

## Non-notified resource consent application report and decision

### Summary of decision

<b>File Reference:</b>	WGN180065
<b>Date Granted:</b>	16 February 2018
<b>Applicant:</b>	Wellington City Council PO Box 2199 Wellington 6140 Attention: David Chick
<b>Agent:</b>	Beca PO Box 3942 Wellington 6140 Attention: Mhairi Rademaker
<b>Decision made under:</b>	Section 104B, 105, 107, 108 of the Resource Management Act 1991 (the Act)
<b>Consents Granted:</b>	<b>Operative Regional Plans</b> <b>[35008]: Discretionary activity</b> Water Permit to take and use groundwater for the purposes of dewatering excavations, dust suppression and other purposes related to the construction of the Omāroro Reservoir.  <b>[35009]: Discretionary activity</b> Discharge Permit to discharge stormwater runoff from areas of bulk earthworks and de-watered groundwater both treated with chemical flocculants, to land, the stormwater network or directly to water related to the construction of the Omāroro Reservoir.  <b>[35010]: Discretionary activity</b> Land use consent to excavate land that may intercept groundwater (bore) required to construct the Omāroro Reservoir.

## **Proposed Natural Resources Plan**

### **[35008]: Discretionary activity**

Water Permit to take and use groundwater for the purposes of dewatering excavations, dust suppression and other purposes related to the construction of the Omāroro Reservoir.

### **[35009]: Discretionary activity**

Discharge Permit to discharge stormwater runoff from areas of bulk earthworks and de-watered groundwater both treated with chemical flocculants, to land, the stormwater network or directly to water related to the construction of the Omāroro Reservoir.

### **[35010]: Discretionary activity**

Land use consent to undertake bulk earthworks of an area of more than 3,000 m<sup>2</sup>, required to construct the Omāroro Reservoir.

#### **Activity:**

Activities related to the construction of the 35,000 m<sup>3</sup> Prince of Wales/Omāroro water supply reservoir, specifically:

- Bulk earthworks exceeding 3,000m<sup>2</sup> in area, including the excavation of land that may intercept groundwater (bore) and the deposition of excavated material (cleanfill) to raise the levels of playing fields;
- The take and use of groundwater for the purposes of dewatering excavations, dust suppression and construction activities; and
- The discharge of treated stormwater runoff and de-watered groundwater that has been treated with chemical flocculants, to land, the stormwater network or directly to water

#### **Location:**

Prince of Wales Park, Mount Cook, Wellington

#### **Map Reference:**

At or about map reference NZTM 1748275.5425827

#### **Legal Description:**

Part Lot 2 DP 10337

#### **Duration of Consents:**

10 years to expire on 16 February 2028  
10 year lapse period requested and granted.

#### **Consent conditions:**

Attachment 1

**Processing timeframes:**

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<b>Application lodged:</b>	18.09.17	<b>Application officially received:</b>	18.09.17
<b>Application stopped:</b>	13.11.17	<b>Application started:</b>	07.12.17
<b>Applicant to be notified of decision by:</b>	16.02.18	<b>Applicant notified of decision on:</b>	16.02.18
<b>Time taken to process application:</b>	20 working days, with a 52 day time extension under s37A(5) with the applicant's agreement		

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**Decision:**

Decision recommended by:	Rachael Boisen Round	Resource Advisor, Environmental Regulation	
Decision peer reviewed by:	Doug Fletcher	Resource Advisor, Environmental Regulation	
Decision approved by:	Jo Frances	Team Leader, Environmental Regulation	



# Reasons for decision report

## 1. Background and proposal

### 1.1 Background

Wellington Water Limited (WWL) on behalf of the Wellington City Council (WCC) has applied for resource consents for activities associated with the construction of a water supply reservoir at Prince of Wales Park, within the Wellington Town Belt, Mount Cook, Wellington. WWL will also be responsible for the operation and maintenance of the Prince of Wales/Omāroro Reservoir on behalf of WCC.

On 27 September 2017, WCC publicly notified the notice of requirement under S168A of the RMA for the change in designation for an area within the Prince of Wales Park to be used for the construction, operation and maintenance of the reservoir. The applicant plans to apply for the relevant resource consents from WCC (including earthworks, traffic, noise, vegetation removal, under the NESCS if required etc.) following the designation process. A joint decision was made in the pre-application stages to separate the WCC and GWRC resource consent processes.

The reservoir is required to service the Wellington Low Level Water Supply Zone, which provides potable water to approximately 70,000 residents and a range of commercial, industrial and community facilities. The applicant states that the reservoir has been designed to be able to continue operation following a 1,000 year return period earthquake and to retain water (i.e. not collapse or cause harm to people) for a 2,500 year return period earthquake.

The proposed circular concrete reservoir structure will have an approximate capacity of 35,000m<sup>3</sup> (35ML), a footprint of 3,800m<sup>2</sup> (reservoir) or 4,000m<sup>2</sup> (reservoir and pipe tunnel), an internal diameter of 67m, and a wall height of 12.1m and total height of 15.5m. The reservoir has been designed to be completely buried with the exception of two small access hatches on the roof of the reservoir, a 2.5m x 2.5m doorway and 10m wide service access area to the reservoir's buried service and pipe tunnel.

Further background to the project, the preliminary design details for the reservoir structure, and the site selection summary are contained within Appendices B, C and D of the application, respectively.



Figure 1: diagram showing proposed location of Omāroro Reservoir

## 1.2 Proposed construction activities

The applicant has applied to GWRC for the following consents related to the construction of the proposed Omāroro Reservoir:

- A water permit to take groundwater for the purposes of dewatering excavations, which will be discharged and/or used for dust suppression and general construction activities;
- A discharge permit to discharge stormwater runoff from areas of bulk earthworks and de-watered groundwater - both treated with chemical flocculants, to land, the stormwater network, or directly to water.
- A land use consent for earthworks of a contiguous area of more than 3,000 m<sup>2</sup>, including the excavation of land that may intercept groundwater (bore).

The activities requiring resource consent from GWRC are detailed further in the following sections.

### 1.2.1 Earthworks required

Bulk earthworks are proposed to take place over an area of up to four hectares. There are three potential earthworks scenarios detailed in the application, with variations explained by differing volumes that are used on-site for raising the playing fields.

The applicant states that the earthworks (excluding topsoil and bulking volumes) will necessitate approximately:

- 56,000m<sup>3</sup> of material to be excavated from the reservoir site;
- 25,000m<sup>3</sup> of suitable material stockpiled (up to 5.5m high) on the upper and/or lower playing fields to be used as backfill once the reservoir is constructed;
- 5,500m<sup>3</sup> of earth/rock material imported for use as fill material, reservoir foundations and drainage material;
- Up to 16,000m<sup>3</sup> used on-site to raise the playing field/s; and
- With the remainder (which will vary in volume between 14,700-30,800m<sup>3</sup>) of material disposed of offsite at a facility that can accept cleanfill material

The applicant plans to use the Rolleston Street entrance for heavy vehicles and the Salisbury Terrace entrance for light vehicles and car parking.

### 1.2.2 Raising the playing field levels

The upper playing field has been identified in the applicant's preliminary design documentation as the ideal location for material storage and stockpiles (possibly up to 5.5m high). The applicant also states that the earthworks required to construct the reservoir may generate over 30,000 m<sup>3</sup> of excess material. The applicant states that these matters cause issues in terms of costs for off-site disposal, traffic movements, visual amenity and space for storage and car parking.

In order to resolve these issues, the applicant proposes to use both the upper and lower fields during construction, distributing the stockpiles over both fields, and to potentially spread excess material over one/both fields to raise their levels. Appendix C of the application outlines the potential options for raising the playing fields levels in detail, including proposed drainage and retaining wall structures, which can be summarised as:

- a) Raising the upper sports field (only) by up to 1.5m using approximately 8,000m<sup>3</sup> of suitable material. The surplus material (approximately 22,700m<sup>3</sup>) will be transported and disposed of off-site.
- b) Raising the levels of both the upper and lower sports fields by up to 1.5m using approximately 16,1000m<sup>3</sup> of additional suitable excavated material. The surplus material (approximately 14,700m<sup>3</sup>) will be transported and disposed of off-site.

### 1.2.3 Dewatering activities

The applicant states that the base of the excavations required to construct the reservoir is 81.0 metres Reduced Level (mRL which is the height measure above or below a datum) and that geotechnical investigations undertaken in 2013 encountered groundwater at around 86.0 mRL.

The applicant therefore states it is likely that groundwater will be encountered and dewatering of the excavation may be required. If so, the applicant states it will occur at a rate no greater than required to dewater the excavation.

The water may be used on-site for construction purposes e.g. dust suppression, or will be discharged as per stormwater from the site (either to land, water, or to the stormwater network) following treatment. If the groundwater meets the requirements of the permitted activity rule/s regarding discharges of water, then it may be discharged without treatment.

#### 1.2.4 Discharges to water and land

Appendix I of the application contains a Draft Construction Erosion and Sediment Control Plan (CESCP), which provides an overview and framework for the erosion and sediment control measures to control discharges to land and water from the proposed earthworks.

The two streams in the project area are some of the last remaining open fragments of the Waitangi Stream, which is culverted downstream of the site beneath the city. The Papawai Stream flows through the site along the western edge of the lower field (separated by an earth bund) and enters into the stormwater network at the top of Papawai Terrace. The unnamed tributary of the Waitangi Stream flows along the western boundary of the reservoir excavation site and enters into the stormwater network at the top of Rolleston Road.

The applicant states the finalised CESCP will include: phase-specific plans to identify specific control measures and their locations and sizing; identification of specific aspects that may contribute to erosion and sediment generation; an assessment of the level of impact on the streams; and identification of mitigation measures to minimise impacts, including control measures and a monitoring regime.

#### 1.2.5 Construction methodology and timeframes

The table below summarises the information provided by the applicant regarding the proposed construction stages, methodology and timeframes, both in the application and in further information received from the agent on 11 October 2017; refer to OurSpace document ID [180065-1597982562-58](#).

Stage	Key methodology	Timeframe
Site establishment	Set-up, fencing, access tracks; construction of erosion and sediment control measures; clearance of vegetation and top soil; relocation of services.	3 months
Reservoir excavation	Excavation of material from reservoir site; stockpiling of excavated material on upper and/or lower fields; removal of excess material from the site (possible raising of the upper and/or lower fields to avoid double handling of material).	6-12 months
Reservoir construction	Construction of the reservoir and pipe tunnel including in-situ and precast concrete as required; connection of services; import of required material and components to the site; testing.	12 months

Backfill	Burying reservoir (using stockpiled material where possible).	3 months
Site restoration	Reinstatement and landscaping of the reservoir site; raising and reinstatement of the upper and/or lower fields (including installation of retaining walls and subsurface/surface drainage, grassing).	3-6 months
		Total: 27-36 months

## 2. Reasons for resource consent

### 2.1 Operative Regional Plans

RMA section	Plan	Rule	Status	Comments
9	Regional Soil Plan	n/a	n/a	As the land related to this application has not been identified as <b>erosion prone land</b> defined in the RSP as land with a slope greater than 28 degrees, the rules in the RSP relating to vegetation clearance of a continuous area of more than one hectare on erosion prone land and earthworks on erosion prone land are not relevant.
9(2)	Regional Freshwater Plan	15	Discretionary	A <b>bore</b> is defined in the RFP as any hole regardless of the method of formation that has been constructed [...] which intercepts groundwater in an aquifer; the construction of which is a discretionary activity under Rule 15 of the RFP.
14(2)(a)	Regional Freshwater Plan	7	Permitted	As the excavations are expected to intercept groundwater, dewatering will be required which will be used for dust suppression and construction activities. The applicant states it is possible the dewatering will exceed the rate and volume permitted by Rule 7; therefore the <b>take and use of groundwater</b> falls under Rule 16 of the RFP as a discretionary activity.
		16	Discretionary	
15(1)	Regional Freshwater Plan	1	Permitted	In the instance that the groundwater taken during dewatering activities meets the conditions of Rule 1 of the RFP, the applicant states this water may be discharged directly to surface water bodies or the stormwater network as a permitted activity.
		2	Permitted	The discharges of sediment- and chemical flocculent- laden stormwater into surface water are not covered by Rule 2 of the RFP as the area of bulk earthworks exceeds 0.3 ha. The <b>discharges to water</b> are therefore covered by Rule 5 of the RFP and are a discretionary activity.
		5	Discretionary	

RMA section	Plan	Rule	Status	Comments
15(1)	Regional Plan for Discharges to Land	n/a	Permitted	The discharges of sediment- and chemical flocculent- laden water to land where it may enter water are not covered by any other rule in the RPDL; therefore the <b>discharges of water to land</b> fall under Rule 2 of the RPDL as a discretionary activity.
		2	Discretionary	

## 2.2 Proposed Natural Resources Plan

The Proposed Natural Resources Plan (PNRP) was publicly notified by the Council on 31 July 2015. All rules in the PNRP have immediate legal effect under section 86B(3) of the Act. As the application was lodged after 31 July 2015, the PNRP is relevant to determining the resource consents required, activity status, the notification decisions and the substantive assessment of the proposal under section 104 of the Act.

RMA section	PNRP Rule	Status	Comments
15(1)	R42	Permitted	Rule R42 permits <b>minor discharges of contaminants into water or into or onto land</b> that may enter water that don't fall under other rules of the PNRP, provided a number of conditions can be met. Any groundwater taken during dewatering activities that meets the conditions in Rule R42 of the PNRP may be discharged directly to surface water bodies or the stormwater network as a permitted activity.
9 and 15(1)	R99-R100	Permitted	Stormwater discharges from earthworks activities are dealt with under Rules R99-R101 in the PNRP. Rule R99 allows for the use of land and the discharge of stormwater into water or onto or into land where it may enter water from earthworks of a contiguous area of up to 3,000 m <sup>2</sup> , provided a number of conditions can be met. Because the earthworks are proposed for an area of up to 4ha or 40,000 m <sup>2</sup> , and the land is not considered erosion-prone under Rule R100, the <b>use of land and the discharge of stormwater into water or into or onto land where it may enter water</b> is a discretionary activity under rule R101 of the PNRP.
	R101	Discretionary	
14(2)(a)	R140	Permitted	Rule R140 permits the <b>take of water and the associated diversion and discharge of that water</b> for the purpose of dewatering a site, provided a number of conditions can be met. As the dewatering will continue for a time period exceeding one month, the dewatering activity falls under Rule R142 of the PNRP as a discretionary activity.  Note: The excavation required for the proposed reservoir does not meet the definition of a bore in the PNRP; therefore resource consent is not required to construct a bore.
	R142	Discretionary	

The proposed activity is not located within or near a scheduled site in the PNRP.

## 2.3 Overall activity status

Overall, the activity must be assessed as a discretionary activity under the operative Regional Freshwater Plan and a discretionary activity under the Proposed Natural Resources Plan.

## 3. Consultation

Iwi authority	Comments
Port Nicholson Block Settlement Trust (PNBST)	No comment provided, therefore it is assumed they have no concerns.
Ngāti Toa Rangatira	Turi Hippolite provided the following comment on behalf of Ngāti Toa on 3 October 2017: <i>“the application to construct a reservoir will not adversely affect the interests of Ngāti Toa”</i> .
Other parties or persons	Comments
Ants Ransley, Environmental Consultant, Southern Skies Environmental Limited	Mr Ransley provided a review of the applicant's ESCP on 3 October 2017, found in OurSpace document ID <a href="#">180065-1597982562-55</a> . Mr Ransley's comments are discussed in section 5 of this report.
Keith Hamill, Consultant Ecologist, River Lake Limited	Mr Hamill provided a peer review of the ecological effects of the discharges on the receiving environment on 7 December 2017, found in OurSpace document ID <a href="#">180065-1597982562-68</a> . Mr Hamill's comments are discussed in section 5 of this report.

## 4. Notification decision

A decision was made to process the application on a non-notified basis on 2 October 2017. Further information on the notification decision is provided in OurSpace document ID [180065-1597982562-50](#).

## 5. Environmental effects

The applicant provided an Assessment of Environmental Effects (AEE), proposed consent conditions (Appendix A) and supporting information including an ecological impact assessment (Appendix E) and draft construction environmental management (Appendix H) and erosion and sediment control (Appendix I) plans.

I concur with the matters discussed in the AEE, particularly the positive effects, effects regarding operational-phase stormwater and flood risk management, and cultural effects of the proposal. Therefore I adopt these parts of the AEE in accordance with section 42A(1B)(b) of the Act. Where appropriate, mitigation measures included in the application have been included as conditions of consent.

A description of existing environment and matters that require comment are discussed below. Information has been drawn from the application provided by the applicant and from peer reviews of both the ESCP (by Mr Ants Ransley of Southern Skies Limited) and the ecological impact assessment (by Mr Keith Hamill of River Lake Limited).

## 5.1 Existing environment

Prince of Wales Park is located within Wellington's town belt to the south of the CBD, with the suburb of Brooklyn located to the west and Mt Cook to the east. The reservoir site is currently a rounded grassy knoll, from which the site slopes down to the west into a gully (unnamed tributary of Waitangi Stream), to the north to the flat, grassed 'upper playing field' and to the southeast to a gully (Papawai Stream and tributaries) and the flat, grassed 'lower playing field'. The applicant states that the site vegetation also includes stands of pines and eucalypts, plantings of pohutukawa, native plantings and areas of regenerating native forest in gullies and beneath the mature exotic trees.

The applicant provided the diagram below and states the Papawai Stream has perennial flows, while the two small tributaries shown in the diagram are ephemeral or intermittent. The unnamed tributary of the Waitangi Stream is perennial in its lower reaches near the upper playing field, but reduces to intermittent pools upstream and eventually becomes ephemeral close to the southern end of the proposed designation. The streams enter the WCC's stormwater network near the northern boundary of the site.

The applicant states that these waterbodies are less than 600 millimetres wide on average and generally have modified channels with diverse substrates ranging from muds to cobbles and some shade cover provided by riparian vegetation. As part of the ecological impact assessment provided with the application, spotlighting of the streams was undertaken with banded kokopu, juvenile eels (elver) and koura identified in the Papawai Stream, and koura seen in the Waitangi Stream tributary. Banded kokopu are a migratory indigenous *Galaxias* fish species which are classified using the New Zealand Threat Classification System criteria as Not Threatened, while koura are *Crustacea* species classified as At Risk – Declining.

Despite the streams in the vicinity of the works being impacted by modification, channelisation, erosion and scour, flooding and background levels of sedimentation, the applicant's ecological impact assessment identified the Papawai Stream and unnamed tributary of the Waitangi Stream as representing *“two of only a very few fragments of the Waitangi Stream that remain un-piped [under Wellington city] and therefore have high and moderate ecological values respectively as remnants of the once much larger system”*. Mr Hamill concurred with this opinion and stated *“the ecology report has done a good job of identifying the values of the streams and vegetation and the key issues associated with the proposed activity.”*

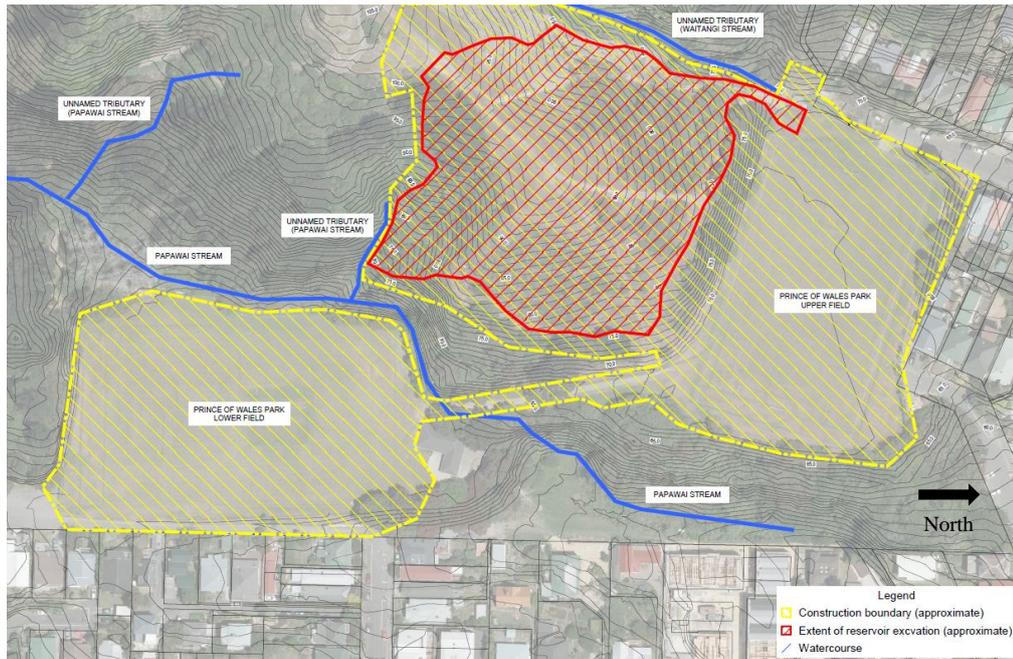


Figure 2: diagram showing extent of earthworks and stream locations

## 5.2 Potential effects of dewatering activities

The applicant states that it is likely that groundwater will be encountered during the excavation of the reservoir site, which will be discharged as per stormwater from the site i.e. either to land, water or the stormwater network following treatment if required. The applicant has provided minimal details regarding the dewatering methodology, quantity and rate of water that may need to be pumped. The estimated excavation period for the reservoir site is 6-12 months, with the construction of the reservoir then estimated as 12 months.

### 5.2.1 Water quality

Dewatering can generate very fine particulates and best practice for dewatering activities generally requires: diverting surface water away from the reservoir excavation to minimise water entering the excavation; creating a sump in the bottom of the excavation to provide a low point from which to pump; suspending a pump inlet or submersible pump above the floor of the sump (using a float) to ensure the cleaner water at the top is removed selectively; using a filter on the pump inlet to help minimise sediment in the discharge; retaining sediment-laden water within the excavation for as long as possible to maximise the amount of settling; and treating all water if necessary before discharge to the most appropriate environment for the relevant water quality e.g. stormwater network, land or waterbody.

### 5.2.2 Drawdown, subsidence and stream depletion effects

Dewatering may result in a temporary reduction in groundwater levels and pumping groundwater out of the excavation may cause the drawdown effects within bores in the surrounding area.

A search of GWRC's GIS database using a 1km radius from the site revealed that there are a several bores used for groundwater monitoring purposes, water permits granted for dewatering and/or diversion of groundwater during

construction of various structures, and a bore (BQ32/0040) constructed and maintained for emergency water supply granted in May 2017 to Wellington Water Limited under WGN170301 [34733].

The potential effects of drawdown were not covered in the applicant's AEE, however given the distance (approximately 800m from the reservoir to bore BQ32/0040) and the conditional requirement for the dewatering methodology to be submitted to GWRC for approval, I am satisfied that the risk of any potential effects is low. It is anticipated that GWRC's hydrologist will have input in the review and approval of the dewatering methodology, and therefore any potential drawdown effects for existing users can be mitigated.

Dewatering may also result in ground subsidence relating to the settling or lowering of the surface of the land from the withdrawal of groundwater. Settlement may only be extensive enough to cause damage where there are soft alluvial soils and/or reclaimed land. According to the applicant, the geomorphology of the site is characterised by relatively shallow soils over slightly-weathered greywacke. Considering this stable substrate and the small footprint of the reservoir excavation site, I do not consider this site to be at risk of settlement.

Dewatering of an excavation by pumping can potentially intercept groundwater which would normally sustain above-ground waterbodies, causing water levels to fall. In this case, pumped water would be treated and either returned directly to the surface water body or effectively circulated back into the waterway by being discharged to land.

### 5.2.3 Proposed consent conditions relating to dewatering

I am satisfied that the environmental effects related to the dewatering activities during construction of the reservoir can be appropriately managed through the recommended consent conditions in Attachment 1, particularly:

- The dewatering methodology to be specifically included in the requirements for the final Construction Environmental Management Plan (CEMP) to be submitted to GWRC for approval, which will allow GWRC's hydrologist to provide comments;
- The keeping and monthly submission of records of the pump rates and periods;
- Dewatering to cease in the event of the visible flow of any surface water body near the excavation site being depleted by the dewatering activity;
- Notification to GWRC of the reservoir excavation site being sealed and water no longer being taken, treated and discharged from the excavation; and
- Ensuring all discharges from the site, including from dewatering activities, are directed to the appropriate erosion and sediment control measure or device prior to discharge.

### 5.3 Water quality effects

The location of bulk earthworks near the bed and banks of waterbodies increases the potential for discharges of sediment-laden stormwater runoff to enter those waterbodies. Sediment-laden water may be generated at the site during the excavation of the reservoir site, clean-filling activities related to the raising of the playing fields, dewatering of groundwater encountered during the excavation, general access of the site by vehicles (both heavy and light), and any other activities within 20 metres of a waterbody.

Suspended sediment can alter water chemistry and cause temperature and turbidity effects. Banded kōkopu (present in Papawai Stream) is sensitive to high turbidity, but the major impact of sediment occurs when it deposits on the stream bed. Sediment deposition can smother invertebrates, block interstitial spaces within the bed (habitat for juveniles and macroinvertebrates) and alter the suitability of the substrate and the stream's community structure. Recovery from the effects of suspended sediment can be rapid, however deposited sediment effects on the stream bed can persist long after a rain event has stopped. The streams within the site area are already impacted by fine sediments due to their mostly-urban catchment and existing erosion and scour of the bed and banks.

The effective implementation of appropriate ESC measures and devices will ensure the risk is lessened, along with maximising the buffer strip of riparian vegetation along waterways.

The applicant has proposed the use of erosion controls including stabilised construction entrances, cleanwater and sediment-laden diversion channels sized to convey the 5% AEP storm event, and progressive stabilisation, with sediment control to be provided by silt fences and super silt fences, and two chemically-treated sediment retention ponds. Mr Ransley had a number of comments and suggestions to be included in the final ESCP to be submitted as a condition of consent, however he summarised by stating "*that the reviewed material provides sufficient information for the approval of the resource consent*".

Both the reviews by Mr Ransley and by Mr Hamill identified one area in particular, close to an ephemeral tributary of the Papawai Stream at the southern end of the reservoir excavation area, as being a high-risk area for potentially transporting sediment to the Papawai Stream. In the AEE the applicant recognised that "*consideration be given to maximising the buffer during detailed design*". To ensure this occurs, I have recommended conditions that ensure that details of the enhancement of riparian vegetation along all waterways within the site area is included within the CEMP to be submitted for approval at least 20 working days prior to any works starting onsite (condition 7). This was identified in Mr Hamill's review as being relevant for the unnamed tributary of the Waitangi Stream, in addition to the Papawai Stream and its tributaries (as already recognised in the applicant's ecological impact assessment).

I proposed that any 'no go' and/or buffer areas to be maintained undisturbed, including minimum buffer strips of riparian vegetation to be retained, are to be

clearly identified in plans included in a final ESCP to be submitted for approval at least 20 working days prior to any works starting onsite (condition 8). I have also expanded upon a condition proposed by the applicant relating to minimising sediment loading and increased turbidity of any waterbody due to the works, by the inclusion of the requirement to maximise the buffer of established riparian vegetation retained between the works and any waterway.

I consider that the draft ESCP information submitted has adequately demonstrated that any sediment-related effects can be managed in accordance with GWRC's *Erosion and Sediment Control Guidelines for the Wellington Region* 2006, which provided the measures and devices are installed and maintained appropriately, will ensure that any sediment related effects can be considered no more than minor.

I am satisfied that the environmental effects from the earthworks and associated discharges to land and water can be appropriately managed through the recommended consent conditions in Attachment 1, particularly those which require the provision of a final ESCP, a flocculation management plan, and phase-specific ESCPs, and for the erosion and sediment controls to be installed and operated in accordance with GWRC's ESC guidelines as a minimum.

#### **5.4 Summary of effects**

I am satisfied that the environmental effects from activities related to the construction of the Prince of Wales/Omāroro water supply reservoir, including bulk earthworks, the take and use of groundwater for the purposes of dewatering excavations, and the discharge of sediment and chemical-treatment in stormwater and groundwater to land or water can be appropriately managed through the recommended consent conditions in Attachment 1. Given the assessment above, it is considered that the proposed activities will not result in any more than minor effects when undertaken in accordance with the recommended consent conditions.

### **6. Statutory assessment**

#### **6.1 Part 2**

Part 2 of the Act outlines the purposes and principles of the Act. Section 5 defines its purpose as the promotion of the sustainable management of natural and physical resources. Sections 6, 7 and 8 of Part 2 define the matters a consent authority shall consider when achieving this purpose.

I am satisfied that the granting of the application is consistent with the purpose and principles in Part 2 of the Act.

#### **6.2 Matters to be considered – Section 104-108**

Section 104-108 of the Act provides a statutory framework in which to consider resource consent applications. All relevant matters to be considered for this application are summarised in the table below:

<b>RMA section</b>	<b>Matter to consider</b>	<b>Comment</b>
104(1)(a)	Actual or potential effects on environment	See Section 5 of this report.
104(1)(b)(iii)	National Policy Statement for Freshwater Management 2014	The NPSFM is given effect to through two transitional policies (5.2.10A and 6.2.4A) in the RFP (see below).
104(1)(b)(v)	<b>Regional Policy Statement (RPS)</b>	I consider that, with the application of the recommended conditions of consent, the proposed activity is consistent with the RPS.
	<i>Objective/Policy</i>	<i>Comment</i>
	Objectives 12 (quantity and quality of fresh water meets the range of uses and values) and 13 (support healthy functioning ecosystems)	Contaminated stormwater runoff from the works will be treated using appropriate erosion and sediment control measures to minimise total suspended solid concentrations before being discharged to land and/or water.  Any discharges that may reach water will be temporary, albeit over a construction period of up to three years.  I consider that stringent compliance with the proposed conditions of consent will ensure the effects on freshwater quality are minimised and the surrounding streams will continue to support healthy functioning ecosystems.
	Policy 15 – Minimising the effects of earthworks and vegetation clearance	The proposal will stage the works and will use appropriate erosion and sediment controls to minimise effects.
	Policy 16 – Promoting discharges to land (rather than water)	The consent conditions will require that the proposal discharges sediment laden water to stabilised land in the first instance if practicable and only directly to water if this cannot be avoided.
	Policy 18 – Protecting aquatic ecological function of waterbodies.	The proposed conditions of consent including those relating to erosion and sediment control will ensure the resultant effects from discharges will be no more than minor.
	Objective 21 - Communities are more resilient to natural hazards and better prepared for the consequences of natural hazard events.	The applicant states that the proposed reservoir will improve the operational and hazard resilience of Wellington city's water supply network.
	Objectives 23-28 – The region's iwi authorities and local authorities work together; the principles of the Treaty of Waitangi; kaitiakitanga is integrated into sustainable	I consider that, with the application of an accidental discovery protocol condition, the applicant has reflected the cultural relationship of tangata whenua with this site. The inclusion of, and compliance with, stringent conditions regarding the control of sediment-laden discharges from the site will ensure the

<b>RMA section</b>	<b>Matter to consider</b>	<b>Comment</b>
	management of natural resources; mauri of coastal and fresh waters; mahinga kai.	potential effects on the mauri of coastal and fresh water and mahinga kai are minimised.
	Policies 48, 49 and 66 – Consideration of the principles of the Treaty of Waitangi; recognising and providing for matters of significance to tangata whenua; enhancing involvement of tangata whenua in resource management decision-making.	The applicant has recognised the historical use of this site for cultivation by tangata whenua, and has adopted the name Omāroro as suggested by representatives for the PNBST. I consider the proposal to be consistent with the objectives and policies of the RPS in relation to the principles of the Treaty of Waitangi.
104(1)(b)(vi)	<b>Operative Regional Plans</b>	I consider that, with the application of the recommended conditions of consent, the proposed activities are consistent with the RFP and the RPDL.
	<i>Objective/Policy</i>	<i>Comment</i>
	Policy 5.2.10A (RFP) and Policy 4.2.24A (RDLP)	I consider the application to be consistent with the objectives and policies of the NPSFM. I also consider that, as the discharge will be temporary and will have no more than minor effects, it meets point 1 of policy 5.2.10A (RFP) and clauses a) and b) of policy 4.2.24A (RPDL).
	Policy 6.2.4A (RFP)	I consider the application to be consistent with the objectives and policies of the NPSFM.
	Objectives 4.1.1 – 4.1.3 (RFP)	The local iwi did not provide comment on the proposal; however the applicant has considered the relationship of tangata whenua with fresh water and the potential effects on mahinga kai.
	Objective 4.1.5 (RFP)	The applicant will safeguard the life-supporting capacity of water and aquatic ecosystems by mitigating the effects of sediment-laden discharges by using appropriate erosion and sediment controls.
	Policies 4.1.12 & 4.1.17 (RFP)	I consider that adverse effects on freshwater resources will avoided, remedied, or mitigated by the applicant's methodology and the proposed consent conditions.
	Policy 4.2.23 (RFP)	I regard the benefits arising from the proposed reservoir as improving the operational and hazard resilience of Wellington's water supply network.

RMA section	Matter to consider	Comment
	Policies 4.2.9 & 4.2.12 (RFP)	I consider that the development will overall enhance the natural character, aquatic habitats and ecosystems of the stream, especially considering the applicant's proposed extension of riparian planting.
	Policy 4.2.33 (RFP)	The proposal is assessed to have no more than minor effects on the listed criteria, including use of the stream beds; temporary effects on habitat values; significant or prolonged decreases in water quality; off-site adverse effects; bank stability; mahinga kai, waahi tapu, or any other sites of special value to tangata whenua; and natural character of rivers and their margins.
	Policies 4.2.34-4.2.36 (RFP)	In determining the proposed consent conditions, I have considered and assessed the matters listed in these policies in order to avoid, remedy, or mitigate adverse effects.
	Objective 5.1.1 (RFP)	The proposed works methodologies and conditions of consent will ensure that water quality and its values are safeguarded.
	Policies 5.2.6 & 5.2.8 (RFP)	The applicant states that the standards contained within Appendix 8 of the RFP can be met and has proposed a condition to apply the standards to the discharges. I have considered these guidelines to set maximum limits of contaminants for the discharges to ensure the water quality is suitable for aquatic ecosystem purposes.
	Policy 5.2.11 (RFP)	The applicants draft ESCP proposes a 20m mixing zone, however Policy 71 of the PNRP considers a 50m mixing zone to be appropriate. To ensure consistency with the PNRP, I have adopted a 50m mixing zone in the relevant consent conditions.
	Policies 5.2.13 & 5.2.14 (RFP)	The applicant states the draft ESCP includes measures and treatment devices which, where possible, will discharge to land as an alternative to surface water and will reduce the adverse effects of stormwater discharges on the receiving water body.

<b>RMA section</b>	<b>Matter to consider</b>	<b>Comment</b>
	<b>Proposed Natural Resources Plan</b>	I consider that, with the application of the recommended conditions of consent, the proposed activity is consistent with the Proposed Natural Resources Plan.
	<i>Objective/Policy</i>	<i>Comment</i>
	Objectives O1 – O5 Ki uta ki tai: Mountains to Sea objectives.	The proposal is consistent with these objectives.
	O14 – O16 Maori relationships	Local Iwi were consulted and did not provide any comment on the proposal. These objectives have been met.
	O24	Water quality will be maintained via appropriate treatment of any sediment contaminated stormwater runoff before it is discharged to land.
	O25	As the effects of any discharges are considered to be no more than minor, and no works are required in the bed of any streams. Aquatic ecosystem health will be maintained.
	O27	The proposed works do not include any works in the bed of streams (intermittent or permanently flowing).
	O39 & O41	The effects of dust on air quality as a result of the proposal will be addressed through consent conditions.
	O44	The effects of the development land use will be appropriately managed through the recommended consent conditions.
	O46 and O47	The erosion and sediment controls will effectively manage runoff and leaching of contaminants to water during construction
	Policies 1 – 5	The proposal is consistent with these policies
	P10	Water quality will be maintained via appropriate treatment of any sediment contaminated stormwater runoff before it is discharged to land or water.
	P17 – P20	The proposal is consistent with these policies.
	P31, P32, P33 and P40	The proposal will maintain and protect ecosystem health, habitat and mahinga kai in Papawai Stream and its tributaries and the unnamed tributary of the Waitangi Stream by appropriately treating sediment contaminated stormwater runoff before it is discharged to land or water and by avoiding undertaking any works in the bed of any streams.

<b>RMA section</b>	<b>Matter to consider</b>	<b>Comment</b>
	P52	The potential effects of the proposal on air quality through dust discharges during construction will be appropriately minimised through the consent conditions.
	P62	The proposal will predominantly discharge to land rather than water.
	P66	Any sediment contaminated stormwater runoff discharges from site will be appropriately treated before it is discharged to land or water to avoid any more than minor adverse effects on freshwater.
	P67	The effects of the sediment discharges will be minimised through the use of sediment retention ponds and other treatment methods prior to being discharged to land.
	P71	The adverse effects of point source discharges (i.e. from SRPs) to rivers shall be minimised by the use of chemical flocculation in order to meet the water quality standards in the receiving water after the zone of reasonable mixing, set at 50m in accordance with the PNRP.
	P95, P97 and P98	The proposal will avoid discharges of sediment laden water to land and water that will result in more than minor adverse effects by use of appropriate erosion and sediment control to reduce the volume of contaminants in treated runoff before it is discharged. Once bulk earthworks are complete all worked surfaces will need to be appropriately stabilised before any erosion and sediment controls can be removed.
104(1)(c)	Any other matter	There are no other matters relevant to this application.
105(1)	Matters relevant to discharge permits	The nature of the discharges and the receiving environments has been taken into account for this decision, as well as possible alternatives.
107	Restrictions on grant of certain discharge permits	In order to grant the discharge permit, the consent will require a condition on mixing zones and allowable effects in accordance with this section.
108	Conditions on resource consents	Standard conditions of consent for this activity type are recommended. Any additional conditions are outlined in Section 5 of this report. All conditions are documented in Attachment 1 to this report.

### **6.3 Weighting of the Proposed Natural Resources Plan**

As the conclusion reached under the assessments of the operative Regional Freshwater and Discharges to Land plans is consistent with that reached under the Proposed Natural Resources Plan, there is no need to undertake a weighting exercise between the two Plans.

## **7. Main findings**

In conclusion:

1. The proposed activity is consistent with the Purposes and Principles of the Resource Management Act 1991.
2. The proposed activity is consistent with the relevant objectives and policies of the Regional Policy Statement, the Operative Regional Freshwater Plan and Regional Plan for Discharges to Land and the Proposed Natural Resources Plan.
3. The actual or potential adverse effects of the proposed activity on the environment will be or are likely to be no more than minor.
4. Conditions of the consent(s) will ensure that the effects of the activity on the environment will be appropriately avoided, remedied or mitigated.
5. The proposal incorporates appropriate mitigation measures, to ensure the adverse effects are or are likely to be no more than minor.

## **8. Duration of consent**

Duration of consent for WGN180065 [35008], [35009] and [35010]: ten years.

The applicant has requested a lapse period of ten years which I consider appropriate to ensure the required funding and designations are in place prior to the works starting.

## **9. Monitoring**

The following compliance monitoring programme will be undertaken during the consent term: initially fortnightly or monthly inspections, reducing over time if all appropriate erosion and sediment control measures and maintenance are undertaken.

Charges relating to this monitoring programme are outlined in the cover letter enclosed with this report.

## Attachment 1: Consent conditions

These conditions are proposed to be applied to all:

**WGN180065 [35008]: Water Permit** to take and use groundwater for the purposes of dewatering excavations, dust suppression and other purposes related to the construction of the Omāroro Reservoir.

**WGN180065 [35009]: Discharge Permit** to discharge stormwater runoff from areas of bulk earthworks and de-watered groundwater both treated with chemical flocculants, to land, the stormwater network or directly to water related to the construction of the Omāroro Reservoir.

**WGN180065 [35010]: Land use consent** to undertake earthworks of an area of more than 3,000 m<sup>2</sup>, including to excavate land that may intercept groundwater (bore), required to construct the Omāroro Reservoir.

### INTERPRETATION

Wherever used in the conditions below, the following definitions, abbreviations, acronyms and terms shall have the prescribed meaning:

**AEE** - Assessment of Environmental Effects

**CEMP** - Construction Environmental Management Plan

**ESCP** - Erosion and Sediment Control Plan

**FMP** – Flocculation Management Plan

**GWRC** - Greater Wellington Regional Council, including any officer of Greater Wellington Regional Council

**Manager** - The Manager, Environment Regulation, Greater Wellington Regional Council

**PFMP** - Playing Fields Management Plan

**SQEP** – Suitably qualified and experienced person

**Stabilised** - inherently resistant to erosion or rendered resistant, such as by using indurated rock or by the application of basecourse, colluvium, hydroseeding, grassing, mulch, or another method to the reasonable satisfaction of the Manager and as specified in Wellington Regional Council's *Erosion and Sediment Control Guidelines for the Wellington Region*, September 2002. Where seeding or grassing is used on a surface that is not otherwise resistant to erosion, the surface is considered stabilised once, on reasonable visual inspection by the Manager, an 80% vegetative cover has been established.

**Working day** - Has the same meaning as under Section 2 of the Resource Management Act 1991

### General conditions

1. The location, design, implementation and operation of the works shall be in general accordance with the consent application and its associated plans and documents lodged with the Wellington Regional Council on 18 September 2017 and updated timeframes/staging information received on 11 October 2017.

Where there may be contradiction or inconsistencies between the application and further information provided by the applicant, the most recent information applies. In addition, where there may be inconsistencies between information provided by the applicant and conditions of the consent, the conditions apply.

*Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.*

2. This consent shall lapse in ten years from commencement unless given effect to prior to that date.

### **Pre-construction requirements**

3. The Manager shall be given a minimum of two working days (48 hours) notice prior to the works commencing.

*Note: Notifications can be emailed to [notifications@gw.govt.nz](mailto:notifications@gw.govt.nz). Please include the consent reference WGN180065 and the name and phone number of a contact person responsible for the proposed works.*

4. The consent holder shall provide a copy of this consent and any documents and plans referred to in this consent to each operator or contractor undertaking the works authorised by this consent, prior to the works commencing.

*Note: It is recommended that the contractor(s) be verbally briefed on the requirements of the conditions of this consent prior to works commencing.*

5. The consent holder shall ensure that a copy of this consent and all documents and plans referred to in this consent, are kept on site at all times and presented to any Wellington Regional Council officer on request.

6. The consent holder shall arrange and conduct a **pre-construction site meeting** prior to any work authorised by this consent commencing on site and invite, with a minimum of 10 working days' notice, the Greater Wellington Regional Council and all contractor(s) undertaking the works.

*Note: In the case that any of the invited parties, other than the representative of the consent holder, does not attend this meeting, the consent holder will have complied with this condition, provided the invitation requirement is met.*

7. The consent holder shall submit a final **Construction Environmental Management Plan (CEMP)** for approval by the Manager at least 20 working days prior to any works starting onsite. The CEMP shall include, but not be limited to, the following details to ensure compliance with all conditions of this consent:

- a) Responsibilities and contact details of all parties involved with the works, including for public enquiries;
- b) A detailed construction methodology for each stage/phase of works, including:
  - i. The proposed methodology, options and process for the take, use and discharge of water related to the dewatering activities;
  - ii. Confirmation of playing fields use and/or raising of levels i.e. a 'Playing Fields Management Plan'; and
  - iii. Details of enhancement of riparian vegetation along all waterways within the site area;
- c) A timetable including staging, timeframes and duration for the works in each stage/phase of works; and
- d) Confirmation of how the consent holder will achieve full compliance with all conditions of the consent and the responsible parties and contact persons, including:
  - i. Methodology and proposed trigger limits for water quality monitoring of the discharges;
  - ii. Procedures for environmental auditing, monitoring and reporting;
  - iii. Procedures (immediate and subsequent) to be undertaken in the event of a spill of oil or other hazardous substances occurring; and
  - iv. Management of complaints and incidents

The consent holder shall not commence works as authorised by this consent until the CEMP has been approved in writing by the Manager. Works shall be undertaken in accordance with the approved CEMP.

Any amendment to the approved CEMP shall be submitted in writing for certification by the Manager at least 15 working days prior to implementing any amendment. Implementation of any amendment shall only occur if the amendment is to the satisfaction of the Manager.

- 8. The consent holder shall prepare, in consultation with the contractor(s) and engineer(s) undertaking the works, a final **Erosion and Sediment Control Plan (ESCP)**. The ESCP shall be submitted to the Manager for approval at least 20 working days prior to any works starting onsite.

The final ESCP shall as a minimum be prepared in general accordance with the current *Erosion and Sediment Control Guidelines for the Wellington Region*, and shall include, but not be limited to, the following:

- a) Identification of appropriately experienced staff responsible for the implementation, operation, management and maintenance of all erosion and sediment control structures, including their roles, responsibilities and contact details;

- b) A detailed description of the works proposed, construction methodology and timetable;
- c) Details of all principles, procedures and practices that will be implemented to undertake erosion and sediment control and minimise the potential for the discharge of sediment-laden water from the site;
- d) The design criteria and dimensions of all erosion and sediment control measures and devices;
- e) Plan(s) of an appropriate scale clearly identifying:
  - i. The locations of waterways and stormwater drains;
  - ii. Staging sequence of erosion and sediment control measures and devices;
  - iii. Areas and cross sections of cut and fill and the inclusion of staged stripping of vegetation and cutting to ensure erosion and sediment control measures and devices are not overloaded;
  - iv. The extent of soil disturbance and vegetation removal;
  - v. Any “no go” and/or buffer areas to be maintained undisturbed, including minimum buffer strips of riparian vegetation to be retained;
  - vi. Locations of all stockpiles, stabilised access roads and stabilised construction entrances;
  - vii. All erosion and sediment control measures, including diversion channels;
  - viii. The boundaries and area of catchments contributing to all stormwater impoundment structures;
  - ix. The locations of all specific points of discharge to the environment, including to the stormwater network;
  - x. Civil infrastructure to be constructed in relation to completed bulk earthworks areas; and
  - xi. Any other relevant site information;
- f) Timetable and nature of progressive site rehabilitation and re-vegetation proposed;
- g) Maintenance, monitoring and reporting procedures and frequency;
- h) Rainfall response and contingency measures including procedures to minimise adverse effects in the event of extreme rainfall events and/or the failure of any key erosion and sediment control measures or devices;
- i) Procedures and timing for review and/or amendment to the ESCP;
- j) Decommissioning methodology for all erosion and sediment control measures and devices including the procedure for obtaining the Manager’s prior approval;

- k) Procedures for re-instating erosion and sediment control measures and devices at the end of each working day, where applicable; and
- l) Reasons for any variance to the current *Erosion and Sediment Control Guidelines for the Wellington Region*.

The ESCP shall be to the satisfaction of the Manager prior to any works authorised by this consent commencing. Construction shall not commence until the consent holder has received the Manager's written certification of the ESCP.

Any amendments proposed to the approved ESCP shall be confirmed in writing by the consent holder and be to the satisfaction of the Manager, prior to the implementation of any amendments proposed.

- 9. At least 20 working days prior to the commencement of works on site, the consent holder shall submit a **phase-specific ESCP** to the Manager for certification. The phase-specific ESCP shall be consistent with the final ESCP submitted in accordance with condition (8).

Where a minor change to a phase-specific ESCP is required, the consent holder shall notify the Manager in writing within two working days of implementing the change. For the purposes of this condition, a minor change includes:

- a) Implementation or repositioning of silt fences and super silt fences;
- b) Implementing or repositioning of diversion bunds, check dams, or inlet protection; and
- c) Any other minor changes as defined in the ESCP or as otherwise agreed with the Manager

*Note: The first phase-specific ESCP may be submitted to the Manager for approval at the same time as the final ESCP required by condition (8) of this consent.*

- 10. The consent holder shall prepare, in consultation with a suitably qualified and experienced flocculant professional, a final **Flocculation Management Plan (FMP)**. The FMP shall be submitted to the Manager for approval at least 20 working days prior to the commencement of earthworks.

The FMP shall include, but not be limited to:

- a) Confirmation of the flocculant to be used and the dosing method of flocculation to be used;
- b) Details of how the flocculation dosage will be triggered;

- c) Confirmation of the constructed shape and size of the SRP(s) and demonstration that the SRP(s) size and shape is appropriate for the relevant catchment;
- d) Confirmation of the optimum dosage rate calculated from the soils in the ponds catchment, including calculation details and bench testing results;
- e) An assessment of alternative flocculants and dosing methods and an explanation as to why the flocculant system was chosen, including discussion on ensuring accurate dosing/reducing overdosing, automated systems, flow-activated dosing, theoretical SRP volume/rain-activated dosing;
- f) Procedures for changing the flocculant method if the proposed method is found to be ineffective after use onsite (including timeframes for making the change between methods);
- g) Location plan and procedures for the storage of flocculation chemical(s) onsite;
- h) A flocculation chemical spill contingency plan including onsite roles and responsibilities;
- i) Identification of pH, dissolved aluminium, NTU and/or TSS trigger levels and procedures to be undertaken if the trigger levels are exceeded;
- j) Details of the monitoring programme in accordance with conditions (35) to (38) including location of water quality monitoring points, frequency of monitoring, reporting of results, and testing of the following parameters:
  - i. pH
  - ii. Temperature (°C)
  - iii. Turbidity (NTU)
  - iv. Dissolved aluminium (g/m<sup>3</sup>) if PAC to be used; and
  - v. Suspended solids (g/m<sup>3</sup>)
- k) Details of rainfall event based monitoring in accordance with condition (35);
- l) Methods, roles and responsibilities for monitoring and maintenance of the flocculation system by the onsite contractor(s) and engineer(s) including contact details of the relevant persons;
- m) Identification of a SQEP and their specific responsibilities for ensuring the operation, monitoring and maintenance of the chemical flocculation system to ensure that it is operating as outlined in the FMP; and
- n) A plan for the decommissioning of flocculated sediment retention ponds.

Use of flocculant on site shall not commence prior to receiving written confirmation that the FMP is to the satisfaction of the Manager.

*Note 1: There shall only be one point of inflow to a SRP and that must be via the dirty water diversion which conveys flows to the SRP.*

*Note 2: For large multi-stage projects FMP's must be reviewed prior to commencing each new stage or as a minimum on a seasonal basis. Reviews must reference monitoring data and/or further bench testing results to determine the effectiveness of the FMP and whether it needs to be amended to ensure on-going optimal performance.*

11. Prior to the commencement of works for each stage/phase of works, other than those required to establish erosion and sediment control measures which have firstly been agreed to by the Manager, a suitably experienced sediment control practitioner shall inspect the area to certify that the erosion and sediment controls have been constructed in accordance with the ESCP and the FMP approved under conditions (8) and (10) respectively of this consent, and the current version (at the time of submission of the ESCP) of the *Erosion and Sediment Control Guidelines for the Wellington Region* as a minimum standard.

Certification shall include, but not be limited to, the following:

- a) Contributing catchments, dimensions and storage volumes of sediment retention ponds, decanting earth bunds, silt fences and diversion channels/bunds as applicable;
- b) As-built plans of the key erosion and sediment controls measures; and
- c) Any other details that will facilitate assessment of compliance with the authorised ESCP, authorised FMP and the current *Erosion and Sediment Control Guidelines for the Wellington Region*.

*Note: The consent holder is advised to complete the sediment control device as-built check sheets available on the Greater Wellington Regional Council's website*

*<http://www.gw.govt.nz/assets/OurEnvironment/Land%20and%20soil/Earthworks-page-As-builtCertificationSheet.pdf> and to submit these with the certification required under this condition.*

The certificate shall be submitted within 5 working days of completing the audit and to the satisfaction of the Manager. The works shall not commence until the written certification has been submitted to the Manager and the contractor(s) has been advised by the suitable experienced sediment control practitioner that the measures have been constructed in accordance with the ESCP and FMP.

### **Winter works**

12. No works shall take place on site during the period of 1 June to 30 September inclusive each year unless approved by the Manager.
13. All earthworked areas shall be stabilised during the period between 1 June to 30 September inclusive each year unless a later date is approved in writing by the Manager.

### **Erosion and sediment control activities**

14. All erosion and sediment control measures and devices shall as a minimum be installed, operated and maintained in accordance with the latest version of the *Erosion and Sediment Control Guidelines for the Wellington Region* (September 2002) and the approved CEMP required by condition (7), ESCP required by condition (8) and FMP required by condition (10) of this permit.
15. All erosion and sediment control measures and devices shall remain the responsibility of the consent holder. No erosion or sediment control measures or devices shall be removed prior to the applicant receiving written confirmation that the relevant stage/phase area is stabilised to the satisfaction of the Manager in accordance with condition (24) of this consent.
16. The consent holder shall ensure that all sediment retention ponds within the site are chemically flocculated from the time the ponds are operational until the ponds are decommissioned. The exception is if flocculation dosing is temporarily stopped due to monitoring results in accordance with condition (38) of this consent.
17. The consent holder shall ensure that all stormwater contaminated with sediment discharged from the site is treated by erosion and sediment control measures as detailed in the approved ESCP required by condition (8) of this permit.
18. Grit traps shall only be used as a secondary (interim) control to the primary devices of the sediment retention ponds. Silt fencing shall only be used where runoff cannot practically be directed to a primary control for treatment.
19. The consent holder shall ensure that prior to the completion of operations each working day that all necessary erosion and sediment control measures are reinstated as detailed in the approved ESCP required by condition (8) of this permit.

### **Discharge activities**

20. The consent holder shall take all practicable steps to minimise sediment loading and increased turbidity of any waterbody due to the works, including by:

- a) Ensuring all stormwater and water discharged from the dewatering activities is directed to the appropriate erosion and sediment control measure or device prior to discharge;
  - b) Maximising the buffer of established riparian vegetation retained between the works and any waterway;
  - c) Completing all works in the minimum time practicable; and
  - d) Minimising the area of disturbance at all times.
21. Notwithstanding the requirements of any other conditions of this consent, the consent holder shall ensure that, after a reasonable mixing zone, discharges from the site shall not give rise to any of the following effects in any receiving waterbody:
- a) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
  - b) Any conspicuous change in the colour or visual clarity; or
  - c) Any emission of objectionable odour; or
  - d) The rendering of fresh water unsuitable for consumption by farm animals; or
  - e) Any significant adverse effects on aquatic life.

*Note: For the purposes of this condition, the end zone of reasonable mixing is defined as a point 50 metres downstream from any point of discharge to a waterbody.*

22. The consent holder shall ensure that discharges to surface water bodies undertaken in accordance with this consent are carried out in a manner that does not cause erosion, scour or instability of the affected stream bed or banks. Any erosion, scour or instability of the stream bed or banks that is attributable to the works shall be remedied by the consent holder within a timeframe as specified by the Manager.

**Bulk earthwork activities**

23. The maximum area of disturbance at any one time shall not exceed the calculated capacity of the sediment treatment device required by the ESCP for that stage/phase of works as approved under condition (9).
24. The consent holder shall:
- a) Progressively stabilise any disturbed areas as they complete each earthworks stage/phase of work to minimise sediment runoff. The progressive stabilisation shall be to the satisfaction of the Manager.

- b) Ensure that a method of stabilisation (e.g. hydroseeding) is applied to each disturbed area within two weeks of completion of the cut or fill works. All stabilisation methods shall be effective within one month of being applied or after a longer period if agreed in writing by the Manager.
  - c) Ensure that each stage of bulk earthworks shall be stabilised before any further stages are undertaken, unless otherwise authorised in writing by the Manager.
25. All fill material used on site shall:
- a) Be restricted to natural material, such as clay, soil and rock and other inert materials as detailed in the definition of cleanfill material in section 2.2 of the Ministry for the Environment publication A guide to the Management of Cleanfills, 2002; and
  - b) Be restricted to those materials listed as acceptable in table 4.1 of the Ministry for the Environment publication A guide to the Management of Cleanfills, 2002.
26. All fill material shall be placed and compacted so as to avoid erosion and instability. Any erosion of soil including failure of cut and fill batters that is attributable to the works shall be contained, remedied and mitigated by the consent holder to the satisfaction of the Manager.
27. In the event of a spill of fuel, hydraulic fluid, or other potential liquid contaminants, immediate steps shall be taken to contain the spilt contaminant. The spilt contaminants and any materials used to contain it shall be removed from the site and disposed of at an authorised landfill. The consent holder shall also immediately notify the Manager of the spill and actions taken.
28. If koiwi, taonga, waahi tapu or other archaeological material is discovered in any area during the works, work shall immediately cease and the consent holder shall notify Greater Wellington Regional Council, Port Nicholson Block Settlement Trust, Te Rūnanga o Toa Rangatira Inc. and Heritage New Zealand as soon as possible but within twenty four hours. If human remains are found, the New Zealand Police shall also be contacted.

The consent holder shall allow the above parties to inspect the site and in consultation with them, identify what needs to occur before work can resume.

No works may resume on site until the consent holder has received written notification that consultation with the parties identified above has been undertaken to the satisfaction of the Manager.

*Note 1: Notification should be emailed to*

- Greater Wellington Regional Council [notifications@gw.govt.nz](mailto:notifications@gw.govt.nz)
- Heritage New Zealand [information@heritage.org.nz](mailto:information@heritage.org.nz)
- Port Nicholson Block Settlement Trust [taiao@portnicholson.org.nz](mailto:taiao@portnicholson.org.nz)
- Te Rūnanga o Toa Rangatira Inc. [resourcemanagement@ngatitoa.iwi.nz](mailto:resourcemanagement@ngatitoa.iwi.nz)

*Heritage New Zealand should also be contacted by phone on 04 472 4341 (National Office).*

*Note 2: Evidence of archaeological material may include burnt stones, charcoal, rubbish heaps, shell, bone, old building foundations, artefacts and human burials.*

### **Dewatering activities**

29. The consent holder shall undertake the proposed dewatering of the reservoir excavation site and associated discharges from the reservoir excavation site in accordance with the methodologies described in the final CEMP to be submitted to the Manager for approval in accordance with condition (7).

No amendments to the methodology shall be made until the consent holder has received written approval that the amendments are approved to the satisfaction of the Manager.

30. For the period of time when water is extracted from the reservoir excavation site, the consent holder shall record:
- a) The pump rate;
  - b) The date and time of each pumping commencement and completion; and
  - c) Any change in the pump rate.

This record shall be maintained at the site and shall be made available to any officer of the Greater Wellington Regional Council upon request. The record shall be submitted to the Manager at the end of each calendar month.

31. In the event of the visible flow of any surface water body near the dewatered excavation site being depleted by the dewatering activity, the consent holder shall:
- a) Immediately cease the dewatering activity; and
  - b) Notify and liaise with Greater Wellington Regional Council to establish what actions should be undertaken and when the take can recommence.

No dewatering may recommence until the consent holder has received written notification that the actions established under (b) are approved to the satisfaction of the Manager.

32. The Manager shall be notified within two working days (48 hours) when the reservoir excavation site has been sealed and water is no longer being taken, treated and discharged from the excavation.

*Note 1: Notifications can be emailed to [notifications@gw.govt.nz](mailto:notifications@gw.govt.nz). Please include the consent reference WGN180065 and the name and phone number of a contact person responsible for the works.*

*Note 2: Sealing of the excavated reservoir area is defined as the installation of a permanent slab and sealing of the walls to significantly reduce or prevent groundwater inflows into the reservoir area.*

### **Site auditing requirements**

33. The consent holder shall ensure that the site is audited by a suitably qualified and experienced person on a minimum of:

- A weekly basis, and
- After a rainfall event of greater than 20mm in a 24 hour period, or 7mm in a one hour period, as measured at the Greater Wellington Regional Council's 'Newtown at Mansfield Street' rainfall monitoring site, or
- At a longer frequency to the satisfaction of the Manager.

The audits are to ensure that the erosion and sediment control methods are being maintained in accordance with the approved final ESCP referred to in condition (8) and the relevant phase-specific ESCP referred to in condition (9).

The audits shall include, but not be limited to, the following information:

- a) Date;
- b) Name of auditor;
- c) Site condition;
- d) Weather conditions;
- e) Sediment management (including identification of problem areas that are not being treated by sediment control measures, and any measures put in place to treat these areas);
- f) Runoff control (check of diversion channels and check sediment retention pond);
- g) Condition and effectiveness of erosion and sediment control measures and devices, including silt fences, contour drains and sediment retention ponds;
- h) Maintenance required and the date this will be completed by;

- i) Contractor responsible for the maintenance; and
- j) General comments.

*Note: Audits will be required while any area is being cleared of vegetation and soil, or earthworked. Once an area has been stabilised in accordance with condition (24) and there are no works occurring on site, the audits for this condition are no longer required.*

- 34. The results of the audits as required by condition (33) shall be submitted to the Manager no later than five working days following the audit.

**Rainfall and flocculation monitoring of SRP**

- 35. The consent holder shall sample and record the following parameters for each chemically-treated sediment retention pond (SRP) at the stated locations, as soon as practicable within daylight hours after a rainfall event of greater than 7mm in 1 hour or 20mm in a 24 hour period as measured at the Greater Wellington Regional Council’s ‘Newtown at Mansfield Street’ rainfall monitoring site.

Parameter	Location within each SRP				At the reasonable mixing zone
	Inflow	Forebay	Pond	Outlet	
pH	✓	✓	✓	✓	✓
Temperature (°C)			✓		✓
Turbidity (NTU)		✓	✓	✓	✓
Suspended solids (g/m <sup>3</sup> )		✓	✓	✓	✓
Dissolved aluminium (g/m <sup>3</sup> )			✓	✓	✓

*Note 1: The consent holder is only required to undertake outlet monitoring if the SRP is discharging.*

*Note 2: Dissolved aluminium only needs to be sampled for monitoring if the flocculant Poly-aluminium Chloride (PAC) is being used to treat the SRP(s).*

- 36. In addition to the monitoring undertaken in accordance with condition (35), the consent holder shall arrange for **weekly** site visits to be undertaken by an independent flocculation specialist who shall sample and record the following parameters for each chemically-treated SRP at the stated locations:

Parameter	Location within each SRP				At the reasonable mixing zone
	Inflow	Forebay	Pond	Outlet	
pH		✓	✓	✓	
Temperature (°C)			✓		
Turbidity (NTU)				✓	
Suspended solids (g/m <sup>3</sup> )				✓	
Dissolved aluminium (g/m <sup>3</sup> )			✓	✓	✓

*Note: Dissolved aluminium only needs to be sampled for monitoring if the flocculant Poly-aluminium Chloride (PAC) is being used to treat the SRP(s).*

*Note: The consent holder is only required to undertake in-stream monitoring at the reasonable mixing zone and monitoring at the SRP outlets if the SR's are discharging.*

37. The results of the monitoring undertaken in accordance with conditions (35) and (36) shall be submitted to the Manager within two working days (48 hours) of the date the sampling is undertaken.
38. Should any monitoring results required under conditions (35) or (36) indicate that the pH of any chemically-treated SRP outflow is at or below 5.5, and/or the dissolved aluminium levels increase above 0.087 mg/L, the dosing of that SRP with flocculant shall cease immediately and the SRP decants raised.

In this event, the Manager shall be notified immediately and the consent holder shall liaise with the Manager on an appropriate course of action.

*Note: This condition is only relevant if the SRP(s) is to be treated with PAC.*

39. The consent holder's requirements under conditions (35) to (38) shall cease when the catchment has been completely stabilised and the SRP(s) decommissioned in accordance with the conditions of this consent, or with the written authorisation of the Manager.

### **Complaints and incidents**

40. The consent holder shall maintain a written record of any complaints received alleging adverse effects from or related to the exercise of this consent, for the duration of works authorised by this consent. This record shall include:
- a) The name and address (as far as practicable) of the complainant;
  - b) Identification of the nature of the matter complained about;

- c) Date and time of the complaint and of the alleged event;
- d) Weather conditions at the time of the complaint (as far as practicable);
- e) Steps taken to investigate the issue which caused the complaint; and
- f) Steps taken to address the issue which caused the complaint.

Complaints received shall be forwarded to the Manager within 24 hours of receiving the complaint.

41. The consent holder shall notify the Greater Wellington Regional Council immediately if any contaminants (including sediment) are released from the site and enter any watercourse, due to any of the following:
- a) Discharges from unstabilised areas that are not treated by sediment control measures or devices required under this consent;
  - b) Failure of any erosion and sediment control measure or device;
  - c) Discharge of a hazardous substance, including fuel or cement; or
  - d) Any other incident which either directly or indirectly causes, or is likely to cause, adverse ecological effects in the receiving environment.

*Note 1: The Wellington Regional Council may also investigate any incidents to determine if a breach of this consent or the Resource Management Act 1991 has occurred and may also undertake enforcement action depending on the circumstances.*

*Note 2: Notifications can be emailed to [notifications@gw.govt.nz](mailto:notifications@gw.govt.nz) and/or to GWRC's Environment hotline 0800 496 734. Please include the consent reference WGN180065 and the name and phone number of a contact person responsible for the works.*

42. If any of the incidents specified in condition (41) occur, the consent holder shall:
- a) Establish control measures, where these have failed or have not been implemented in accordance with the relevant management plan, as soon as practicable;
  - b) Liaise with the Manager to establish what remediation or rehabilitation is required and whether such remediation or rehabilitation is practical to implement; and
  - c) Carry out any remedial action as required by and to the satisfaction of the Manager.

43. The consent holder shall maintain a permanent record of any incidents that occur on the site which result, or could result, in any adverse effects on the environment (air, water, soil) beyond the boundary of the site. The record shall include:

- a) Date and time of the incident;
- b) The type and nature of the incident and the cause of the release of contaminants;
- c) Weather conditions at the time of the incident (as far as practicable);
- d) Measures taken to remedy the effects of the incident; and
- e) Measures put in place to prevent the incident from re-occurring.

This record shall be maintained at the work site, shall be made available to officers of the Wellington Regional Council (upon request), and shall be forwarded to the Manager (if requested) within seven working days of the incident occurring.

#### **Review condition**

44. Wellington Regional Council may review any or all conditions of this consent by giving notice of its intention to do so pursuant to section 128 of the Resource Management Act 1991, within one month of each anniversary of the commencement of this consent, for any of the following reasons:

- a) To review the adequacy of any plan and/or monitoring requirements, and if necessary, amend these requirements outlined in this consent
- b) To deal with any adverse effects on the environment that may arise from the exercise of this consent; and which are appropriate to deal with at a later stage
- c) To require the implementation of Best Practicable Options, in respect to new methodologies for the undertaking of the works to avoid, remedy or mitigate any significant adverse effect on the environment arising from the works
- d) To enable consistency with any relevant Regional Plans or any National Environmental Standards or Regulations

The review of conditions shall allow for the deletion or amendment of conditions of this consent; and the addition of such new conditions as are shown to be necessary to avoid, remedy or mitigate any significant adverse effects on the environment.

*Note: For the purposes of this condition the “exercise of the consent” is deemed to be once the works authorised by this consent have commenced.*

45. The Wellington Regional Council shall be entitled to recover from the consent holder the costs of any review, calculated in accordance with and limited to the Council’s scale of charges in force and applicable at that time pursuant to section 36 of the Resource Management Act 1991.

*Note: Additional resource consents from your local council may be required to undertake this proposal. We advise you to contact the Wellington City Council prior to commencing works.*