

Appendix 1: Map



Z:\Projects\Government\HUD\P02916 Carrington Plan Change\GIS\ArcPro\P02916_arcpro_Layout_Carrington_Predict_A3_Mar_23

Note: Trees not otherwise classified are individual mature specimen trees or have recently been removed.

- Rock Outcrop
- Vegetation Area**
 - ▨ Exotic riparian vegetation (2,605 m²)
 - ▨ Native riparian vegetation (3,085 m²)
 - Mature mixed canopy (5,807 m²)
- Watercourses**
 - Piped Section
 - Wairaka Stream
 - Stormwater Management Device
 - ▭ Wairaka Precinct

Client **Ministry for Housing and Urban Development**

Project **TE AUAUNGA**



Project no. P02916

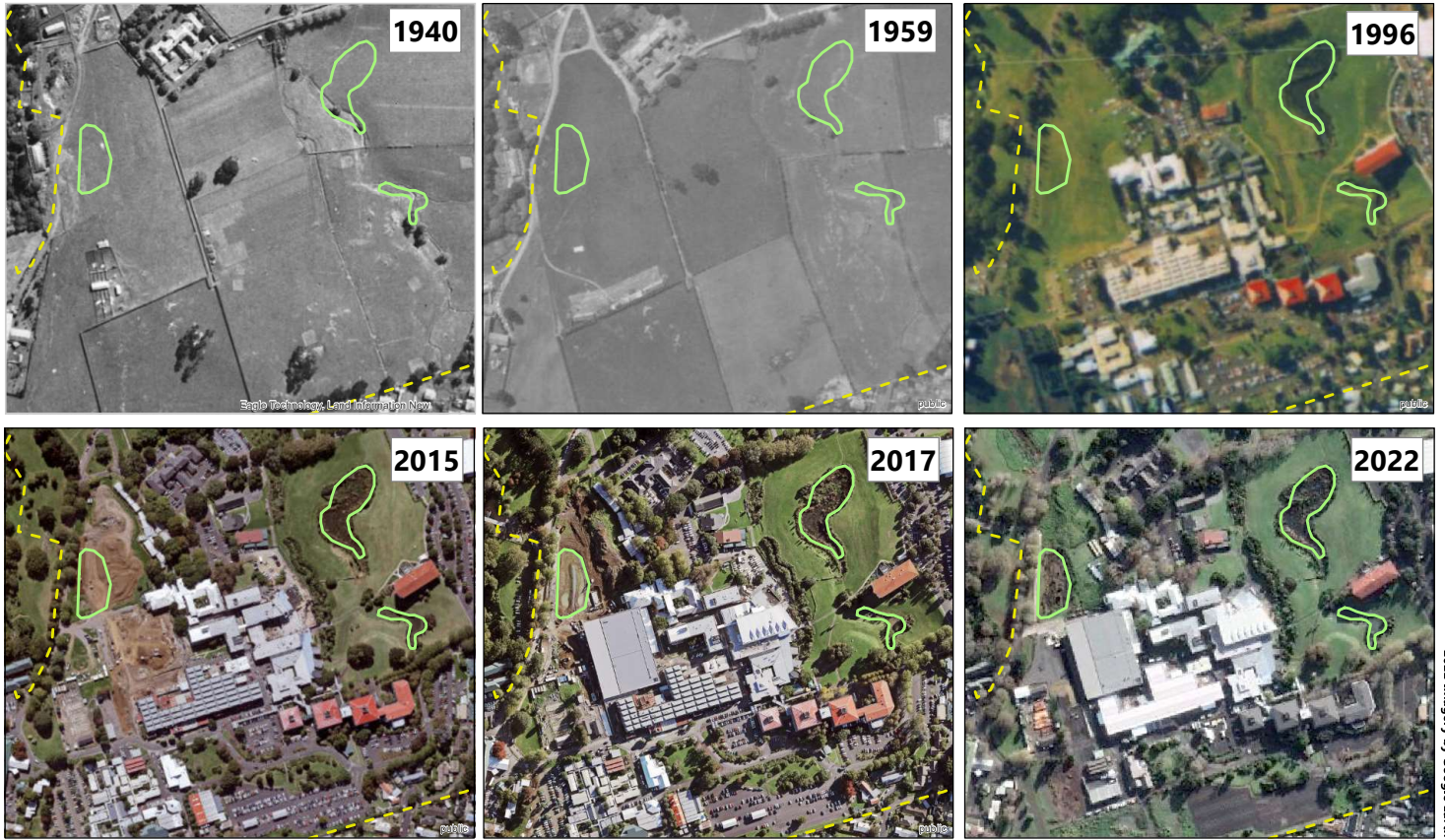
Date 4 Apr 2023

Drawn **CU**
Approved **JS**

This plan may contain errors or omissions or may not have the spatial accuracy required for some purposes. There may be other information relating to the area shown on this map which is unknown to Morphum Environmental Ltd. This map may contain Crown copyright data. Please consult Morphum Environmental Ltd if you have any queries.

Appendix 2: Photo-schedule

HISTORIC IMAGERY SHOWING UNITEC WETLANDS



2022 Project: Government HUI/17/0207 - Commercial Plan Change - GIS - Aerial Imagery for Environmental Assessment

2022 Imagery by Google Earth

- Wairaka Site Boundary
- 'Wetlands'

Client **MINISTRY FOR HOUSING AND URBAN DEVELOPMENT**
Project **TE AUAUNGA**

Project no. P02916
Date 3 Apr 2023



Drawn CU
Approved JS

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Appendix 3: Ecological Values Assessment

| Vegetation Type | EIANZ (2018) Assessment matter | Assessed value | Reasoning |
|----------------------------|---------------------------------------|-----------------------|--|
| Exotic riparian vegetation | Representativeness | Very Low | Vegetation with typical structure and composition that would be found in a community of exotic trees in urban Auckland. Exotic species dominate. |
| | Rarity/distinctiveness | Very Low | Common, exotic species commonly encountered in urban Auckland. |
| | Diversity and pattern | Very Low | A low species diversity of common exotic species |
| | Ecological context | Low | Although not of individual species merit, the riparian nature of this vegetation provides importance ecological service functions, albeit to a limited degree. Important functions include stepping stone for native fauna moving across the wider landscape and a degree of shade and overland filtration for the streams |
| | Overall | Negligible | |
| Native riparian vegetation | Representativeness | Low | Vegetation is not of the typical structure and composition that would be found in a natural vegetation community. Reflects the planted nature of this vegetation and commonality across urban Auckland. |
| | Rarity/distinctiveness | Moderate | As a myrtle, manuka threat status has been recently revised to 'At Risk', vegetation is not otherwise rare or distinct. Manuka/kanuka scrub has a regional IUCN threat status of least concern. |
| | Diversity and pattern | Low | Diversity is well below what would naturally have occurred in manuka/kanuka scrub historically and pattern is limited to a single ecotone along the riparian margin |

Responses to Auckland Council RMA cl 23 Requests | E1-E9 | 11

| Vegetation Type | EIANZ (2018) Assessment matter | Assessed value | Reasoning |
|---------------------|--------------------------------|-----------------|--|
| | Ecological context | Moderate | The riparian nature of this vegetation provides importance ecological service functions, albeit to a limited degree. Important functions include stepping stone for native fauna moving across the wider landscape and a degree of shade and overland filtration for the watercourses. Value has increased to reflect the habitat provisioning and foraging opportunities for native fauna |
| | Overall | Moderate | |
| Mature mixed canopy | Representativeness | Very Low | The vegetation type here is not reflective of any natural vegetation community. |
| | Rarity/distinctiveness | Moderate | As a myrtle, pohutakawa threat status has been recently revised to 'At Risk'. The specific species assemblage is of species commonly found throughout Auckland, even in urban environs. |
| | Diversity and pattern | Very Low | The vegetation communities within the precinct are not considered to represent a natural diversity of species or habitat types. |
| | Ecological context | Low | The vegetation potentially provide foraging, nesting habitat functions, mainly for disturbance tolerant species, given proximity to road way. |
| | Overall | Low | |

Appendix 4: Bird Records

Table 1: (31/03/2023)

| Common name | Scientific name | Threat Status (Robertson et al. 2016) |
|--|--|--|
| Species noted previously (2022) | | |
| Australian Magpie | Gymnorhina tibicen | Introduced and naturalised |
| Common Myna | Acridotheres tristis | Introduced and naturalised |
| Eurasian Blackbird | Turdus merula | Introduced and naturalised |
| House Sparrow | Paser domesticus | Introduced and naturalised |
| New Zealand Kingfisher | Todiramphus sanctus vagans | Not Threatened |
| North Island Fantail | Rhipidura fuliginosa placabilis | Not Threatened |
| Pukeko | Porphyrio melanotus melanotus | Not Threatened |
| Skylark | Alauda arvensis | Introduced and naturalised |
| Song Thrush | Turdus philomelos | Introduced and naturalised |
| Spur Wing Plover | Vanellus miles | Not Threatened |
| Welcome Swallow | Hirundo neoxena neoxena | Not Threatened |
| Additional records (2023) – Within Wairaka Precinct | | |
| Silverye | Zosterops lateralis lateralis | Not Threatened |
| Tui | Prosthemadera novaeseelandiae novaeseelandiae | Not Threatened |
| Goldfinch | Carduelis carduelis | Introduced and Naturalised |
| Common pheasant | Phasianus colchicus | Introduced and Naturalised |
| Black-backed gull | Larus dominicanus | Threatened – Nationally Critical |
| Mallard | Anas platyrhynchos | Introduced and Naturalised |
| Additional records (2023) – from outside Wairaka Precinct | | |
| Pied shag | Phalacrocorax varius | At Risk - Recovering |
| White faced heron | Egretta novaehollandiae | Not Threatened |
| South Island pied stilt | Haematopus finschi | Not Threatened |
| Red-billed gull | Chroicocephalus novaehollandiae | At- Risk |
| New Zealand Pigeon | Hemiphaga novaeseelandiae | Not Threatened |
| Pied stilt | Himantopus leucocephalus | Not Threatened |
| Little shag | Microcarbo melanoleucos | Not Threatened |
| *Bar-tailed godwit | Limosa lapponica | At Risk |

Responses to Auckland Council RMA cl 23 Requests | E1-E9 | 13

| | | |
|--------------------------|----------------------------------|------------------------------------|
| Buff-banded rail | <i>Gallirallus philippensis</i> | At Risk – Declining |
| *Variable oyster catcher | <i>Haematopus unicolor</i> | At Risk - Recovering |
| *Wrybill | <i>Anarhynchus frontalis</i> | Threatened - Nationally Vulnerable |
| Harrier hawk | <i>Circus approximans</i> | Not Threatened |
| Paradise duck | <i>Tadorna variegata</i> | Not Threatened |
| *Caspian tern | <i>Hydroprogne caspia</i> | Threatened - Nationally Vulnerable |
| Royal spoonbill | <i>Platalea regia</i> | At Risk – Naturally Uncommon |
| *White fronted tern | <i>Sterna striata</i> | Threatened – Naturally Critical |
| *Far eastern curlew | <i>Numenius madagascariensis</i> | Non-resident Native - Vagrant |
| *New Zealand dotterel | <i>Charadrius obscurus</i> | At Risk – Recovering |
| Black billed gull | <i>Chroicocephalus bulleri</i> | Threatened – Naturally Critical |

*Denotes coastal species unlikely to be found in the plan change area.

Appendix 5: Actively managed vegetation



Figure 1: Pine that would otherwise be considered potential roosts, note scars that have healed over where lower vegetation has been removed.

Appendix 6: NRSI memo

Notification determination and resource consent decision report for a discretionary activity under the Resource Management Act 1991

Subject: To authorise the damming of water with and use of an existing dam on the bed of a tributary of Oakley Creek, Mt Albert for stormwater treatment.

To: Greg Murphy, Team Leader: Water Allocation

From: Stephen Crane, Senior Consents & Compliance Advisor

Date: 12 August 2015

1.0 APPLICATION DESCRIPTION

Application and Property Details

Applicant Name: Unitec Institute of Technology

Consent Application Number: 33526

File Number: 8256

Activity: Discretionary

Site Address/Location: 1 Carrington Road, Mt Albert, Auckland

2.0 PROPOSAL, SITE AND LOCALITY DESCRIPTION

2.1 Reason for application

Consent is required under the Proposed Auckland Unitary Plan (PAUP) rule H.4.17.1 and Rule 6.5.62 in the Auckland Council Regional Plan: Air Land and Water.

The dam does not comply with rules 6.5.52 and 6.5.56 because the catchment area is greater than 40 ha, and although the dam is a stormwater dam in an urban area, it is not required to meet the conditions of a consent to divert and discharge stormwater required under chapter 5 of this plan.

2.2 Proposal and site description

The applicant owns a 51.5 ha property, on the west side of Carrington Road, Mt Albert. The applicant has made an application no. 33526 to replace existing consent no. 8256 (file Kr 928256) to dam water with a 5m high on-stream dam located on a

tributary of Oakley Creek, 530m upstream of the confluence with the main stem, granted in April 1992, and expiring on 31 December 2006. The dam is for a stormwater detention / quality pond and located on Lot 2 DP 406935 (CT 424414).

A full description of the proposal is provided in the application titled Application for Resource Consent to dam surface water, received 7 December 2006 prepared by Glenn Huggard (hereby referred to as the Application Report).

The existing dam has been in place since 1992 however consent for the damming of water expired in 2006. The dam was constructed for demonstration stormwater ponds. The embankment and spillway designs were developed following extensive hydrological analysis of present and future flood flow conditions. The design calculations by Beca Carter Hollings and Ferner dated March 1991 are held on file 8256. Also on file is the report "Maintenance Manual, Carrington Polytechnic Sediment Stormwater Ponds, August 1992" prepared by Beca Carter Hollings & Ferner Ltd.

The dam and impoundment has the following specifications:

The 5m high dam is well finished with a grassed embankment. The dam crest is approximately 3m in width at its maximum height of RL 20.6m. From this point the width of the downstream toe of the dam is approximately 47m to the invert of the downstream watercourse at RL 15.6m. The length of the dam crest is approximately 130m as measured along the length of the pond at its outlet end (eastern). The slope of the downstream embankment is 1V: 10H.

The invert of the 11m wide flood spillway is at RL 20.0m (600mm deep below the dam crest). The invert of the outlet weir to the 1050mm diameter service spillway pipe, and normal pond water level, is at RL 19.5m with 500mm freeboard.

There have been no changes to the dam since its construction in 1992. The original water permit however had calculated the dam height at 3.1m. This measurement was taken from the RL of the outlet pipe and not at the invert of the watercourse to which the pipe structure discharged into. As a result the height of the dam has been recalculated at 5m. The impoundment surface area is 5300 m² and the volume is 7500 m³. The catchment area is 42 ha.

The dam is located on-stream.

A site visit to the dam proposed location was completed by AC sediment control advisor Matt Byrne On 20 July 2009.

2.3 Catchment description

The Oakley Creek catchment is in the AC Waitemata surface water management area. The AC has no surface water allocation management plan for this management area of stream catchments. No minimum flow or water availability for this stream

catchment, or any other stream catchment in the Auckland region, has been set in the Auckland Council Regional Plan: Air, Land and Water 2010.

The Oakley Creek catchment is one of several stream catchments which discharge into the Waitemata Harbour. The Oakley Creek catchment rises to an elevation of 100m at the Hillsborough Road ridge. The western area of the Oakley Creek catchment is comprised of Waitemata Group sandstone while the catchment to the NE of the creek is dominated by basaltic lava flow derived from Mt Albert. The interface of the two lithology generally forms the Oakley Creek stream channel.

All building on the Unitec campus have numbers. The dammed watercourse (with no official stream number) flows northward under the campus Farm Road and to the west of the sports fields, is piped for 100m between buildings 033 and 035, flows through the separate Mason Clinic property of Waitemata Health Ltd, and discharges into the main stem of Oakley Creek at map reference NZTM 1751955mE 5917570mN. The stream is not denoted as Natural Stream Management Area in chapter 3 and maps of the Auckland Council Regional Plan (Air, Land and Water).

The dam impounds the lower of two stormwater detention and quality ponds located on the Unitec campus. The campus site is comprised of office buildings with classrooms with car parks, sports fields and meeting houses / buildings located across the campus. The immediate area surrounding the two ponds is currently moderately sloped banks which are grassed while the ponds themselves have a healthy abundance of native vegetation normally associated with stormwater ponds and wetlands.

The catchment above the ponds is comprised of a residential area of Mt Albert running back up to New North Road at 50m above msl. Piped stormwater from parts of this area is reticulated and discharged at the head of the ponds. Additional stormwater from the surrounding campus roads, buildings and pervious areas also contribute to pond flows.

The area of the catchment where the dam and stormwater ponds were constructed comprises basalt overlain by alluvium. Alluvial material from the stream channel was removed prior to construction of the dam.

The dam discharges water to the remaining stream channel which, when studied during the site visit, was approximately 1m wide with an average depth of 0.3m. Flows observed during the site visit 20 July 2009 were abundant with the visual colour and clarity of the stream appearing good. The stream from the discharge point of the dam meanders through the campus and is occasionally piped beneath road crossings and campus buildings. Its length from the dam to the receiving environment of Oakley Creek is approximately 530m.

There is another small unnamed stream (also with no official stream number), flowing through a small part of the Unitec campus, that arises at a spring known as Te Wai Unuroa o Wairaka (The long drink of Wairaka) located at map reference NZTM

1752255mE 5917000mN adjacent to Building #180. The spring fed stream discharges into the dammed stream about 200m downstream of the spring source.

Fig 1 Oakley Creek and Dam site



The Unitec e-Learning site provides the following information about the spring which is of significance to iwi: "The numerous subterranean streams and tunnels around the Mt Albert region and extending to Riu ki Uta (Three Kings) was known as the Ara Tomo O Ruarangi (tunnel entrance of Ruarangi) and was used extensively by a people known as Turehu (a supposed light skinned race who came early to Aotearoa) or Patupaiarehe to escape from their enemies.

When Mataatua canoe made its way north from Whakatane with Puhi in command, they made landfall near the Whau River. With him was his younger brother, priestly sister Muriwai and niece Wairaka. Wairaka was already famous when she acted

quickly and saved the Mataatua canoe from the rocks at the mouth of the Whakatane River. Before swimming out to the canoe, she uttered the statement Kia whakatane au i ahau (let me act like a man) hence the name, Whakatane. Wairaka's home here was Te Pou of Wairaka, now known as Owairaka or Mt Albert. Wairaka's people stayed on here and intermarried with the people of Rakataura (Tainui) and Ohomairangi (Te Arawa).

Springs surfaced everywhere around Mt Albert, including the spring that gushes out on campus. When Wairaka was thirsty, she demanded water and stamped her foot on the ground. Fresh water gushed out of the ground. This spring is known as Te Wai Unuroa o Wairaka (The long drink of Wairaka). Some iwi refer to Rakataura as being the rangatira who led the 'Turehu' people at the time, whilst others refer to Ruarangi. Regarding nga wai unuroa o Wairaka (the long drink of Wairaka) – the ancestress from Ngati Awa, some iwi refer to Nga wai o Raka-taura (the waters of Rakataura).

The spring here on campus was highly valued for drinking and for the rituals of thanks-giving and ceremonials. It offered relief to the sick, as well as for healing, bathing, irrigation and was a constant provider of food. To locate the spring follow the stream past the Marae, Puukenga, and Red Lecture Theatre. The spring lies just past the bridge that spans the stream”.

Stream flows

Stream minimum flows, dam bypass flows, and water availability are commonly expressed in terms of the stream mean annual low flow (MALF or $Q_{2.3}$). This is the flow that the stream would naturally recess to on average only once every 2.3 years. It is calculated from an analysis of continuous long term flow records at a site, often measured with a weir. The MALF and other flow statistics in stream catchments with few flow records can be assessed from comparison with other catchments that do have such long flow records. The specific discharge (SD) is the flow per unit area of catchment expressed in litres per second per square kilometre ($l/s/km^2$). It can be used to predict flows in other stream catchments.

There is no regular summer manual flow gauging site on the stream that runs through the Unitec campus site. Determining a MALF for the stream requires reference to records from other streams. Stream flow specific discharges tend to reflect the underlying geology. The surface geology of the dam catchment comprises Mt Albert basalt flows. On the main stem of Oakley Creek there is the AC Oakley Creek @ Richardson Rd continuous flow measuring site with a catchment area of $6.2 km^2$. The site was installed in September 2012. With such a short flow record it is not possible to calculate an accurate MALF from the record.

There is also a flow site Meola @ Motions Rd on the adjacent Meola Creek with a catchment area of $12.9 km^2$. The MALF for this site is 41 l/s and MALF specific discharge $SD_{2.3}$ $3.2 l/s/km^2$. The flow at this site recessed to the MALF about 18 to 24 February and 6 to 14 March 2014. The concurrent flow at AC Oakley Creek @ Richardson Rd site in these periods was about 25 l/s. This suggests that the MALF

for this site is about 25 l/s and MALF specific discharge $SD_{2,3}$ for the 6.2 km² catchment area is 4 l/s/km².

There will be infiltration from the basalt geology catchment into the stormwater pipes upstream of the applicant's dam in summer conditions. The catchment area at the applicant's dam site is 0.42 km², and the natural mean annual low flow, based on a specific discharge of 4 l/s/km², is therefore estimated as 1.7 l/s.

2.4 Background

In 1992, the Auckland Regional Council (ARC) granted consent for a Water Permit to Carrington Polytechnic (Unitec Institute of Technology) to dam an unnamed tributary of the Oakley Creek, Mt Albert. The purpose of the water permit was to create a dam associated with the creation of two stormwater quality / detention ponds at the Carrington Polytechnic campus. This water permit expired on 31 December 2006. Associated consents are stormwater discharge no. 8257 (file Br 928246) and streamworks no. 28690 (file Lu 17268).

In August 2006, Unitec applied for a replacement consent to authorise the existing dam. After a lengthy correspondence period, a site visit was undertaken by representatives of the then ARC on 20 July 2009, in order to assess the existing stormwater ponds and the dam structure. Further assessment of an associated stormwater discharge permit no.8257 (file 928246) which expires 31 December 2027, was also undertaken in order to assess the appropriateness of granting a replacement consent for the existing damming of water.

A comprehensive stormwater discharge consent no. 24973 (file 10752) was granted in June 2001 for the whole Oakley Creek catchment, and expires December 2032.

2.5 Other activities considered

There are no other activities being considered with this application.

3.0 NOTIFICATION ASSESSMENT

3.1 Assessment of permitted baseline

The permitted baseline only applies to permitted activities on the subject site. If the baseline is applied, then the relevant permitted baseline is ACRP:ALW Rule 6.5.52 "The damming of water with an existing dam as at 23 October 2001 on the bed of a permanent stream subject to conditions including that the dam structure shall be no greater than 4m in height and catchment no greater than 40 ha".

This constitutes the permitted baseline and these adverse effects may be discounted as the level of adverse effect arising from those permitted activities has been deemed to be acceptable. It is only any other or further adverse effects arising from the proposal over and above the permitted baseline which are to be assessed.

The dam has a catchment area of 42 ha and crest height of 5 m, and is therefore greater than the permitted activity. Most water in a dam is held in the top 1-2m. Due to the potential of this dam impoundment to hold a substantially greater amount of water, and the potential complexity of effects associated with the proposed activity, the permitted baseline does not provide a useful comparison for the purpose of discounting effects.

3.2 Assessment of effects on the environment Section 95(2)(a)

The following assessment of the adverse effects of the activity on the environment addresses the activity's actual and potential effects, and any mitigating factors. Where appropriate the assessment criteria of the Auckland Council Regional Plan: Air, Land, Water (ACRP:ALW) policy 6.4.42 and 6.4.45 regarding damming water are used as the context for assessing the potential adverse environmental effects arising from the proposal. The stream at the dam location has permanent flow and so the dam is an on-stream dam.

Values of Oakley Creek

In terms of chapters 2 and 3 of the ACRP:ALW values and management Areas, the Oakley Creek stream does not have any Wetland management areas; and is not a Natural Stream, Water Supply or High Use Stream Management Area. It is an Urban Stream management area.

Effects on fish passage

Dams pose barriers that can prevent fish from accessing habitat necessary for specific life-cycle stages.

There is currently poor fish passage into the ponds as there is a vertical concrete wall constructed as part of the pond's outlet structure. It is expected however that limited fish passage is available to some native climbing species since fish passage from Oakley Creek to the discharge outlet of the pond appears suitable.

Fish passage on this dam is not required since, although there is a large catchment, there is no length of permanent stream upstream of the dam impoundment. There is no habitat upstream of the dam because it is fed by reticulated stormwater. A stormwater pipe discharges just upstream of the dam. While the dam impoundment is poor quality fish habitat, the stream downstream would provide better habitat.

Effects on stream flows, habitat and water quality

Damming water can reduce water levels and change flow regimes (including the natural flow variability) downstream. These changes can result in: an increase in the frequency and duration of low flows; poorer water quality including decreased dissolved oxygen concentrations and increased stream water temperatures; and a

reduction in available in-stream habitat, including that attributable to the drowning or inundation of the section of stream behind the dam.

Passing of low flows is required due to the moderate habitat quality of the main stem of Oakley creek. Based on the 42 ha dam catchment area, and a mean annual low flow specific discharge for the Oakley Creek catchment of 4 l/s/km², the mean annual low flow is therefore estimated as 1.7 l/s.

No water is taken from the dam, and so maintaining the service spillway will suffice for passing low flows, since water that flows into the impoundment also flows out and downstream less any evaporation and seepage loss. There are no surface water take consents or other dams in the stream catchment.

Therefore a bypass flow of all natural inflow is required. This may be achieved by flow through the service spillway.

The dam has been in existence for approximately 21 years and the current wetland plantings that occupy the margins of the stormwater quality / detention pond provide adequate shading. The dam's margins wide sward of native plants adds to the visual amenity of the property, as well as providing habitat for bird life. It is considered that the dam does not create a negative impact on the surrounding properties amenity values.

Effects on dam safety, flooding, erosion and drainage

The damming of water carries with it a risk that the dam will fail, with potential damage to the downstream environment, including freshwater ecosystems, property, people, communities and infrastructure. The maintenance and enforcement of standards on dam design, construction, operation and maintenance will reduce the risk of dam failure. The dam hazard category was determined using the Dam Safety Guidelines (TP109, ARC, 2000). The ARC dam hazard category is "Low". Monitoring and management of the dam structure will avoid any effects of the dam caused by potential structural failure.

The applicant has provided details of the monitoring and maintenance program that is regularly carried out on the dam. Provided this monitoring and maintenance program continues to be administered, no further measures to avoid, remedy or mitigate adverse effects are considered necessary.

There are no downstream wetlands to be affected. The watercourse downstream of the dam to Oakley Creek is almost wholly contained on the Applicants property. The dam is fed by reticulated stormwater from the contributing catchment. There is no open stream above the dam. Overflow travels downstream through an unnamed tributary of the Oakley Creek for approximately 530m before discharging into the main stem (stream no. 081200) of the Oakley Creek at the property boundary.

A visual inspection of the downstream environment was undertaken on 20 July 2009 and at that time no adverse effects on the stream channel as a result of the dam were

noted. The damming of surface water within the pond attenuates upstream flows and provides regularly managed flows into the stream channel below the dam. The outflow from the dam discharges via a 1050mm diameter culvert onto a concrete apron and rip rap. Based on visual observation of the channel downstream of the dam, it is considered that the present scenario does not result in channel geomorphology effects that are more than minor.

Conclusion

With regard to the above criteria, consideration must be given to the fact that the existing dam has been in place for 21 years. A healthy margin of native riparian vegetation has established along the banks of the dam's associated stormwater pond and wetland type plants have also established within the ponds. The stormwater ponds attenuate up-catchment flows and when available, provide for continuous flows to the downstream environment. While fish passage is not ideal, some passage is available, albeit limited to climbing species. Furthermore, given the dam's existing state, it is not considered practicable to include any requirements for installation of a low flow by-pass structure, to require decommissioning or removal of the dam, to require any financial contributions or to require any other mitigation measures.

The current application for a replacement consent does not propose to alter in any way the dam, its associated structures or the stormwater quality / detention ponds.

It is considered that any actual or potential adverse effects of the proposed activity on the environment as identified above will be less than minor. This conclusion is based on undertaking the proposed measures to ensure that the dam operation meets current standards for dam safety, and passing of low flows is implemented, to avoid, remedy or mitigate potential effects in accordance with the application documents and subject to adherence with the recommended conditions of consent.

3.3 Request or rule: Sections 95A to 95E

Pursuant to Section 95A(2)(b), (c), and (3)(a), the applicant has not requested public notification and no National Environmental Standard or rule in the Regional Plan requires or precludes public or limited notification.

Pursuant to Section 95A(4) there are no special circumstances to warrant public notification.

Pursuant to Section 95C(2) and (3) further information as requested was provided by the set deadline, and a report was not commissioned.

3.4 Identification of affected parties

Pursuant to section 95E it is determined that no other persons are considered adversely affected by the activity.

There is a small unnamed stream (also with no official stream number), flowing through a small part of the Unitec campus, that arises at a spring known as Te Wai Unuroa o Wairaka. The spring is of significance to iwi. The dam is not located on, and will not affect this spring-fed tributary.

A low flow bypass condition is included to ensure that the damming does not cause cumulative effects on the receiving environment.

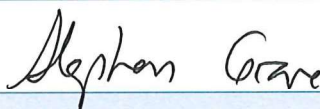
The stream discharges into the flat floodplain of an open grassed park-like grounds of the Unitec campus, immediately downstream of the dam on the applicant's own property. There are no buildings or structures in this immediate area, other than those of the applicant. The property of Waitemata Health Ltd is 400m downstream of the dam. No other person will be adversely affected by the application to dam water with the on-stream dam. Therefore written approvals were not required from any person by the Council.

3.5 Recommendation on notification

It is recommended that this application be processed on a non-notified basis because:

- The adverse effects on the environment of the activity for which consent is sought will be no more than minor.
- There are no persons considered adversely affected by the granting of this consent.
- The applicant has not requested public notification and no National Environmental Standard or rule in the Regional Plan requires public or limited notification.

Stephen Crane



Senior Consents and Compliance Advisor, Natural Resources and Specialist Input, Resource Consents.

Date:

12/8/2015

3.6 Notification determination

Acting under delegated authority, and for the reasons set out in the above assessment and recommendation, this application shall be processed on a non-notified basis.

Andrew Benson

AP Benson

**Team Manager: Water
Natural Resources and Specialist Input, Resource Consents**

Date:

13 / 8 / 15

4.0 ASSESSMENT OF APPLICATION

4.1 Assessment of effects on the environment: Section 104(1)(a)

The assessment of adverse effects undertaken for the purpose of the notification decision concluded that adverse effects were no more than minor. That assessment is also relevant for the purpose of the assessment required under s104(1)(a). In addition the following positive environmental effects have been identified: the damming of water provides stormwater treatment for the applicant's property and upstream.

4.2 Statutory considerations: Section 104(1)(b)

Auckland Council Regional Plan : Air Land and Water

The following objectives and policies of the Auckland Council Regional Plan (Air, Land and Water) are considered relevant to the damming of water: 6.3.2, 6.3.5, 6.3.7, 6.4.1, 6.4.2, 6.4.40, 6.4.42, 6.4.45, and 6.4.47.

Comments

With adequate mitigation the proposal will not have more than minor adverse effects on the environment. Policy 6.4.42 and 6.4.45 sets out appropriate mitigation for damming proposals. In this case, passing of low flows, and dam maintenance measures are considered as appropriate required mitigation. Financial contributions and further wetland creation are not considered appropriate in this case. Dam removal is not considered necessary.

The proposal is consistent with maintaining the stream natural values. The effects of the dam on fish passage upstream are minor because, although there is a large catchment, there is no length of permanent stream upstream of the dam impoundment. There is no habitat upstream of the dam because it is fed by reticulated stormwater. A stormwater pipe discharges just upstream of the dam.

The dam was specifically designed for a stormwater detention / quality pond, and will therefore enhance the water quality in the Oakley Creek stream.

Sufficient flow will be passed down the service spillway pipe to attract and allow passage of fish up into the dam impoundment. The dam is designed to improve

rather than reduce water quality down-stream of the dam. It is not proposed that there be new tall riparian vegetation on the stream downstream of the dam since that would not be consistent with the open grassed park-like grounds of the Unitec campus.

Maintenance of downstream flow regimes will be provided for, due to the consent condition requirement to pass low flows through the service spillway pipe, and that no water is being taken from the dam. There are no downstream lawful water users to be adversely affected.

It is therefore considered that there is no unmitigated impact on the natural character of the environment or effects on flora and fauna. The proposal is consistent with Tangata Whenua values identified in the Regional Plan.

One of the matters that applications for damming shall be assessed against (policy 6.4.42 (f) and 6.4.45(d)) is remedial measures and ongoing operation and maintenance to ensure those dams' safety performance standards are being met. The dam structure has been inspected by engineers who report that the dam overall hazard rating is low. No dam remediation (repairs) are required, although ongoing maintenance and monitoring are required by the recommended consent conditions 8 to 12 to minimise the potential for the dam to be a safety concern.

The recommended monitoring is consistent with the hazard rating for the dam. Flooding as a result of the structure is not considered to be an issue. Bed aggradation or impeded drainage on adjacent properties is unlikely. This dam application is being considered individually, since there are no cumulative effects of other existing dams in the catchment.

Land instability/bank erosion is not a concern. The dam is not expected to have effects more than minor on hydrological flows or water quality, subject to implementing mitigation. Therefore there would be no more than minor adverse effect on people, communities or habitat. No wetlands have been identified in the vicinity of the dam. A review condition is recommended in line with policy 6.4.44.

There were no adverse effects on any wetland, wāhi tapu or archaeological site.

It is concluded that the proposed activity is consistent with the provisions of the ACRP: ALW, subject to compliance with the recommended conditions of consent. In particular it is noted that the dam design, construction, operation and maintenance, has been addressed through conditions. Sufficient water will be retained in the natural water body to protect instream values, tangata whenua traditions (e.g. mahinga kai) and natural character and amenity values.

Consideration of the provisions of the Proposed Auckland Unitary Plan (PAUP)

For the damming of surface water and use of a dam on the bed of rivers and streams, the relevant objectives and policies of the Proposed Auckland Unitary Plan

(PAUP) are contained in Part 2, Chapter C, Sub section 5.15.2 – Water quantity, allocation and use, Policies 11 to 16; Part 2 Chapter E Sub section 7.3 - Overlay objectives and policies High Use Stream and Natural Stream Management Areas, and Part 5 Appendix 5.2 Table 1 River and stream minimum flow and availability. The relevant regional rules are contained in Part 3 Chapter H: Natural Resources sub section 4.17- Taking, using, damming and diversion of water and drilling.

In summary, the intent of the policies of the PAUP is quite similar to those of the ACRP: ALW.

Overall, I have applied greater weight to the operative plan provisions in my assessment.

Other statutory documents

An assessment has been undertaken of the proposed activity against the relevant provisions of the:

- National Environmental Standard
- National Policy Statement: *Freshwater Management 2011*
- Auckland Council Regional Policy Statement
- Proposed Auckland Unitary Plan.

It is concluded that the proposed activity is consistent with the relevant provisions of the plans and policy statements, subject to compliance with the recommended conditions of consent.

4.3 Other relevant matters: Section 104(1)(c)

There are no other matters considered relevant and reasonably necessary to determine the application.

4.4 Consideration of Part 2 matters

Policy to address the potential adverse effects of damming water on a permanent stream have been set in the ACRP: ALW. Consultation was undertaken with Iwi in the development of this Plan. As the proposed mitigation is consistent with the Plan policy, it is concluded that the proposal will not adversely affect matters of national importance, including the relationship of Maori with the water resources under s 6(e).

As the adverse effects of the proposed activity on the environment can be satisfactorily avoided, remedied or mitigated, and as the proposal is consistent with and not contrary to the statutory direction, it is concluded the proposal meets the purpose and principles of the RMA and is a sustainable use, development and protection of natural and physical resources, in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing

and their health and safety while -

- a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
- b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
- c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

Having considered the Matters of national importance, Other matters, and the requirement to take into account the principles of the Treaty of Waitangi, it is concluded that the proposal will not adversely affect any of those matters.

4.5 Duration of consent: Section 123

Policy 6.4.13 of the ACRP: ALW provides for the setting of concurrent duration and review dates of consents within a catchment or aquifer, to allow management of water damming, takes and discharges in an integrated manner. The applicant did not apply for a specific duration of consent.

Most of the related water take consents in the same AC Auckland Isthmus surface water management area expire in 2021 and will likely be replaced with a term of 15 years to expire in 2036. It is considered appropriate to set a term of 21 years for this consent so that the expiry date will be consistent with the future 2036 expiry date of other surface water consents in the same management area.

A term of 21 years is considered an appropriate balance between the likelihood of change in the activity and water requirements over the term of consent, and the need to provide security of tenure to reflect investment in infrastructure.

The consent will therefore expire on 31 May 2036 with provision to review the conditions in June 2016 and at not less than five yearly intervals thereafter. This recommendation is made in accordance with policy 6.4.13 of the ACRP: ALW. The review condition allows the AC to take into account a range of information, including results of previous monitoring and changed environmental knowledge, in determining whether or not the conditions of consent should be changed.

5.0 RECOMMENDATION

5.1 Adequacy of information:

The above assessment is based on the information submitted as part of the application. It is considered that the information submitted is sufficiently comprehensive to enable the consideration of the above matters on an informed basis:

- a. The level of information provides a reasonable understanding of the nature and scope of the proposed activity as it relates to the relevant district and/or regional plan.
- b. The extent and scale of any adverse effects on the environment are able to be assessed.
- c. Persons who may be adversely affected are able to be identified.

5.2 Recommendation

It is recommended that pursuant to Sections 104, 104B, and 108 of the RMA, consent is granted to the discretionary activity application by Unitec Institute of Technology to dam water with and use an existing dam on the bed of a tributary of Oakley Creek, Mt Albert for stormwater treatment at 1 Carrington Road, Mt Albert, Auckland being consent application 33526.

The reasons for this decision are as follows:

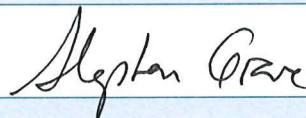
1. It is considered that the overall adverse effects on the receiving environment are no more than minor. Subject to the imposition of conditions, the effects can be further avoided, remedied or mitigated.
2. The proposal is considered to be consistent with the relevant provisions of the NES, Regulations, NPS, ACRPS, ACRP:ALW, PAUP, and in particular, the integrated management of the Region's natural and physical resources.
3. The proposal will be consistent with Part 2 of the Resource Management Act 1991 by promoting the sustainable management of natural and physical resources. Overall it is considered that the cumulative safeguards of Section 5(2)(a) to (c) have been met and the proposal thereby meets the purpose of the RMA.

5.3 Conditions

Recommended conditions of consent are provided following the draft Reason for decision.

5.4 Report by:

Stephen Crane



Senior Consents and Compliance Advisor, Natural Resources and Specialist Input, Resource Consents.

Date:

12/3/2015

RESOURCE CONSENT 33526 SECTION 104 AND 108 DECISION

Application Description

Consent to dam water

Application and Property Details

Consent Holder: Unitec Institute of Technology

Consent Application Number: 33526

File Number: 8256

Site Address: 1 Carrington Road, Mt Albert, Auckland

Legal Description: Lot 2 DP 406935

DECISION UNDER DELEGATED AUTHORITY

Acting under delegated authority pursuant to Sections 104, 104B and 108 of the RMA, consent is granted to the discretionary activity application by Unitec Institute of Technology to dam water with and use an existing dam on the bed of a tributary of Oakley Creek, Mt Albert for stormwater treatment.

Signed under Delegated Authority

Andrew Benson



**Team Manager: Water
Natural Resources and Specialist Input, Resource Consents**

Date:

13/8/15

Reasons for this decision

The reasons for this decision are as follows:

1. It is considered that the overall adverse effects on the receiving environment are no more than minor. Subject to the imposition of conditions, the effects can be further avoided, remedied or mitigated.
2. The proposal is considered to be consistent with the relevant provisions of the NES, Regulations, NPS, ARPS, ACRP: ALW, PAUP, and in particular, the integrated management of the Region's natural and physical resources.
3. The proposal will be consistent with Part 2 of the Resource Management Act 1991 by promoting the sustainable management of natural and physical resources. Overall it is considered that the cumulative safeguards of Section 5(2)(a) to (c) have been met and the proposal thereby meets the purpose of the RMA.

CONDITIONS

Pursuant to Section 108 of the RMA, this consent shall be subject to the following conditions:

General conditions

Activity in accordance with plans

1. The damming of water with and use of an existing dam on the bed of a tributary of Oakley Creek, Mt Albert on land legally described as Lot 2 DP 406935 (C.T. 414414) for stormwater treatment shall be carried out in accordance with the plans and all information submitted with the application, detailed below and all referenced by Council as Resource Consent Application 33526.

All charges paid

2. This consent (or any part thereof) shall not commence until such time as the following charges, which are owing at the time the Council's decision is notified, have been paid in full:
 - (a) All fixed charges relating to the receiving, processing and granting of this resource consent under section 36(1) of the Resource Management Act 1991 (RMA); and
 - (b) All additional charges imposed under section 36(3) of the RMA to enable the Council to recover its actual and reasonable costs in respect of this application, which are beyond challenge.
3. The consent holder shall pay any subsequent further charges imposed under section 36 of the RMA relating to the receiving, processing and granting of this resource consent within 20 days of receipt of notification of a requirement to pay the same, provided that, in the case of any additional charges under section 36(3) of the RMA that are subject to challenge, the consent holder shall pay such amount as is determined by that process to be due and owing, within 20 days of receipt of the relevant decision.
4. The consent holder shall pay the council any further monitoring charge or charges to recover the actual and reasonable costs incurred to ensure compliance with the conditions attached to this consent/s.

Advice Note:

The initial monitoring charge is to cover the cost of inspecting the site, carrying out tests, reviewing conditions, updating files, etc., all being work to ensure compliance with the resource consent. In order to recover actual and reasonable costs, inspections, in excess of those covered by the base fee paid, shall be charged at the relevant hourly rate applicable at the time. The consent holder will be advised of the

further monitoring charge or charges as they fall due. Such further charges are to be paid within one month of the date of invoice. Only after all conditions of the resource consent have been met, will the council issue a letter confirming compliance on request of the consent holder.

Access to property

5. That the servants or agents of the Council shall be permitted access to the relevant parts of the property at all reasonable times for the purpose of carrying out inspections, surveys, investigations, tests, measurements or taking samples.

Specific conditions dam water consent 33526

Term of consent / duration

6. The damming of water permit 33526 shall expire on 31 May 2036 unless it has lapsed, been surrendered or been cancelled at an earlier date pursuant to the RMA.

Works

7. The dam shall be constructed and maintained in accordance with the following dimensions and standards:
 - A 5 metre high earth fill dam, crest length 130 metres, crest width 3 metres.
 - A maximum impoundment surface area of 5300 square metres and approximate impoundment volume of 7500 cubic metres.
 - Flood spillway trapezoidal shape 11 metres wide base and 0.60 metres freeboard below dam crest.
 - A flood spillway capable of safely passing a 1% Annual Exceedance Probability (AEP) flood flow with minimal damage to the flood spillway.

Significant remedial works

8. In the event of any significant remedial works being required as a result of damage or safety improvements to the dam, spillways, low flow bypass or fish passage, then works shall be completed as soon as possible. Within 20 working days of completion of the remedial works a certificate from a suitably qualified engineering professional shall be supplied to the Team Leader Consents and Compliance – Water Allocation certifying that the engineer has supervised the remedial works, that the works have been satisfactorily completed and that the design intent of the remedial works have been met.

Advice Note:

Other consents such as stream works consents may be required before any remedial works can be undertaken. In addition, there may be other regional or district plan provisions that may apply – for example sediment control measures in the Proposed Auckland Unitary Plan and Regional Plan: Sediment Control. It is the Consent

Holder's responsibility to determine what other consents are required and to obtain these before undertaking any works.

Passing of Low Flows

9. All natural dam inflow shall be passed downstream of the dam at all times.

Dam safety and maintenance

10. The dam, spillways, low flow bypass and associated structures shall be operated and maintained to ensure that, at all times, they are structurally sound, pose no undue risk to human life, property, or the natural environment, and are able to perform satisfactorily to their approved design standard.

Advice Note:

Tasks associated with the maintenance of the dam include those necessary to minimise damage (including wave lap, vegetation and stock management), scour, and erosion along with any structural maintenance of the dam and associated facilities. Trees or large vegetation can weaken the structural stability of the dam, create seepage pathways and impede visual inspection and hence should not be allowed to grow on the dam. If the crest of the dam is to be used as a stock race, then the dam will need protecting with suitable measures such as covering the crest of the dam with gravel, fencing the sides of the crest, and diverting stormwater away from the upstream and downstream dam faces.

Dam Inspection

11. The dam, spillway, low flow bypass and associated structures shall be inspected at six monthly intervals and during/after extreme weather events in accordance with the "Maintenance Manual, Carrington Polytechnic Sediment Ponds, prepared by BCH&F Ltd, August 1992" and Check Sheet appended to that manual.

Advice Note:

A sample inspection sheet is attached in Appendix 1 of this consent to provide guidance to the Consent Holder as to the type of matters that should be addressed when an inspection is carried out. Inspections by a suitably qualified engineering professional should be undertaken if there are any significant changes to the dam, spillways, low flow bypass or associated structures.

Professional Dam Inspection

12. The dam, spillway, low flow bypass and associated structures shall be inspected by a suitably qualified engineering professional in 2020 and 2030 to check the structural integrity and functioning of the dam and associated structures, and to advise on any upgrade or maintenance works that are required. A copy of the inspection report is to

be provided to the Team Leader Consents and Compliance Water Allocation within 30 days of the inspection.

Five Yearly Report

13. A report (including photographs) shall be submitted to the Team Leader Consents and Compliance Water Allocation by 30 June 2020 and subsequently at intervals of not more than five years thereafter. The report shall contain: Inspection records of the dam, low flow pass and other associated structures; Any maintenance works carried out during the previous five years and plans for any future works.

Review

14. Pursuant to Section 128 of the RMA, the conditions of this consent may be reviewed by the Team Leader at the Consent Holder's cost:
- (a) In June 2016 and subsequently at intervals of not less than five years thereafter in order to:
 - (i) deal with any adverse effect on the environment which may arise or potentially arise from the exercise of this consent and which it is appropriate to deal with at a later stage or
 - (ii) vary the operating, monitoring and reporting requirements, mitigation measures and performance standards in order to take account of information, including the results of previous monitoring and changed environmental knowledge, on: water flow and level regimes, including bypass flow requirements; water quality; instream biota, including the functioning of aquatic ecosystems and fish passage; dam safety performance;
 - (b) In the case of a coastal, water or discharge permit, to provide compliance with rules in any regional plan relating to use of water, water or air quality etc. (refer section 128(1)(b) of the RMA) that have been made operative since the commencement of consent.
 - (c) In the case of a coastal, water or discharge permit, to provide compliance with any relevant National Environmental Standard that has been made since the commencement of consent.
 - (d) At any time, if it is found that the information made available to the council in the application contained inaccuracies which materially influenced the decision and the effects of the exercise of the consent are such that it is necessary to apply more appropriate condition.

Appendix 1: Example Routine Visual Inspection Checklist for an Embankment Dam

| Item No. | Description | Observation/Comment |
|---|--|---------------------|
| E1 | Record reservoir level (e.g. metres above mean sea level) | |
| E2 | Is there reservoir shoreline instability or erosion? | |
| E3 | Is the upstream face showing any erosion, instability, depression or cracking? | |
| E4 | Is the dam crest showing any deformation, misalignment, depressions or cracking? | |
| E5 | Is the left abutment showing any instability or seepage, including where the dam embankment contacts with the abutment? | |
| E6 | Is the right abutment showing any instability or seepage, including where the dam embankment contacts with the abutment? | |
| E7 | Is the downstream face showing any instability, deformation, depression, cracking or seepage? | |
| E8 | Is the dam toe showing any erosion or seepage? | |
| E9 | Measure the total dam seepage (e.g. time to fill 1 litre container, or mm head over a 90 degree v-notch weir) | |
| E10 | Is the service or flood spillway entrance obstructed? Is the spillway, including the outlet, damaged or eroded? | |
| Other Comments and Observations (e.g. unusual events since last inspection, vegetation issues, operating issues etc). | | |

ADVICE NOTES

1. The consent holder shall obtain all other necessary consents and permits, including those under the Building Act 2004, and the Historic Places Trust Act 1993. This consent does not remove the need to comply with all other applicable Acts (including the Property Law Act 2007), regulations, relevant Bylaws, and rules of law. This consent does not constitute building consent approval. Please check whether a building consent is required under the Building Act 2004. Please note that the approval of this resource consent, including consent conditions specified above, may affect a previously issued building consent for the same project, in which case a new building consent may be required. If not all resource consents have been applied for, it remains the responsibility of the consent holder to obtain any and all necessary resource consents required under the relevant requirements of the Resource Management Act 1991.

2. If you disagree with any of the above conditions, or disagree with the additional charges relating to the processing of the application you have a right of objection pursuant to Sections 357A or 357B of the RMA. Any objection must be made in writing to Council within 15 working days of notification of the decision.

3. Section 138 RMA specifies the conditions relating to surrender of a resource consent. A consent authority may refuse to accept the surrender of part of a resource consent where that may: affect the integrity of the consent; affect the ability of the consent holder to meet other conditions of the consent; or lead to an adverse effect on the environment. There also remains some liability to the person surrendering the resource consent under (3)(a) and (b) of this section. This liability relates to breaches of conditions of consent occurring before surrender and to the completion of work required to give effect to the consent. The Council would be unlikely to allow the surrender of this consent under section 138(2)(c) without supporting information indicating that no on-going risk was posed to human health and safety, or the environment. The consent holder is advised that before the consent can be surrendered, the dam will have to meet the requirements of the permitted activity rules in the ARC's relevant regional plan.

DEFINITIONS

| | |
|--------------|---|
| ACRPS: | means Auckland Council Regional Policy Statement |
| Council: | means The Auckland Council |
| HGMPA: | means Hauraki Gulf Marine Park Act 2000 |
| NES | means National Environmental Standard |
| NPS | means National Policy Statement |
| NZCPS: | means New Zealand Coastal Policy Statement 2010 |
| RMA: | means Resource Management Act 1991 and all amendments |
| Team Leader: | means Auckland Council Team Leader (Water Allocation) or nominated Auckland Council staff acting on the relevant Team Leader's behalf |

Appendix 7: 'Wetland' near the confluence of the Wairaka and Te Auaunga



Figure 2: Wairaka Stream through the Mason Clinic

Appendix 8: Te Auaunga



Figure 3: Te Auaunga immediately upstream of Great North Road culvert.

Appendix 9: Daylighting opportunity photographs

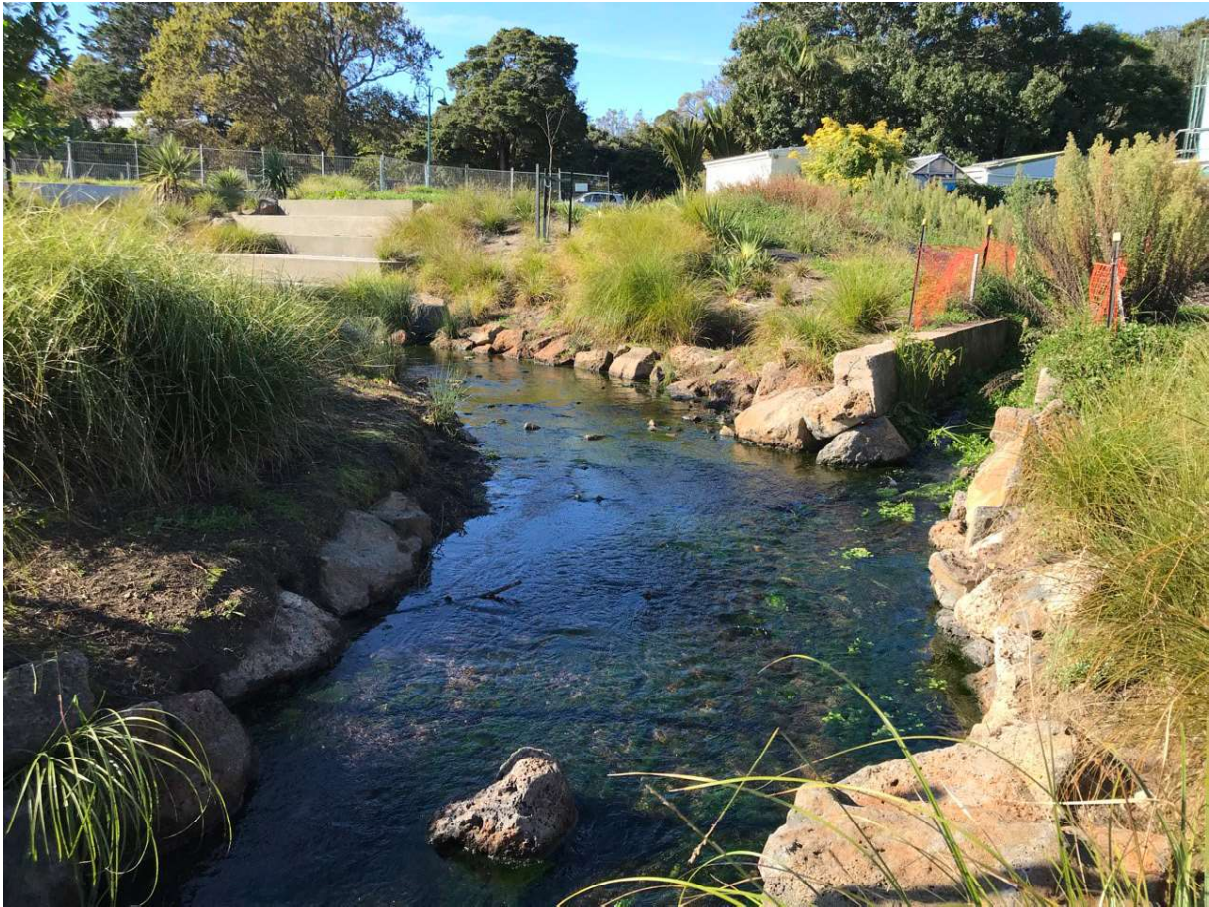


Figure 4: Recently (post-March 2021) daylight reach of Wairaka



Figure 5: Remaining daylighting opportunity