul Carran** at paragraph 7.
- 10.2 Section 168A(3)(b) of the RMA requires an alternatives assessment if the requiring authority (in this case the territorial authority) does not have an interest in the land sufficient for undertaking the work, or it is likely that the work will have a significant adverse effect on the environment.
- 10.3 HCC owns the land the proposed reserve will be located on and as such has sufficient interest in the land for undertaking the work. In addition, the assessment of the effects concludes that there will be no significant adverse effects on the environment. However, a comprehensive process was followed looking at alternative sites, routes, or methods of undertaking the work. This is covered in the evidence of **Mr Paul Carran** where he addresses the site selection investigations for the Project; design parameters for site selection; sites considered for the Project; and options considered in relation to delivery<sup>8</sup>.
- 10.4 In summary, alternatives for the project were considered in the following ways:

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<sup>7</sup> AEE, Appendix M (Site Selection Report)

<sup>8</sup> Carran EIC, paras 6, 7, and 8.

- a Alternative solutions - various solutions (other than a new reservoir) were considered, however, the measures were insufficient to address the shortfall in water supply storage, support future growth, or ensure seismic resilience. This is discussed in paragraph 5.6 of the evidence of **Mr Laurence Edwards**. A new reservoir was deemed the best solution to provide the necessary capacity and resilience for Lower Hutt.
- b Reservoir location - after identifying the need for a new reservoir, a detailed site selection process was conducted. Initially, 28 sites were considered, but many were discounted due to steep terrain. The list was narrowed to 14, then to seven based on earthworks, access, and corridor feasibility. All seven of potential sites would have impacted land within SNR's along the eastern hills<sup>9</sup>. A Multi-Criteria Analysis (MCA) involving experts and stakeholders identified Naenae 2 as the preferred site, scoring highest in all criteria except social factors. Sensitivity analysis confirmed these rankings. This process is discussed in detail in the Site Selection Report (AEE, Appendix M) and discussed in paragraph 7 of the evidence of **Mr Paul Carran**.
- c Reservoir form – the Preliminary Design Report<sup>10</sup> confirmed a 55 m diameter above-ground concrete circular reservoir. This design allows for easier maintenance and visual inspections, and concrete is preferred for its durability over steel.
- d Pipeline location - the new reservoir will share the existing inlet main but requires a new delivery main and overflow pipeline. Five pipeline alignments were considered, with Summit Road deemed impractical due to constructability issues and high impact on residents.<sup>11</sup> All of the practicable options favoured an alignment down the hillside north of the reservoirs going through the SNR12 area and requiring vegetation removal. The preferred option's environmental impacts are manageable. Alignments down the gully were rejected due to slope stability and maintenance challenges. An alternative proposed by Balgownie Grove residents was also discounted due to significant construction and environmental risks. This process is discussed in detail in the Pipe Alignment Report (AEE, Appendix P) and discussed in the evidence of **Mr Paul Carran**.

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<sup>9</sup> SNRs 12, 56, 33 and 21

<sup>10</sup> AEE, Appendix C (Preliminary Design Report)

<sup>11</sup> AEE, Appendix P (Pipe Alignment Report)

**11 Whether the designation is reasonably necessary to achieve the project objectives**

11.1 Under section 168A(3)(c) RMA, the proposed works and designation must be “reasonably necessary” for achieving the objectives for which the designation is sought. The evidence of **Mr Laurence Edwards** at sections 8 and 9 sets out the need for, objectives and benefits of the project.

11.2 The objectives of the Project are:

**Objective 1:** *To address the current storage shortfall and ensure sufficient storage for future growth in the Lower Hutt Central and Taitā Water Storage Areas (WSA) by:*

- i Ensuring the Lower Hutt Central and Taitā WSAs are operationally resilient by providing sufficient secure, safe and reliable water storage to supply 48 hours of water to residents, businesses and critical water users (including Fire and Emergency NZ) under normal operating conditions, based on projected demand with appropriate consideration of population growth; and*
- ii Improving disaster resilience of the Lower Hutt Central and Taitā WSAs by providing a seismically resilient water supply capable of meeting Wellington Water’s target level of service.*

**Objective 2:** *To deliver a secure, safe and reliable water storage solution that has a 100-year design life.*

**Objective 3:** *To integrate the chosen solution into the Lower Hutt Central WSA network in a cost-effective manner.*

11.3 It is my view that the Project and designation are reasonably necessary for achieving these objectives. The Project results in benefits which include addressing the current storage deficit in the potable water supply network, enabling future growth and development and a more resilient water supply network.

11.4 I consider that designating the site is reasonably necessary as a planning mechanism to achieve Wellington Water’s objectives as it will:

- a Protect the land from other development - no other party can undertake an activity on the designated land that might affect the reservoir without HCC’s approval;

- b Provide certainty that the Project can be operated and maintained in the future;
  - c Be included in the District Plan, provides certainty to the community and nearby residents as to the nature, scale and location of the proposed works;
  - d Enable confirmation of the Project footprint prior to further detailed design occurring, with the ability to consider further effects through the outline and management plan process; and
  - e Be well understood by HCC as a mechanism utilised by infrastructure providers for enabling upgrades and improvements to infrastructure.
- 11.5 In my opinion, for the reasons outlined above, the Project Work and the NoR for a new designation are reasonably necessary for achieving the Project's objectives.

## **12 Engagement and Consultation**

- 12.1 Consultation and engagement for this Project has been undertaken with nearby landowners affected by the Reservoir, key stakeholders and interest groups, with wider community and mana whenua, and is outlined in detail in Section 7 of the AEE.

### **Mana Whenua**

- 12.2 Taranaki Whānui ki Te Upoko o Te Ika (Port Nicholson Block Settlement Trust) have been involved in the Project since the site selection process in 2022. They provided a Cultural Impact Assessment<sup>12</sup> and feedback they have provided has been incorporated into mitigation measures such as erosion and sediment control and landscape planting. Engagement with Taranaki Whānui will continue throughout detailed design and construction of the reservoir.
- 12.3 Feedback has been sought from Te Runanga o Toa Rangatira (Ngāti Toa) who advised that they have no immediate issues with the proposed work and are happy to support Taranaki Whānui's position.

### **Hutt City Council**

- 12.4 A 'pre-lodgement' meeting was held with HCC's planning team in June 2023 regarding the NOR and supporting specialist reports required. Feedback was also sought from the HCC Parks and Recreation team, with the cultural impacts of

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<sup>12</sup> AEE, Appendix K.

work in the stream discussed, as well as impacts on SNR12, and the closure of firebreak tracks.

- 12.5 Local HCC councillor Andy Mitchel was briefed in February 2023 and an information package was provided to all HCC councillors and the Mayor. Several meetings have also been held with Bruce Hodgins, Strategic Advisor for HCC.

#### **Fire and Emergency New Zealand**

- 12.6 A meeting was held with Fire and Emergency NZ ('**FENZ**') in May 2023 to discuss the maintenance and closure of the firebreak during construction. They confirmed that they do not expect access to the firebreak be maintained during construction as there are other access points above the site that can be used if needed. It was agreed that the firebreak will be reinstated upon completion of works.

#### **Department of Conservation**

- 12.7 The Department of Conservation ('**DOC**') has been consulted regarding lizard salvage and transfer permits. A Wildlife Permit is being sought separately.

#### **Land Information New Zealand**

- 12.8 Consultation with Land Information NZ ('**LINZ**') has been undertaken regarding the proposed relocation of a trig station that is located within the earthworks' boundary. A preferred relocation point to install a mark has been agreed at the head of the cul-de-sac at Farrelly Grove.

#### **Neighbourhood Engagement**

- 12.9 Local community members and community environmental groups were provided a link to participate in an online survey that sought feedback on the impacts of the proposed Reservoir.
- 12.10 Street events were held to target groups of nearby residents in Fairfield and Naenae who were identified as being in close proximity to the work. Concerns raised included construction traffic, loss of parking, noise and vibration and damage to road surfaces<sup>13</sup>. Concerns around traffic and loss of parking are addressed in the evidence of **Ms Hilary Fowler**, with noise and vibration addressed in the evidence of **Mr Leonard Terry**.

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<sup>13</sup> AEE, Appendix L (Social Impact Assessment)

## **Wider Community**

- 12.11 Engagement with the wider community has been undertaken by way of social media, websites, flyer and letter drops, and community drop-in sessions.
- 12.12 It is my view that consultation undertaken has been comprehensive and consistent with sound consultation practice.

## **13 Planning and Policy Framework**

- 13.1 Within Section 12 of the AEE, I have considered the NOR against the relevant planning and policy documents. Within the AEE I concluded that the Project is consistent with the relevant objectives and policies. I have provided a summary of the Project against the key provisions and documents below.
- 13.2 I generally concur with the statutory assessment in the Officer's Report, and in this section highlight what I consider to be key points.

### **NPS Freshwater Management 2020**

- 13.3 The National Policy Statement for Freshwater Management ('**NPS-FM**') is underpinned by the concept of Te Mana of te Wai. This recognises the importance of water, and that the protection of the health of freshwater protects the health and well-being of the wider environment. Te Mana of te Wai is about restoring and preserving the balance between water, the wider environment and the community.
- 13.4 The NPS-FM is in my view more relevant to the regional consent applications than it is this NOR. However, I consider that the Project achieves positive water quality outcomes through implementing best practice erosion and sediment control measures so that stormwater is treated prior to discharge during construction. The Project design has taken into consideration the extent of the identified wetlands and implemented design changes to avoid these areas. Taranaki Whānui ki Te Upoko o Te Ika have been engaged during preliminary design and this will continue during detailed design and construction of the reservoir.
- 13.5 The Project provides mitigation in the form of riparian planting that will result in habitat creation along the margins of Waiwhetū Stream, avoidance of wetlands and minimisation of instream works. Given the design of the Project, mitigation proposed and involvement of Taranaki Whanui, it is my opinion that the Project responds positively to Te Mana o te Wai.

## NPS for Indigenous Biodiversity 2023

- 13.6 The intent of the National Policy Statement for Indigenous Biodiversity ('**NPS-IB**') is to maintain, and not reduce, the values of existing indigenous biodiversity throughout New Zealand as well as to protect those identified values from future development. The NPS-IB applies to indigenous biodiversity in the terrestrial environment. The Project area is within SNR:12 which has the status of a SNA under the transitional provisions of the NBPS-IB<sup>14</sup>.
- 13.7 I consider that the following clauses of the NPS-IB are relevant to the Project:
- a Clause 3.10(2) of the NPS-IB directs that certain kinds of adverse effects on an SNA are to be avoided, except as provided in Clause 3.11. Clause 3.11 provides exceptions to the previous clause for the construction of 'specified infrastructure' that provides significant national or regional public benefit:
    - i The proposed reservoir is construction of 'specified infrastructure' that provides significant national or regional public benefit<sup>15</sup> as discussed in the evidence of **Mr Laurence Edwards**. This is 'specified infrastructure' as clause b in the definition of the definition of the phase in the NPS-IB anything identified as such in a regional policy statement or plan. The Greater Wellington RPS states that the local authority water supply network is regionally significant, meaning the definition of specified infrastructure in the NPS-IB is satisfied.
    - ii There is an operational and/or functional need<sup>16</sup> for the reservoir to be at a suitable height/topography - this is explained further in the evidence of **Mr Paul Carran**. As the reservoir would need to have a top water level of 72.53 m, there were limited options available. Each of the remaining seven longlisted suitable locations had a portion of their land parcels in an SNR area<sup>17</sup>, including the reservoir site ultimately chosen.
    - iii There are no practicable alternative locations<sup>18</sup> for the new development outside of the SNR. As discussed above and in the evidence of **Mr Paul Carran**, all of the seven longlisted sites at the

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<sup>14</sup> SNR12 has the status of a 'Significant Natural Area' (SNA) under the transitional provisions of the (NPS-IB) unless or until a suitably qualified ecologist engaged by the relevant local authority determines that it is not an area of significant indigenous vegetation or significant habitat of indigenous fauna.

<sup>15</sup> As per NPS-IB cl 3.11(1)(a).

<sup>16</sup> As per NPS-IB cl 3.11(1)(b).

<sup>17</sup> Site Selection Report (Appendix M to the AEE): page 30, and Appendix A (Longlisted Site Assessment). . The relevant SNRs are SNR:12, 53, 36 and 21.

<sup>18</sup> As per NPS-IB cl 3.11(1)(c).

required elevation had land parcels within an SNR area, meaning there are no practicable alternative locations outside of the SNA.

- b In addition, once the exemption applies, any adverse effects have to be managed by applying the effects management hierarchy, under policy 3.10(3). Where practicable, avoiding effects was required or recommended first. Where effects could not avoid impacts, mitigation was proposed to minimise those effects. Where possible, remediation measures were provided to reduce the overall Project impact to the site and receiving environment. This is discussed further in the Ecological evidence of **Mr Mark Hansen**.
  - c **Mr Mark Hansen** and I discussed the residual levels of effects on vegetation. We determined that the effects were not more than minor, and as such biodiversity offsetting and/or compensation were not required.
- 13.8 The objective of the NPSIB is to “*maintain indigenous biodiversity across Aotearoa New Zealand so that there is at least no overall loss in indigenous biodiversity...*” Construction of the Project could potentially remove 1.9 ha of vegetation, or 0.3% of the 670 ha SNR. The vegetation to be removed comprises a mix of exotic and indigenous vegetation with low ecological values. To remediate the effects of the Project, replacement planting is proposed that will restore indigenous biodiversity values within an area that is currently dominated by exotic species with low values.
- 13.9 Policy 2 provides for Tangata Whenua to exercise kaitiakitanga for indigenous biodiversity in their rohe. I am satisfied that provision has been made for mana whenua to comment on and influence the outcomes of the Project including preparation of a cultural values report.
- 13.10 Policy 3 requires a precautionary approach be adopted when considering adverse effects on indigenous biodiversity. In this case extensive ecological survey work has been undertaken to understand the scale, nature and composition of the indigenous biodiversity impacted by the Project, so I consider this policy has been satisfied.
- 13.11 Policy 7 is to protect SNAs by avoiding or managing adverse effects. A mitigation package commensurate with the scale or effects generated has been proposed and in my view this appropriately manages effects in this case.
- 13.12 Under Policy 10, activities that contribute to New Zealand’s social, economic, cultural and environmental wellbeing are recognised. I consider that the Project



will deliver regionally significant specified infrastructure which is operationally required to be located within an SNA.

- 13.13 Policy 13 promotes the restoration of indigenous biodiversity. A comprehensive mitigation package is proposed to restore indigenous biodiversity values within an area that is currently dominated by exotic species with low values, satisfying the requirement of this policy in my opinion.
- 13.14 Given the above, I consider that the Project is consistent with the NPS-IB.

### **Regional Policy Statement for the Wellington Region**

- 13.15 I undertook a detailed assessment of the relevant objectives and policies of the Regional Policy Statement ('RPS') in preparing section 12.4 of the AEE. Within this assessment I concluded that the project is consistent with these provisions. I do not repeat this assessment here, but instead outline what I consider to be the key provisions relevant to the Project.
- 13.16 I acknowledge that decision on Regional Policy Statement Plan Change 1 were released after the NoR was lodged and do not consider that the decision has any direct implications for the Project.

#### *Energy, Infrastructure and Waste – Objective 10*

- 13.17 This objective seeks to recognise and protect the social, economic, cultural and environmental benefits of regionally significant infrastructure. The Hutt Valley water supply network is regionally significant, and the proposed reservoir will be a key component in ensuring the on-going operation and resilience of that network. I consider that the social benefits of the proposed reservoir are significant and are considered to outweigh the potential effects during construction which are largely short-term in nature.

#### *Freshwater – Objective 12*

- 13.18 This objective seeks to safeguard the life supporting capacity of water and aquatic ecosystem functions and health. I consider that the Draft Erosion and Sediment Control Plan, submitted as Appendix F of the AEE, will minimise the discharge of sediment to freshwater and therefore minimise the potential effects on aquatic ecosystems.

*Indigenous Ecosystems – Objective 16*

- 13.19 This objective seeks to identify, protect, maintain and restore indigenous ecosystem habitats with significant biodiversity values. The Ecological Impact Assessment, submitted as Appendix G of the AEE, does not consider that either the native planted communities or introduced exotic communities to be significant and concludes that the reservoir will have a very low level of effects following mitigation provided for the loss of vegetation.

*Natural Hazards – Objective 21*

- 13.20 This objective seeks to ensure that communities are more resilient to natural hazards. The proposed reservoir will provide the operational and hazard resilience of the Lower Hutt Central and Taita Water Storage Areas (WSAs).

*Mana Whenua – Objective 28*

- 13.21 This objective seeks to maintain the cultural relationship of Māori with their ancestral lands, water, sites, wahi tapu and other taonga. A CIA prepared for Taranaki Whānui has confirmed that the proposed reservoir site has no identified Māori sites of significance in the vicinity. An Accidental Discovery Protocol will be in place in the case of any archaeological finds.

*Soils and Minerals – Objective 29*

- 13.22 This objective seeks to minimise the effects of earthworks and vegetation clearance in relation to soil erosion. The Draft ESCP sets out proposed controls that will minimise soil erosion within the site, which I consider satisfies the purpose of this objective.

**Hutt City District Plan**

- 13.23 My assessment of the relevant objectives and policies of the Hutt City District Plan ('**HCDP**') is provided in Section 12.5 of the AEE, and I consider that the Project is consistent with these provisions. Below, I consider the key provisions relevant to the Project.

*Network Utilities – Objective 13.1.1.*

- 13.24 This seeks to recognise and project the benefits of regionally significant network utilities. The Project will result in the construction and subsequent operation of a regionally significant network utility that, in my opinion, will delivery positive

outcomes, such as a safe and resilient water supply, for the communities that it serves.

*Network Utilities – Objective 13.1.3.*

- 13.25 This seeks to recognise and provide for the sustainable, secure and efficient use, operation and development of network utilities in the city. This NOR seeks to designate the site for the reservoir, which will provide for its ongoing operational requirements. The reservoir will contribute to the efficient functioning of the WSA that it services. It has also been designed to provide network resilience whilst other reservoirs within the WSA are upgraded following the completion of construction.

*Network Utilities – Objective 13.1.4.*

- 13.26 This seeks to manage any adverse effects on the environment resulting from the design, location, operation, upgrading and maintenance of network utilities. The AEE is supported by a number of technical reports that have assessed the construction and then subsequent operation of the reservoir. With appropriate mitigation being implemented it is not envisioned that the operation of the reservoir will generate any adverse effects on the environment.

*Noise – Objective 14C1.1.*

- 13.27 This seeks to maintain or enhance the amenity value of all activity areas by ensuring that the adverse effects of excessive noise on the environment are avoided or mitigated. A Construction Noise and Vibration Management Plan is proposed to mitigate construction related noise effects. During the operation of the reservoir there are no noise related effects anticipated.

*Significant Natural Resources – Objective 14E1.1.*

- 13.28 This seeks to identify and protect significant natural, cultural and archaeological resources in the city from inappropriate subdivision, use and development. The Project is not considered to be an inappropriate use of land which features a significant natural resource as it will result in the construction and subsequent operation of a regionally significant piece of infrastructure. In addition, as detailed in the ecological assessment, the identified significant natural resource features a mixture of indigenous but predominantly exotic vegetation. To address the effects associated with the Project, a comprehensive mitigation package has been proposed to address this, including replating with locally-sourced indigenous vegetation.

*Earthworks – Objective 14I1.1.*

- 13.29 This seeks to ensure that earthworks are designed to maintain the natural features that contribute to the City’s landscape. The volume of earthworks required to construct the Project has been minimised as much as possible and has been designed to follow the natural contours of the site where possible. I acknowledge that the volume of earthworks will have an impact on a ridgeline, but consider that with proposed landscaping mitigation in the form of planting that the Project will blend into the surrounding environment over time.

*Earthworks – Objective 14I1.3.*

- 13.30 This seeks to ensure that provision is made for earthworks to be carried out for services which are essential to the health and safety of the community. The earthworks proposed are necessary to enable the construction of a potable water reservoir which is an essential service for the health of the community.
- 13.31 I consider that the Project gives effect to, and is consistent with, these objectives.

**Part 2 matters**

- 13.32 As above, I have concluded that the Project is consistent with the objectives and policies of the relevant planning documents, which may mean there is less need to refer to Part 2 of the RMA.
- 13.33 However, for completeness this section of my evidence provides a summary of how the project relates to the different Part 2 matters.

*Section 6 – Matters of national importance*

- 13.34 Matters (a), (c), (d), (e) and (h) of Section 6 are relevant to the Project. I consider that the Project has recognised and provided for these matters as:
- a Where the project has interacted with a natural watercourse (i.e. Waiwhetū Stream and wetlands), substantial mitigation planting is proposed or the design has been altered so as to avoid these areas. A comprehensive landscape planting plan has also been proposed., to preserve the natural character of the stream and wetland margins, which I consider satisfies the requirements of s 6(a).
  - b Where the project intersects with the identified significant natural resource, a comprehensive mitigation package has been proposed which I believe will improve underlying character and composition of vegetation at the site.

Overall, the I am of the view that the Project will not be inconsistent with s 6(c)

- c Public access along the banks of the Waiwhetū Stream will be maintained following completion of the Project, meeting the requirement of s 6(d).
- d Wellington Water acknowledges that the environment is a taonga that must be managed carefully and that Māori have a kaitiaki responsibility and obligation of care over their communities and environments. Wellington Water has worked with the relevant iwi throughout the development of this Project to ensure that their values have been recognised and provided for, which I consider to be consistent with the requirements of s 6(e).
- e Concerns relating to natural hazards have been addressed through the seismic design of the reservoir, and the Project will contribute positively towards the resilience of the community. This contributes positively towards the management of significant risks from natural hazards, in accordance with s 6(h).

#### *Section 7 – Other Matters*

13.35 The Project has had particular regard and responded to the matters in section 7 of the RMA. In particular:

- a Kaitiakitanga and the ethic of stewardship of tangata whenua have been recognised and addressed through the engagement process followed and involvement of Taranaki Whānui in the site selection and design process, meaning the Project is consistent with s 7(a).
- b The maintenance and enhancement of amenity values and the quality of the environment is addressed in the AEE, in line with s 7(c). Potential adverse effects on amenity values including landscape, noise and air will be managed through implementation of construction management plans, adopting best practice techniques and proposed integrated ecology and landscape design and mitigation.
- c The finite characteristics of natural resources are recognised under s 7(g) through a comprehensive package of remediation measures and proposed conditions to address any effects on ecological resources.

*Section 8 – Te Tiriti o Waitangi (Treaty of Waitangi)*

- 13.36 The Project has addressed the requirement of Section 8 of the RMA through engagement with Taranaki Whānui who have identified themselves as mana whenua with an interest in the affected area. The matters raised by the iwi and within the cultural impact assessment have been addressed in the design to date. It is anticipated that that mana whenua will continue to be involved in the implementation of the Project.
- 13.37 Additional engagement with Ngāti Toa has been carried out. They identified no concerns and acknowledged that they would support Taranaki Whānui where needed with respect to this Project.

*Section 5 – Purpose*

- 13.38 I consider that the Project will enable people and communities to provide for their social, economic and cultural wellbeing and for their health and safety by:
- a Provision of additional water storage for the Lower Hutt WSA which in turn provides for future development and population growth within the region; and
  - b Delivering a secure, safe and reliable water storage solution that has a 100-year design life.
- 13.39 Sustainable management also involves the promotion of the matters in section 5(2)(a) through to (c) of the RMA. In this regard, the Project:
- a Will sustain the potential of natural and physical resources for future generations by delivering positive environmental benefits associated with reinstatement and improvement of the Eastern Hills Firebreak track, remediation of the site with eco-sourced vegetation and revegetation of the Waiwhetū Stream banks with native vegetation that will improve habitat along that portion of the stream,
  - b Is needed to meet the water supply needs of the growing population.
- 13.40 I consider that the Project will safeguard the life supporting capacity of water, soil and ecosystems through the management measures proposed. This includes treatment of stormwater discharges through best practice erosion and sediment control measures to protect soil and water quality, introduce eco-sourced planting that will improve the underlying character and composition of vegetation on site, and avoiding effects ecological values of inland wetlands by ensuring no works occur in their immediate vicinity.

## 14 Responses to submissions

14.1 Five submissions were received in relation to the Project. I have reviewed all the submissions in preparing my evidence. Where I am able to respond to the matters raised, I do this below.

### Response to Mr J Foster's submission

- 14.2 Mr Foster asks about the name of the reservoir, whether a survey marker will be affected by the reservoir's construction, whether the construction of the reservoir will impact a planned road that is to go from Upper Fitzherbert Road to Summit Road, and whether certain tracks (Wet Jandel, Waddington Winder, Judd Crescent Firebreak) will be affected by the Reservoir, and the names allocated to Māori land blocks.
- 14.3 The naming of the reservoir has been addressed in the evidence of **Mr Laurence Edwards** at paragraph 10.2.
- 14.4 Regarding the survey marker affected by the proposal – as discussed in section 3.3 of the AEE it will be relocated prior to physical works beginning on site, to a site at the head of the Farrelly Grove cul-de-sac, in agreement with LINZ.
- 14.5 My understanding is that there are no current plans for a new road to Upper Fitzherbert Road in Wainuiomata. There is no road corridor designated in the Hutt City District Plan, and it is not discussed in the Wellington Regional Growth Framework. The Hutt City 10 Year Plan 2024 – 2034 includes mention of a *“possible new east-west growth corridor between Johnsonville and Wainuiomata”* however no specific details or locations are provided and there does not appear to be any funding allocated towards this.
- 14.6 The Wet Jandel and Waddington Winder track will be closed for use during construction of the reservoir, due to health and safety concerns. The track will be reinstated upon completion of construction. The Judd Crescent Firebreak track is further away from the construction site and there is no indication this track will be affected. Appropriate signage will be in place for the duration of the work advising track users to alternative access points.
- 14.7 Mr Foster also asks about the names of allocated Māori blocks in Appendix 2 of the Cultural Impact Report. I am unable to answer this question but Mr Foster is welcome to contact the authors of the report directly to discuss the naming further.

- 14.8 Mr Foster also discusses a Māori Track that came from Wainuiomata and the possibility that this was located on the ridge where the reservoir will be built. This was not identified or discussed in the cultural report prepared by Raukura Consultants on behalf of Taranaki Whanau<sup>19</sup>.

#### **Response to Ms C Burt's submission**

- 14.9 Ms Burt asks about closing the summit road walking track and whether it will be able to be reinstated, and access for firefighting equipment and staff while construction is ongoing. Ms Burt also asks about loss of native bush, which is addressed by **Mr Mark Hansen** in his Ecology evidence at paragraph 11.2.
- 14.10 It is necessary to close the Firebreak Track walking track for the duration of construction for health and safety reasons. This is due to heavy machinery operating in close proximity to the track. Signage will be provided advising of the closed and alternative routes, and this will also be communicated in advice to the local community. Once construction is complete, the track will be reinstated on the eastern side of the reservoir and seating and signage provided. This will result in improved recreational outcomes for people using the track.
- 14.11 A meeting was held with Fire and Emergency New Zealand ('FENZ') in May 2023. They advised that they do not expect to get a fire truck up the track and that the firebreak acts as a break in vegetation to stop the spread of bushfires. They do not expect that the firebreak will be maintained during construction; however, they confirmed it will not be needed as there are other access points above the site that can be used as needed. As discussed above at paragraph b, the track will be reinstated once construction works are completed.

#### **Submissions on flooding from C Holt and R Parry**

- 14.12 Mr Holt and Mr Parry are concerned that there is a flooding risk associated with the Project. WSP Engineers have assessed the potential flooding risk. This is an assessment presented in **Appendix 1** to this evidence. The assessment concludes that:
- a Additional stormwater runoff from the increased hardstand areas is expected to be approximately 60 L/s for a 10-year ARI rainfall event. The peer-reviewed Eastern Lower Hutt model predicts that the estimated Waiwhetū Stream flow rate during the same event will be approximately 27,000 L/s. The time of concentration for the site is less than 10 minutes and therefore

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<sup>19</sup> AEE, Appendix K (Cultural Impact Report)



the peak flows from the reservoir are expected to occur much sooner than peak flows in Waiwhetū Stream. Therefore, the effect of the increased stormwater discharge is considered negligible.

- b Draining of the reservoir(s) is a planned activity and would not be undertaken concurrently with storm flow in Waiwhetū Stream.
- c Auto shut-off valves will be installed in the reservoir, so an overflow from the reservoir(s) would be an unusual occurrence, arising from control system failure, and is highly unlikely to occur concurrently with storm flow in Waiwhetū Stream.

14.13 In my view this is primarily a regional council matter, but for completeness I consider that the risk of flooding associated with the Project is less than minor. The relevant approvals are being sought during the regional resource consenting process.

#### **Response to C Holt's submission**

14.14 Mr Holt raises concerns about an active fault in the Waiwhetū Stream and potential ground instability leading to slips, and this will be discussed in the evidence of **Mr Campbell Keepa** at paragraph 8.

14.15 Mr Holt also raises concerns about the prospect of reservoir failure and raises the issue of such an occurrence in Idaho, USA and his concerns about a 15 ML uphill from properties that may flood them. I note that there is already an existing 11.3 ML reservoir on site, that was constructed in 1946 that has survived a number of large seismic events without sustaining damage. The proposed reservoir will be designed to meet the latest national seismic hazard assessment standards and built to Importance Level (IL) 4<sup>20</sup>, as discussed in the evidence of **Mr Campbell Keepa** in paragraph 7.2. The reservoir failure Mr Holt raises in the USA involved an open pond-style reservoir that was over 100 years old that had not been maintained and in my opinion is not considered relevant to what is proposed on the site.

#### **Response to R Parry's submission**

14.16 Mr Parry raises concerns that construction of a new reservoir is not a good prioritisation of spending, the location is not resilient, the noise generated during

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<sup>20</sup> AEE, Appendix C (Preliminary Design Report)

construction is unreasonable and the works will cause the Waiwhetū Stream to flood.

- 14.17 Concerns regarding the prioritisation of spending is covered in paragraph 10.3 of the evidence of **Mr Laurence Edwards**, while **Mr Campbell Keepa** discusses the suitability of the location in paragraph 9.54 of his evidence. The noise issues raised are discussed by **Mr Leonard Terry**, and flooding issues are addressed above in 16.4.

#### **Response to F and P Clarke**

- 14.18 The Clarkes' submission raises concerns around reduced property values, traffic disruption, the route of the delivery pipe.
- 14.19 Any impact on property values is not relevant to assessments under the RMA, as the causes of any impact will be already be assessed separately as individual environmental effects.
- 14.20 The potential for damage from slips and earthquakes are discussed in the evidence of **Mr Campbell Keepa**.
- 14.21 The threat of increased flooding of Waiwhetū Stream as a result of the reservoir is less than minor, as discussed in section 14.4.
- 14.22 The visual impacts of the work including the pipeline down the hill to Balgownie Grove is covered by **Dr Wendy Hoddinott**.
- 14.23 Traffic disruptions on Balgownie Grove is discussed by **Ms Hilary Fowler**.
- 14.24 The disadvantages of rerouting the pipe through a nearby reserve is discussed in the evidence of **Mr Paul Carran**.

#### **15 Response to Section 42A Officer's Report**

- 15.1 I have reviewed the Officer's Report prepared by Mr Dan Kellow dated 7 November 2024 and comment on matters relevant to my evidence.
- 15.2 I agree with the conclusion reached in the Officer's Report that the Notice of Requirement as requested by HCC should be confirmed. I also agree that having regard to the conditions proposed, effects on the environment can be either avoided, remedied or mitigated to an acceptable level.

- 15.3 The Project's traffic and transport effects were peer reviewed by an independent expert, Ms Harriet Fraser on behalf of Council. She recommended that several conditions are altered and concludes that traffic effects can be appropriately managed. In paragraph 12.3 of her evidence, **Ms Hilary Fowler** agrees with the intent and proposed changes identified and has proposed some further refinements to the wording of the conditions to provide further clarification. These can be found in **Appendix 2** of my evidence. I agree with conclusion of both experts that traffic effects can be appropriately managed and mitigated.
- 15.4 The Project's ecological effects were peer reviewed by an independent expert, Ms Tessa Roberts on behalf of Council.
- a She concluded that ecological field assessment carried out were comprehensive but felt that some species had been overlooked but if addressed appropriately, ecological effects on high value species can be managed.
  - b She felt that the loss of 0.71ha of indigenous vegetation and threatened fauna habitat has not been addressed and there is opportunity for compensation of this loss in enhancing the surrounding habitat which would result in vegetation and habitat loss suitably managed.
  - c Ms Roberts has proposed additional requirements in the recommended conditions in Officer's Report.
  - d **Mr Mark Hansen** provides a detailed response to Ms Robert's in section 12 of his evidence. Mr Hansen and I have discussed the residual levels of effects on vegetation and determined that as the residual effects were not more than minor, biodiversity offsetting and/or compensation are not required pursuant to the NPS-IB. Accordingly, it is my opinion that proposed condition 36 h) requiring enhancing of surrounding habitat through exotic species removal and enrichment planting is unnecessary as request that it is removed.
  - e In **Appendix 2**, I have provided edits to the wording of the conditions to provide further clarification. These are discussed in further detail in paragraphs 16.9 and 16.10 below.
- 15.5 Noise and vibration effects from the Project were reviewed by an independent expert, Mr Steve Arden. He concluded that the proposed conditions will appropriately address the potential noise and vibration effects of construction activities. I agree with Officer's Report which concludes that the proposed

conditions relating to noise effects are appropriate and that the noise effects are acceptable. I do not propose any changes to Council's recommended conditions.

- 15.6 The landscape and visual effects of the Project were independently reviewed by Ms Linda Kerkmeester. I agree with the Council's conclusion that immediately following construction that there will be a period where visual impacts will be high, particularly on Balgownie Grove, but note that mitigation is proposed in the form of replanting and placing pipes underground. It is my view that the proposed planting along with natural regeneration over time period of 5 years will reduce these effects substantially. I note that in section 13.1 of her evidence **Dr Wendy Hoddinott** agrees cross-referencing of conditions across management plans to ensure effective mitigation and vegetation management as proposed in Council's recommended conditions. I support this conclusion.
- 15.7 Geotechnical and Erosion and Sediment Control effects from the Project were assessed by an independent expert, Mr Adam Smith. Mr Smith considers that further investigations are required and that these should be peer reviewed and provided as part of the Outline Plan process detailed in paragraph 26.5. I note that further geotechnical testing will be undertaken as part of the detailed design process. The Officer's Report recommends conditions that require the results of this further analysis including geomorphological mapping and fully dynamic deformation analysis be submitted to HCC as part of a Project Construction Outline Plan. I note in section 10.5 of his evidence **Mr Campbell Keepa** agrees that peer review is appropriate for these findings in this instance. I agree with Council's finding that a reservoir can be appropriately designed for the site with appropriate analysis and investigation still to take place.
- 15.8 Mr Kellow concluded that the Notice of Requirement is consistent the overall objective and policies of the relevant planning documents and the purposes and principles of the RMA.

## **16 Proposed mitigation and conditions**

- 16.1 I have reviewed the conditions recommended by Mr Kellow as part of the Officer's Report. I have included an updated set of condition with my evidence as **Appendix 2** which is based on this condition set. Further refinements that I recommend are shown in red as strike-out or underline
- 16.2 I consider that the Council has largely adopted the condition that were proposed as part of the original NoR. I do however note that there are some minor changes to conditions proposed in the paragraphs below, and on the whole these

conditions are reasonably necessary to avoid, remedy or mitigate adverse effects of the Project.

### Earthworks

- 16.3 Proposed condition 16 requires that any spills on the road be cleared “*If such spills occur, the Requiring Authority shall clean the road surfaces to their original condition as soon as possible after the spill occurs and within 24 hours*”. We request that this be amended to read “*If such **any large** spills occur, the Requiring Authority shall clean the road surfaces to their original condition as soon as possible after the spill occurs and within 24 hours*”.
- 16.4 We request an amendment to this condition to ensure that this requirement only applies to large spills, as it may not be practicable for the contractor to clear smaller deposits of earth for vehicle tracking, for example, within 24 hours.

### Construction Traffic

- 16.5 Proposed condition 26 specifies what the Construction Traffic Management Plan (CTMP) must include, as a minimum. The Officer’s Report has recommended a number of amendments to and additional sub-conditions.
- 16.6 The following changes are requested, with text that is struck through to be **removed**, and text that is underlined and in red to be **added**. Text that is both underlined and struck through indicates wording that was proposed in the Officer’s Report but which I consider should be deleted/rejected.
- ...
- f. *Provision for safe and efficient access of vehicles to and from the construction site;*
    - i. ~~*Details of briefings to heavy vehicle drivers about the importance of slowing down and adhering to established speed limits when driving past any school site.*~~
  - g. **Details of induction/briefing to HCV drives associated with the construction of the reservoir, which must include:**
    - i. **Awareness of the potential risks and the importance of slowing down when driving past any school site; and**
    - ii. **Adhering to temporary and permanent speed limits at all times when driving to and from the site.**
  - h. ~~*Details of where parking will be temporarily removed; and how reasonable access to on-street parking for residents will be achieved; and*~~ **and where alternative on-street parking can be accessed; and**
  - i. ~~*Details as to where footpaths will be temporarily closed and for how long;*~~
  - j. ~~*Measures to provide for the monitoring and maintaining of the road pavements on Tilbury Street, Summit Road and Balgownie Grove during construction;*~~ **Details of the pre and post construction pavement surveys on Tilbury Street, Summit Road and Balgownie Grove during construction;**

- k. *Measures to manage staff parking so ~~that it is contained within the site~~ that it is provided off-site to avoid parking impacts on local roads;*

...

- a Condition 26 (f) (i) has been removed and replaced by a new condition (g). I consider this wording better reflects that briefings are only to be provided to drivers associated with the construction of the reservoir, and that they are expected to adhere to speed limits at all times, not just when driving past schools. This is discussed further in paragraph 11.5 of the evidence of **Ms Hilary Fowler**.
- b Condition 26 (h) has been amended to require the contractor to provide information on where alternative on-street parking can be accessed as the definition of “reasonable access” to on-street parking may differ from resident to resident making compliance difficult.
- c Condition 26 (j) requires the CTMP to provide details of pre and post construction surveys rather than just the measures to carry them out.
- d As noted in the Construction Methodology<sup>21</sup>, there will be insufficient room on site to accommodate parking for all construction staff. Instead, the Contractor will be required to provide an area off-site to accommodate staff parking that does not impact parking on local roads and transport their staff to and from the site. Condition 26 (k) has been amended to reflect this.
- 16.7 References to trucks in conditions 36 c() and l should be changed to HCV for continuity.
- 16.8 Condition 29 has been amended to clarify the route that HGV traffic should take to and from SH2 “when practicable” in the case of any road closures or diversions due to road works or accidents that may render the specified route unsuitable.

### **Ecological Management Plans**

- 16.9 Condition 34 requires a Bird Management Plan (‘BMP’) that is to be prepared to contain certain information. We request that the following minor changes be made:
- a) *The Zone of Influence for all indigenous protected species possible on site;*
- b) *The breeding active nest season for all protected species on site;*

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<sup>21</sup> AEE, Appendix D (Construction Methodology)

- c) Methodologies to determine if active nests are present prior to vegetation removal occurring and construction activities commencing that would disturb species on site (if construction were to occur during the breeding active nest season); and
- d) The management actions that will be implemented should active nests of indigenous protected species be discovered during checks (i.e. exclusion zones).
- e) Methodologies to offset the loss of any confirmed nesting habitat for threatened species
- f) Confirmation that pre clearance checks of cavities in large trees shall be undertaken during breeding active nest seasons (in case cavity nesters are present).
- g) Confirmation that pre clearance checks for karearea shall also be undertaken if vegetation clearance is to occur within the breeding active nest season

I have amended the wording to reflect that not all indigenous species are protected and some exotic species are protected. I have defined protect species as “all species of mammals, birds, amphibians and reptiles within New Zealand, other than those listed as 'Wildlife not protected' within Schedule 5 of the Wildlife Act 1953 and includes 'Terrestrial and freshwater invertebrates declared to be animals' listed in Schedule 7 of the Wildlife Act 1953”. Changes from ‘breeding season’ to ‘active nest season’ are recommended to avoid the risk of killing eggs or chicks either directly or by disturbing an adult that may abandon an active nest (which is defined as a nest containing eggs and or chicks). This is further detailed in paragraph 9.2 of the evidence of **Mr Mark Hansen**.

16.10 Condition 36 requires a Vegetation Management Plan (‘VMP’) that is to be prepared to contain certain information. We request that the following minor changes to be made:

- a Include methods to protect newly established plants remediation planting from pests;
- ...
- g Confirm that the fleshy spotted all at risk or threatened orchid species shall be searched for within the manuka/kanuka prior to any clearance works and outline procedures for the translocation and management of orchids if discovered on site prior to vegetation clearance occurring.
- ~~h — Confirm the extent and method of enhancing surrounding habitat through exotic species removal and enrichment replanting.~~

I have amended condition 36 (a) to clarify that the VMP seeks to protect remediation planting from pests rather than any newly established plants that may be growing on site prior to works commencing. We have amended condition 36 (g) to reflect sun orchid species found on site by Council’s peer review Ecologist Ms Tessa Roberts in paragraph 16 of her evidence. We request that

condition (h) is deleted. As the residual effects of vegetation removal have been found to have no more than minor effects, enhancement planting of the surrounding habitat is not considered necessary, as detailed in paragraph 12.11 of the evidence of **Mr Mark Hansen**.

16.11 I propose minor changes to specify that conditions 7, 39 and 40 to include the word “Construction Project” in front of Outline Plan. Project Construction Outline Plan has been defined in the glossary at the start of the conditions as “*An Outline Plan of Works covering construction works necessary for the Project,*” and this change seeks to differentiate this outline plan from the Enabling Works Outline Plan described in Condition 37.

16.12 I also propose minor changes for Condition 37 to clarify that this is an Enabling Works Outline Plan which is defined in the glossary as “an Outline Plan of Works covering the Enabling Works and excluding the construction works.

## **17 Other matters**

### **Other Matters – s168A(3)(d)**

17.1 I consider the Civil Defence and Emergency Management Act 2002, the HCC 10-Year Plan 2024-2034 and the HCC Reserves Strategic Direction are ‘other matters’ that I consider to be relevant to the Project and the decision maker may take them into account when making their recommendation. I have previously discussed these in section 12.5.2 of the AEE.

#### *Civil Defence and Emergency Management Act 2002*

17.2 The Civil Defence and Emergency Management Act 2002 seeks to:

- a Improve and promote the sustainable management of hazards in a way that contributes to the social, economic, cultural and environmental well-being and safety as well as the protection of property;
- b Provide for planning and preparation for emergencies and for response and recovery in the event of an emergency;
- c Require local authorities to coordinate Civil Defence and Emergency Management through regional groups across the “4Rs” (reduction, readiness, response and recovery) and encourage cooperation and joint action between those groups; and



d Encourage the coordination of emergency management across the range of agencies and organisations with responsibilities for preventing and managing emergencies.

17.3 As required by this Act, HCC has responsibilities as a lifeline utility provider, which includes ensuring that they can continue to deliver these services as best as practicable during and after an emergency and have considered and be planning for this. The Project will contribute towards HCC's responsibilities to provide water, a lifeline utility, following a natural disaster.<sup>22</sup>

*Taking the next steps: Our 10-year plan 2024-2034*

17.4 The 10-year plan sets out the initiatives and services that HCC plan to fund in the next 10 years. Throughout the plan there is an emphasis on providing funding towards three waters infrastructure to address pressures associated with a growing population and climate change. Aging water infrastructure and constrained water storage capacity is identified as key challenges to be addressed.<sup>23</sup>

17.5 The reservoir and associated pipe work is identified as a key water supply project as it responds to growth and demand, as well as the effects of climate change and natural hazards.

17.6 Funding for the Project is identified as necessary as the Project will support growth in the Hutt Valley and provide for the existing shortfall in water storage in the Central Hutt WSA. The Project is therefore consistent with the vision established in the 10-year plan.

*Reserves Strategic Directions 2016-2026*

17.7 Within the Reserves Strategic Directions document<sup>24</sup>, the site is identified as a Natural HCC Managed Reserve within the Valley Floor/Eastern Hills reserve network. Key actions for these reserves include clear wayfinding to natural areas in the Eastern Hills, pest plant control in and around bush reserves, and the restoration of the natural character of and increasing habitat for aquatic life in streams through riparian planting.

17.8 The Project will introduce some new wayfinding signage for users of the Eastern Hills, remove pest plants within the Project footprint, and introduce riparian

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<sup>22</sup> AEE, Section 12.5.2.1

<sup>23</sup> Draft Long-Term Plan 2024-2023, page 180.

<sup>24</sup> Reserves Strategic Directions 2016-2026, HCC, DOC/17/186242.

planting along a portion of the banks of the Waiwhetū Stream. I therefore consider the Project to be consistent with this document.

## **18 Conclusions**

- 18.1 The Project provides resilience for the Hutt Valley's water supply following a significant natural hazard event as well as increasing potable water storage volumes in the Lower Hutt and Taita Water Storage Areas to cater for future population growth. It will contribute to improved recreational opportunities and improve the underlying character and composition of vegetation on-site and along a portion of Waiwhetū Stream.
- 18.2 In delivering the Project, there is the potential for adverse effects to be generated. However, based on the evidence of other witnesses as well as the technical specialist reports that were prepared in support of the NoR, I consider that the effects of the Project are able to be appropriately avoided, remedied or mitigated.
- 18.3 I consider that through implementation of the proposed measures to avoid, remedy and mitigate effects on the environment, as well as the positive effects generated by the Project, that the Project is consistent with the purposes and principles of the RMA.
- 18.4 Based on the conclusion I have reached in my evidence above and in the AEE, I consider that the Project is consistent with the purpose of the RMA and has adequately addresses and provided for Part 2 matters, and is consistent with the relevant objectives and policies of the relevant planning documents. I consider that the purpose of the RMA will be achieved by confirming the designation to provide for the Project.

**Catherine Lucy Swan Crooks**

**14 November 2024**

**Appendix 1      Flooding Memo**



# Memorandum

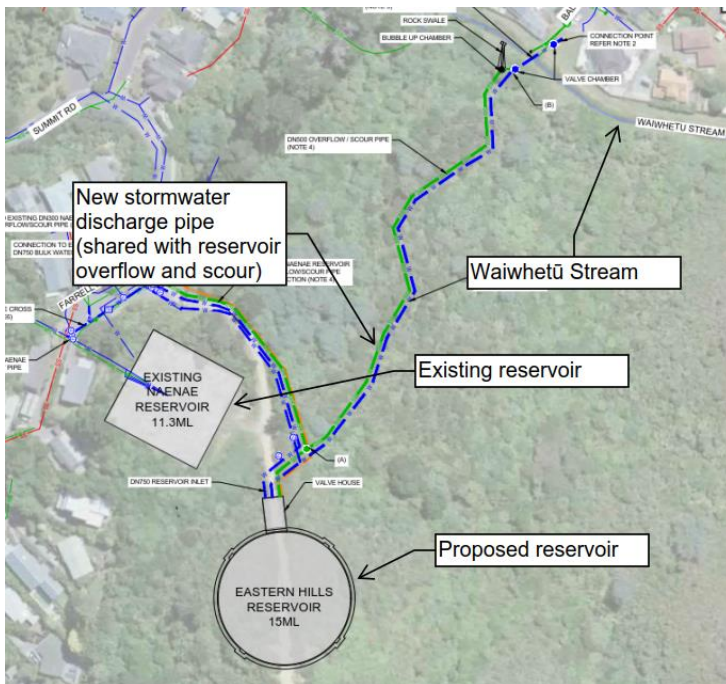
To	Cathy Crooks
Copy	File
From	Petra Burns
Office	Nelson
Date	5 November 2024
File/Ref	3-WW021.02
Subject	High level flooding assessment from increase in stormwater from the proposed Eastern Hills Reservoir

## Purpose of this Memo

A proposed water reservoir, the Eastern Hills reservoir, is to be constructed beside the existing Naenae reservoir.

The purpose of this memo is to summarise the findings of the Stormwater Impact Assessment written in response to a S92 request from HCC. This memo will only summarise the findings of the flooding assessment, to estimate the increased stormwater flow from the increase in impervious area from the proposed reservoir that will enter Waiwhetū Stream under 10-year ARI (10% AEP) and 1% AEP conditions.

## Location



### Estimated stormwater flows

- Peak flow in the Waiwhetū Stream at the stormwater outlet is estimated to be 27m<sup>3</sup>/s for a 10% AEP (based on the peer-reviewed Eastern Lower Hutt model).
- Additional peak runoff from the site due to new impervious area is approximately 60 L/s and 90 L/s for a 10% and 1% AEP respectively (allowing for climate change).
- The time of concentration for the site is less than 10 minutes and expected to occur much sooner than peak flows in the Waiwhetū Stream.

### Conclusion

Based on the time of concentration and substantial flows in the Waiwhetū Stream, the impact of the additional runoff from the project site on the receiving stream and downstream catchment is considered to be less than minor.

## Appendix 2

## Recommended Conditions

## Definitions, abbreviations, acronyms, and terms

Term	Definition
<u>Active Nest</u>	<u>A nest containing eggs and/or chicks</u>
AEE	Assessment of Environmental Effects for the Eastern Hills Reservoir Project
BMP	Bird Management Plan
CEMP	Construction Environmental Management Plan
CMO	Hutt City Council's Compliance Monitoring Officer
CNVMP	Construction Noise and Vibration Management Plan
CTMP	Construction Traffic Management Plan
Commencement of Construction	The time when the Construction Works start
Completion of Construction	Completion of reservoir earthworks, construction of the reservoir, restoration of the reservoir site and access track, and completion of planting in accordance with the LCP (but not including any further planting that may be required during the maintenance and monitoring period under the VMP)
Construction Works	Activities undertaken to construct the Eastern Hills Reservoir, excluding Enabling Works, up to Completion of Construction
dB	Decibel
Enabling Works	Includes the following and similar activities in relation to the Project: <ul style="list-style-type: none"> <li>• Geotechnical investigations and land investigations</li> <li>• Site establishment activities including site yards, site offices, fencing, and formation of site access points</li> <li>• Construction of site access road</li> <li>• Ecological surveys and any necessary relocations</li> <li>• Vegetation protection</li> <li>• Construction and installation of erosion and sediment control measures</li> <li>• Establishment of mitigation measures (such as screening, bunds, noise walls)</li> <li>• The detailed scope of enabling works specified in Section 4 of the Notice of Requirement for a New Designation in relation to the Project dated 26/02/2024.</li> </ul>
<u>Enabling Works Outline Plan</u>	<u>An Outline Plan of Works covering the Enabling Works and excluding the construction works</u>
ESCP	Erosion and Sediment Control Plan
GWRC	Greater Wellington Regional Council, including any officer of Greater Wellington Regional Council
HCC	Hutt City Council in its capacity as territorial authority or regulator
<u>HCV</u>	<u>Heavy Commercial Vehicle, including all truck and trailer units</u>
LCP	Landscape Concept Plan
LMP	Lizard Management Plan
Material Change	Material change will include amendments to any base information informing the management plan which has the potential to materially increase adverse effects on a particular receiver, or on the environment. For clarity, changes to personnel, contact schedules and other administrative changes do not constitute a material change.

Term	Definition
Outline Plan	An Outline Plan of Works prepared in accordance with section 176A of the Resource Management Act 1991
Project	The design, construction, maintenance, and operation of the Eastern Hills Reservoir as in the AEE and these designation conditions
<u>Project Construction Outline Plan</u>	<u>An Outline Plan of Works covering the Construction Works necessary for the Project, and excluding Enabling Works.</u>
Requiring Authority	Hutt City Council in its capacity as the owner of the Project
<u>Protected Species</u>	<u>All species of mammals, birds, amphibians and reptiles within New Zealand, other than those listed as 'Wildlife not protected' within Schedule 5 of the Wildlife Act 1953 and includes 'Terrestrial and freshwater invertebrates declared to be animals' listed in Schedule 7 of the Wildlife Act 1953</u>
Suitably Qualified Person	A person (or persons) who can provide evidence to demonstrate their suitability and competence in the relevant field of expertise and put those skills and knowledge into practice in order to perform a job in an effective and efficient manner to an established standard.
VMP	Vegetation Management Plan
Working day	Has the same meaning as under Section 2 of the Resource Management Act 1991

## Key

Text that is underlined in black is proposed to be added by Hutt City Council

~~Text~~ that is in red and struck through is proposed to be deleted by Wellington Water

Text that is underlined in red is proposed to be added by Wellington Water



## General Conditions

1. Except as modified by the conditions below, and subject to final design and Outline Plan(s), the Project shall be undertaken in general accordance with the information provided by the Requiring Authority in the Notice of Requirement and supporting documents being:
  - i) The Description of the Project provided in Part B of the AEE Report prepared by Connect Water titled 'Notice of Requirement for a New Designation. Project Name: Eastern Hills Reservoir', dated 26/02/2024; and
  - ii) The Project's Technical Assessment Reports, Appendix A – Appendix Q, of the Notice of Requirement for a New Designation; and
  - iii) The following "Notice of Requirement Plans prepared by Connect Water (Drawing Set 3-WW021.02\_C000).

*NOTE: Where there may be contradiction or inconsistencies between the application and any further information provided by the applicant, the most recent information applies. Where there is conflict between the documents listed above and these designation conditions, these conditions shall prevail.*

2. The Project must be undertaken in accordance with any management plans required to be prepared under these conditions.
3. Other than as specified in, and required by, Conditions 1 & ~~41-41~~ (ongoing monitoring and management), all other conditions relate to the Construction Works of the Project only apply to construction activities. After the Completion of Construction, these conditions will no longer apply and can be removed as part of any subsequent District Plan review or change. For the avoidance of doubt, none of these conditions, Conditions 2 to ~~39 41~~ inclusive, prevent or apply to works required for the ongoing operation or maintenance of the Reservoir.
4. As soon as reasonably practicable following the Completion of Construction of the Project, the Requiring Authority shall:
  - a) Review the area designated for the Project
  - b) Identify any areas of designated land that are no longer necessary for the on-going operation or maintenance of the Project or for ongoing mitigation measures
  - c) Give notice to HCC in accordance with section 182 of the RMA seeking the removal of those parts of the designation identified under (b) above.
5. The Requiring Authority shall submit to the CMO at least 2 months prior to Commencement of Construction, a detailed programme outlining:
  - a) The proposed staging of the Construction Works
  - b) The anticipated submission dates of the management plans and outline plans required by these conditions
6. The Requiring Authority shall arrange and conduct an on-site meeting including the Project representative and appropriate contractor representative(s) and the CMO at least 10 working days prior to the Commencement of Construction. The following information shall be made available at the meeting:
  - a) Timeframes for key stages of the Construction Works;

- b) Details of the Project representative(s), including their contact details (phone and email address); and
- c) Contact details of the site contractor and other key contractors.

*Note: In the case that any of the invited parties, other than the representative of the Requiring Authority and the contractor, do not attend this meeting, the Requiring Authority will have complied with this condition, provided the CMO is invited 5 days in advance of the on-site meeting occurring.*

- 7. A **Project Construction** Outline Plan(s) shall be submitted to HCC unless a waiver for this requirement is provided in writing by the HCC.

## Certification of Management Plans

- 8. The Construction Works management plans listed in clause (a) shall be submitted to HCC for certification. The certification process shall be confined to confirming that the Management Plan meets the requirements of the relevant management plan conditions(s). The preparation of all management plans required by these conditions shall be undertaken by a Suitably Qualified Person.
  - a) The following plans shall be submitted for certification:
    - i. Construction Environmental Management Plan (**CEMP**);
    - ii. Construction Noise and Vibration Management Plan (**CNVMP**);
    - iii. Construction Traffic Management Plan (**CTMP**);
    - iv. Landscape Concept Plan (**LCP**);
    - v. Bird Management Plan (**BMP**);
    - vi. Vegetation Management Plan (**VMP**); and
  - b) If twenty (20) working days have passed since the management plan has been provided to HCC under clause (a) above, and the Requiring Authority has not received a response from HCC, the Management Plan shall be deemed to be certified.
  - c) If the HCC's response is that they are not able to certify the Management Plan, the they shall provide reasons and recommendations for changes to the management plan in writing. The Requiring Authority shall consider any of the reasons and recommendation of HCC and resubmit an amended Management Plan to be certified.
  - d) If the Requiring Authority has not received a response from HCC within ten (10) working days of the date of resubmission under clause (c) above, the amended Management Plan will be deemed to be certified.
  - e) Any certified management plan may be updated or revised to reflect any changes in design, construction methods or management of effects:
    - i. Any material changes are to be submitted to HCC for certification as soon as practicable following identification of the need for an update or revision. If the Requiring Authority has not received a response from HCC within ten (10) working days of submitting the revised information, the management plan will be deemed to be certified. Any material changes may not be implemented until certified by HCC.
    - ii. Except for material changes, management plans may be amended to reflect any changes in design, construction methods or management of effects and

submitted to Hutt City Council for information, without the need for recertification.

- f) No Construction Works may commence until all management plans that relate to those Construction Works or relevant stage(s) of works have been certified by the HCC or are deemed certified in the absence of a response from HCC.

## Construction Environmental Management

- 9. The Requiring Authority shall not commence Construction Works (or relevant stage of Construction Works, if the works are carried out in stages) until a Construction Environmental Management Plan (**CEMP**) has been certified by HCC, in accordance with condition 8, confirming that the CEMP satisfies the requirements of Condition 10.
- 10. The purpose of the CEMP is to set out the management procedures and construction methods to be undertaken to avoid, remedy or mitigate any adverse effects associated with the Construction Works. To achieve the purpose, the CEMP must include details of:
  - a) Construction methodologies and construction timeframes, including staging;
  - b) Working hours, which should generally be 7:30am to 6:00pm Monday to Saturday except as otherwise provided for under condition 18;
  - c) The roles and responsibilities of staff and contractors;
  - d) Details of the project manager and the Project representative(s), including their contact details (phone and email address);
  - e) The proposed site layouts (including construction yards), locations of refuelling activities and construction lighting;
  - f) Methods for providing for the health and safety of the general public;
  - g) Procedures for incident and complaint management and reporting including details of who can be contacted to report complaints throughout the duration of the Construction Works;
  - h) The complaints register that shall be maintained for the duration of the works detailing complaints received alleging adverse effects from, or related to, the works;
  - i) Procedures for how complaints are to be addressed;
  - j) Details of where machinery operations must be excluded, to ensure minimal disturbance of these areas; and
  - k) Details of where temporary signage shall be installed during construction of the Project, which informs the general public of the works, including alternative access points for accessing the Eastern Hills recreational area.
- 11. The Requiring Authority must implement the certified CEMP (with any amendments) for the duration of the Construction Works.
- 12. The Requiring Authority must ensure that a copy of the certified CEMP, including any amendments made in accordance with the process specified in Condition 8, is kept onsite and this copy is updated within 10 working days of any amendments being certified by, or provided to, the HCC.

## Earthworks

- 13. The Requiring Authority must submit an Erosion and Sediment Control Plan (ESCP) to the Hutt City Council for information once it has been certified by the Greater Wellington Regional Council.

14. The Requiring Authority shall stabilise all areas exposed by earthworks, trenching or building work as soon as possible after excavation or, at the latest, within one month of completing earthworks.
15. The Requiring Authority shall ensure all Construction Works, including any earthworks, are carried out in a manner that controls dust travelling beyond site boundaries to the extent that it does not cause a nuisance or hazard.
16. The Requiring Authority shall ensure that vehicles and machinery leaving the site do not deposit earth or other material in or on road reserve, the road surfaces or surrounds. If ~~such~~ **any large** spills occur, the Requiring Authority shall clean the road surfaces to their original condition as soon as possible after the spill occurs and within 24 hours.
17. Prior to the Commencement of Construction Works, a stabilised vehicle crossing shall be installed at the site entrance(s) for the Construction Works and/or suitable wheel wash facilities on site so that earth material from the site is not tracked onto the road.

## Construction Noise and Vibration

18. The Requiring Authority shall not commence Construction Works until a Construction Noise and Vibration Management Plan (**CNVMP**) has been certified by HCC, confirming that the CNVMP satisfies the objective established in this condition (condition 18) and the requirements of conditions 19 to 24. Certification shall occur in accordance with the process set out in Condition 8. The objective of the CNVMP is to provide a framework for the development and implementation of the Best Practicable Option for the management of Construction Works noise and vibration effects, and to set out how compliance with the construction noise and vibration standards set out in Conditions 23 and 24 below will be achieved as far as practicable.
19. The purpose of the CNVMP is to provide methods to manage noise and vibration appropriately for a variety of circumstances within the project site by outlining the measures, procedures and standards for mitigating the effects of noise and vibration during construction of the Project. The CNVMP must include, as a minimum:
  - a) A description of the likely construction noise and vibration emissions anticipated as a result of construction activities;
  - b) A description of the construction work, anticipated equipment and processes and their scheduled durations;
  - c) A description of noise or vibration suppression devices to be used on equipment or processes;
  - d) The normal hours of operation being 7:00 am till 6:00pm Monday to Saturday, with noisy activities restricted prior to 7.30am;
  - e) The construction noise and vibration criteria that apply for the Project, which must be consistent with those standards specified in NZS 6803:1999 'Acoustics – Construction Noise' (Condition 23) and BS 5228-2:2009 Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration (Condition 24);

- f) Identification of affected houses and other Noise Sensitive Receptors where noise and vibration criteria apply, including a list of Noise Sensitive Receivers (as defined in NZS 6803:1999 'Acoustics – Construction Noise');
- g) Requirements for monitoring road surface condition to minimise noise and vibration from trucks travelling over potholes and uneven surfaces;
- h) Methods and frequency for monitoring and reporting on construction noise and vibration to HCC;
- i) Procedures for maintaining contact with stakeholders, notifying of proposed construction activities, and handling of noise and vibration complaints (consistent with the complaints procedures and complaints register within the CEMP);
- j) Where compliance with the criteria in Conditions 23 and 24 may not be achieved, a description of alternative mitigation strategies that will be used;
- k) The requirement for pre-construction building inspections at locations close to activities generating significant vibration, prior to and after completion of construction and processes for repair of any damage caused by the Work;
- l) Construction equipment operator training procedures and expected construction site behaviours; and
- m) Contact numbers for key construction staff, and staff responsible for noise assessment and the CMO(s).
- n) Procedures for community liaison,
- o) Where practicable, based on the phasing of works, a 3 metre high site hoarding shall be constructed around the boundary of the construction site. The site hoarding shall be designed and constructed to act as a noise barrier and be maintained for the duration of the project.

20. Where Construction Works require night-time works, the CNVMP must address the following matters:

- a) The arrangement for night works, including:
  - i. Enhanced communication procedures with residents on Summit Road identified as PPFs in the Noise and Vibration Assessment submitted with the application;
  - ii. Scheduling in respite periods (e.g., a maximum of 3 consecutive nights of works).
- b) Controls to minimise the occurrence of events generating intermittent sounds such as reverse beepers, shouting, or whistling.

21. The Requiring Authority must implement the certified CNVMP (with any amendments) for the duration of the Construction Works.

22. The Requiring Authority must ensure that a copy of the certified CNVMP, including any amendments, is kept onsite and this copy is updated within 10 working days of any amendments being made.

23. 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 as far as practicable:

Day of week	Time	dB L <sub>Aeq</sub> (15min)	dB L <sub>AFmax</sub>
<b>Noise Criteria at Residential Neighbours</b>			
Weekdays	0630 – 0730	55	75
	0730 – 1800	70	85
	1800 – 2000	65	80
	2000 – 0630	45	75
Saturdays	0630 – 0730	45	75
	0730 – 1800	70	85
	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

24. Vibration from the Construction Works must comply with the following criteria as far as practicable:

Receiver	Details	Category A	Category B
<b>Noise Criteria at Residential Neighbours</b>			
Occupied Activities sensitive to vibration	Night-time 2000h – 0630h	0.3mm/s ppv	1mm/s ppv
	Daytime 0630h – 2000h	1mm/s ppv	5mm/s ppv
Other occupied buildings	Daytime 0630h – 2000h	2mm/s ppv	5mm/s ppv
All other buildings	At all other times Vibration – transient	5mm/s ppv	BS 5228-2* Table B2
	At all other times Vibration – continuous	5mm/s ppv	BS 5228-2* 50% of Table B2 values

BS 5228-2:2009 *Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration*

**Advice Note:** For vibration measurements, reference should be made to BS 5228-2 and DIN 4150-3. For additional guidance on measurement techniques, reference can be made to BS 6472-1 in relation to human annoyance and ISO 4866:2010 for building damage.

## Construction Traffic

25. The Requiring Authority shall not commence Construction Works until a Construction Traffic Management Plan (**CTMP**) has been certified by Hutt City Council confirming that the CTMP satisfies the requirements of Condition 26, 27, and 28. Certification shall occur in accordance with the process set out in Condition 8. The objective of the CTMP is to avoid, remedy or mitigate, as far as practicable, adverse construction traffic effects of the Project on the availability of kerbside parking, damage to the roading surface, property access, traffic safety and efficiency during construction.

26. The CTMP must include, as a minimum:

- a) Measures to minimise the disruption to users of local travel routes;
- b) Temporary traffic management measures required to manage impacts on road users during the proposed construction works including signage and traffic control;

- c) Measures to maintain safe existing vehicle access to adjacent properties including safe sight lines where trucks or materials are parked or stored in the carriageway;
  - d) Any proposed temporary changes in speed limits;
  - e) Measures to control HCV so that two HCVs are not travelling in opposite directions along Summit Road or Tilbury Street at any one time including detailing appropriate waiting locations;
  - f) Provision for safe and efficient access of vehicles to and from the construction site;  
~~i. Details of briefings to heavy vehicle drivers about the importance of slowing down and adhering to established speed limits when driving past any school site.~~
  - g) Details of induction/briefing to HCV drivers associated with the construction of the reservoir, which must include:
    - i. Awareness of the potential risks and the importance of slowing down when driving past any school site; and
    - ii. Adhering to temporary and permanent speed limits at all times when driving to and from the site.
  - h) Details of where parking will be temporarily removed; ~~and how reasonable access to on-street parking for residents will be achieved; and where alternative on-street parking can be accessed; and~~
  - i) Details as to where footpaths will be temporarily closed and for how long;
  - j) ~~Measures to provide for the monitoring and maintaining of the road pavements on Tilbury Street, Summit Road and Balgownie Grove during construction; Details of the pre and post construction pavement surveys on Tilbury Street, Summit Road and Balgownie Grove during construction;~~
  - k) Measures to manage staff parking so that it is contained within the site that it is provided off-site to avoid parking impacts on local roads;
  - l) Details of the Temporary Traffic Management needed to ensure the safe movement of trucks HCVs, including truck and trailer units through the Summit Road intersection with Tilbury Street.;
27. The Requiring Authority shall carry out a preconstruction survey of the road pavement, footpath pavement on Summit Road, Tilbury Street and Balgownie Grove and the Tilbury Street bridge prior to the commencement of Construction Works. The methodology for the survey is to be agreed with the Road Asset Manager. Prior to the Construction Works commencing, the preconstruction survey shall be supplied to the Road Asset Manager.
28. Following completion of the Construction Works, the Requiring Authority shall complete a postconstruction survey of Summit Road, Tilbury Street, and Balgownie Grove and the Tilbury Street bridge. The Requiring Authority shall contribute a fair and reasonable cost, as determined by a Suitably Qualified Person, towards repair and maintenance of Summit Road and, Tilbury Street, Balgownie Grove and the Tilbury Street bridge should damage to the road be attributable to the Construction Works.
29. All HGV traffic carrying goods (including bulk materials) that will utilise SH2, either travelling North or South,, shall use the Kennedy Good Bridge, Fairway Drive, Daysh Street route to avoid HGVs travelling through the Hutt CBD to access either the Melling or Dowse interchanges. All HGV construction traffic that will utilise SH2, travelling to or from the North

or South, shall use the Kennedy Good Bridge, Fairway Drive, Daysh Street route when practicable.

## Landscape, Visual Amenity and Natural Character

30. The Requiring Authority shall not commence Construction Works until a Landscape Concept Plan (**LCP**) developed in partnership with Taranaki Whānui ki Te Upoko o Te Ika has been certified by HCC, confirming that the LCP satisfies the requirements of Condition 31. Certification shall occur in accordance with the process set out in Condition 8. The objective of the LCP is to avoid, remedy or mitigate adverse landscape visual effects associated with the construction and operation of the Project on nearby receivers.

31. The LCP must, as a minimum, include:

- a) Ensure that the Project's landscape treatments are context-sensitive in terms of acknowledging Taranaki Whānui ki Te Upoko o Te Ika values, land use, sense of place and the viewing audience;
- b) Details of the final earthworks levels, including confirming that they will integrate with adjacent topography, and provide appropriate revegetation conditions and include specific details for the revegetation of the cut face;
- c) Details of the replaced pathways through the site including the location of replacement signage;
- d) Appropriate design treatment(s) to support safety and wayfinding;
- e) Consideration of CPTED (Crime Prevention Through Environmental Design) principles in relation to the project;
- f) Identification of vegetation to be retained, including retention of as many as practicable significant trees and areas of regenerating indigenous vegetation;
- g) Protection measures for vegetation to be retained;
- h) Identification of proposed planting including plant species, plant/grass mixes, spacing/densities, sites (at time of planting) and layout and planting methods;
- i) Details of the proposed planting that is to occur within the riparian margin of the Waiwhetū Stream;
- j) Planting programme detailing the staging of planting in relation to the construction programme which shall, as far as practicable, require planting to occur within the first planting seasons following completion of the Construction Works;
- k) Details of how the input of a suitably qualified ecologist has provided input so that ecological benefits are attained via the proposed planting; and
- l) The proposed maintenance of plantings, including the replacement of unsuccessful plantings.
- m) Detail how vegetation clearance, salvage, stockpiling and its reuse/spread on site, will be managed under the supervision of an ecologist and/or landscape architect, including the salvage of indigenous plant material and forest duff (topsoil layer) as part of the earthworks stage. *Note: This clause is redundant if the Vegetation Management Plan has already been certified*



## Ecological Management Plans

32. At least 10 days prior to any works on land identified as lizard habitat, the Requiring Authority shall provide a copy of the Lizard Management Plan and a copy of the permit obtained under Wildlife Act 1953, as certified by the Department of Conservation, to the CMO for their records.
- The Requiring Authority shall undertake the works in accordance with the Lizard Management Plan and any conditions of the permit obtained under the Wildlife Act 1953.
33. The Requiring Authority shall not commence Construction Works until a Bird Management Plan (**BMP**) has been certified by Hutt City Council confirming that the **BMP** satisfies the requirement of Condition 34. The objective of the **BMP** is to avoid, remedy or mitigate the potential adverse effects of the Project on birds.
34. The BMP must include, as a minimum:
- The Zone of Influence for all indigenous protected species<sup>1</sup> possible on site;
  - The breeding active nest<sup>2</sup> season for all protected species on site;
  - Methodologies to determine if active nests are present prior to vegetation removal occurring and construction activities commencing that would disturb species on site (if construction were to occur during the breeding active nest season); and
  - The management actions that will be implemented should active nests of indigenous protected species be discovered during checks (i.e. exclusion zones).
  - Methodologies to offset the loss of any confirmed nesting habitat for threatened species
  - Confirmation that pre clearance checks of cavities in large trees shall be undertaken during breeding active nest seasons (in case cavity nesters are present).
  - Confirmation that pre clearance checks for karearea shall also be undertaken if vegetation clearance is to occur within the breeding active nest season
35. The Requiring Authority shall not commence Construction Works until a Vegetation Management Plan (**VMP**) has been certified by Hutt City Council confirming that the **VMP** satisfies the requirements of Condition 36. The objective of the **VMP** is to avoid, remedy or mitigate the potential adverse effects of the Project on indigenous vegetation.
36. The **VMP** must, as a minimum:
- Include methods to protect newly established plants remediation planting from pests;

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<sup>1</sup> for the purposes of these conditions all species of mammals, birds, amphibians and reptiles within New Zealand, other than those listed as 'Wildlife not protected' within Schedule 5 of the Wildlife Act 1953 and includes 'Terrestrial and freshwater invertebrates declared to be animals' listed in Schedule 7 of the Wildlife Act 1953

<sup>2</sup> A nest containing eggs and/or chicks

- b) Detail a suitable annual monitoring and maintenance schedule for 5 years following completion of the Project to ensure canopy closure and plant survivorship occurs;
- c) Identify those areas of indigenous vegetation lost during site clearance activities;
- d) Identify those areas on site where remediation of indigenous vegetation will occur; and
- e) Identify where riparian planting is proposed along the banks of the Waiwhetū stream.
- f) Detail how vegetation clearance, salvage, stockpiling and its reuse/spread on site, will be managed under the supervision of an ecologist and/or landscape architect, including the salvage of indigenous plant material and forest duff (topsoil layer) as part of the earthworks stage.
- g) Confirm that ~~the fleshy spotted all at risk or threatened~~ orchid species shall be searched for ~~within the manuka/kanuka~~ prior to any clearance works and outline procedures for the translocation and management of orchids if discovered on site prior to vegetation clearance occurring.
- ~~h) Confirm the extent and method of enhancing surrounding habitat through exotic species removal and enrichment replanting.~~

37. An Enabling Works Outline Plan(s) must be prepared and submitted to Hutt City Council in accordance with section 176A of the RMA for enabling works that are not otherwise a permitted activity pursuant to the Hutt City District Plan (unless the requirement is waived by Hutt City Council) prior to the Project Construction Outline Plan.

In addition to the matters required by section 176A(3) of the RMA, the Enabling Works outline plan(s) ~~(Enabling Works)~~ must:

- a) Detail the purpose for undertaking the Enabling Works activity prior to the Construction Works;
- b) Detail the mitigation required, and an appropriate timescale for implementing that mitigation, if an enabling work occurs and the project does not commence; and
- c) Address the requirements of ecological management plans if ecological surveys and relocations are required.

The Enabling Works Outline Plan(s) ~~(Enabling Works)~~ is not required to include:

- d) The management plans required by Condition 8(a).

## Accidental Discovery

38. At least 15 Working Days prior to Construction Works commencing, the Requiring Authority shall prepare an accidental discovery protocol and provide a copy to HCC for information. The protocol shall be implemented in the event of the accidental discovery of cultural or archaeological artefacts or features during construction of the Project. The protocol shall include, but not be limited to:

- a) Identification of parties to be notified in the event of an accidental discovery, who shall include, but need not be limited to, Taranaki Whānui ki Te Upoko o Te Ika, Te Rūnanga o Toa Rangatira, Heritage New Zealand Pouhere Taonga, HCC, and if koiwi are discovered, the New Zealand Police.
- b) Setting out procedures to be undertaken in the event of an accidental discovery, which shall include the cessation of Construction Works in the vicinity of the discovery until authorised to proceed.

- c) Training procedures for all contractors regarding the possible presence of cultural or archaeological sites or material, what these sites or material may look like, and the relevant procedures if any sites or material are discovered.

## Earthworks – Site stability

- 39. Further investigations and geomorphological mapping are required to be submitted as part of the **Project Construction** Outline Plan.

*Note: Hutt City Council will have this information peer reviewed by an external experienced chartered geo-professional.*

- 40. A fully-dynamic deformation analysis shall be undertaken showing that a seismic resilient engineered solution can be constructed at the site. The analysis shall be submitted to Hutt City Council as part of the **Project Construction** Outline Plan.

*Note: Hutt City Council will have the information peer reviewed by an external experienced chartered geo-professional.*

## Ongoing Monitoring and Management

- 41. Notwithstanding Condition 8, monitoring and management measures required by the following management plans must remain in place for 5 years once Construction Works are complete:
  - a) Condition 30, **LCP**;
  - b) Condition 32, **LMP**;
  - c) Condition 35, **VMP**.