ADDENDUM TO

Archaeological values of freshwater historic heritage of the Wellington Region (Cochran, Murray and Kelley, 2012)

Report prepared by

SUBSURFACE LIMITED
Archaeological Services

ANDY DODD MA, PGDiP
DIRECTOR
PO Box 31 Paekakariki 5258
Tel 04 902 3290 Email andyj.dodd@gmail.com

for

GREATER WELLINGTON REGIONAL COUNCIL

P O Box 11 646
Wellington

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Birchville Dam (1931)
Local Authority: Upper Hutt City Council
Grid reference: NZTM E1775278 N5449206 ±3m
Archsite reference: R26/619

Main dam, looking across crest of dam past intake valves towards spillway (Dodd, 2015)

Description of features

The Birchville dam is a 46 metre long unreinforced concrete arch dam which supplied water to the Upper Hutt area between 1931 and 1954.[1] There are several pieces of disconnected pipe in the stream bed down-stream of the main dam, as well as concrete tanks set in the bank between the stream and the walking track.

Archaeological significance

The dam is comparatively modern so archaeological values are limited. The information potentially accessible from applying archaeological recording methods to the physical remains is likely to be readily available from archival sources. The disconnected remains of the water supply pipeline in the stream valley and bed below provide a tangible reminder of the use of the dam in the supply of water to the Upper Hutt area.

References

Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.127-138

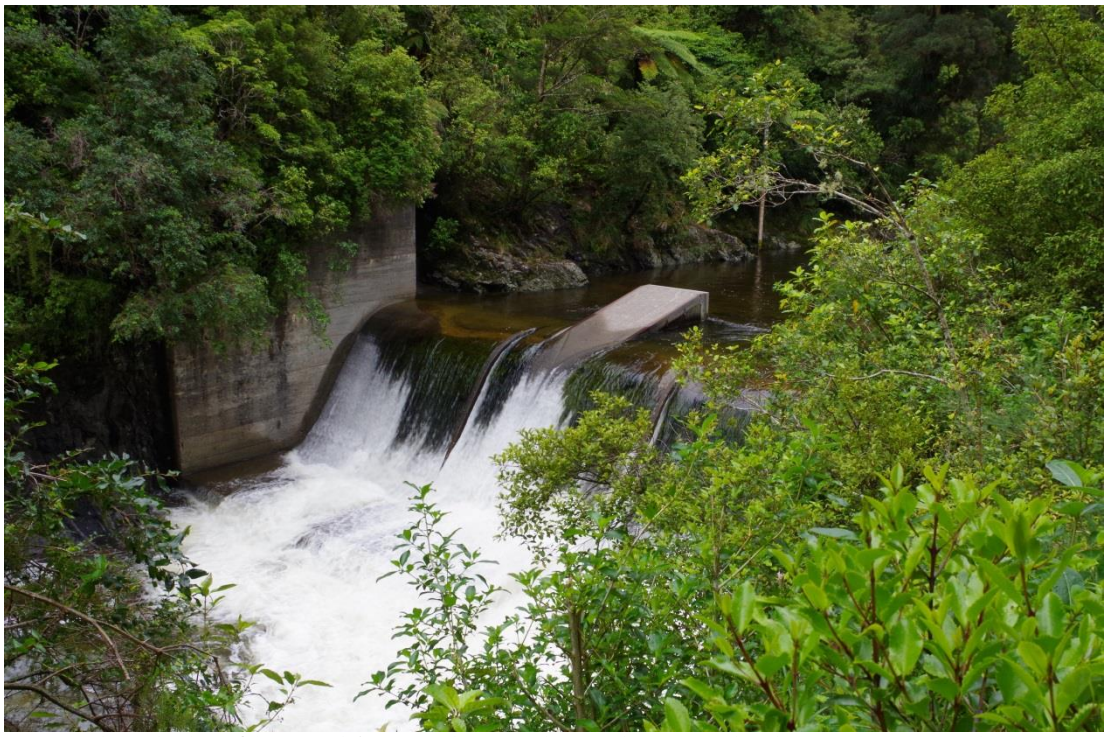
[1] Cochran C. and M. Kelly, 2012, Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review. Unpublished report to the Greater Wellington Regional Council, pp.127-138

	Description	Easting	Northing
1	Main dam	1775278	5449206
2	Concrete tank	1775377	5449092
3	Concrete tank	1775407	5449023
4	Pipe remnant	1775392	5449000
5	Pipe remnant	1775404	5448959
6	Pipe remnant	1775438	5448896
7	Pipe remnant	1775458	5448835
8	Pipe remnant	1775450	5448825

Aerial photography showing the location of the various features associated with the Birchville dam and water supply (Source Upper Hutt City Council on-line GIS, 2015)

Disconnected sections of water supply pipe in stream south of dam (Dodd, 2015)

Kaitoke Waterworks Weir (1946-1957)
Local Authority: Upper Hutt City Council
Grid reference: NZTM E1784214 N5453147
Archsite Reference: S26/4



Weir and intake (S26/4) viewed from track to southeast, the true right abutment contains the entrance to the pipeline tunnel

Description of features

The weir is part of a water supply system that was constructed between 1946 and 1957.[1] It is of concrete construction with dimensions approximately 38 metres in width and 8 metres high above the stream bed on the downstream side. The intake is located centrally towards the true right side, with the overflow on either side, and this leads to a chamber contained within the construction of the weir. The weir house which incorporates access to the chamber is on the true left abutment, and the true right abutment contains the entrance to the pipeline. From the intake the water travels through a 700-metre long tunnel, and across a pipe bridge (S26/5) to a sand trap and strainer house before being piped to the Te Marua facilities. Below the treatment facilities, on the true right (northwest) side of the river, there is an outflow from a scour pipe and an overflow. Concrete abutments supporting a timber platform on welded steel girders are located at the base of the overflow and waste pipe and are set in the river bank. The supports for the pipe bridge are clear of the river bed on rocky outcrops.

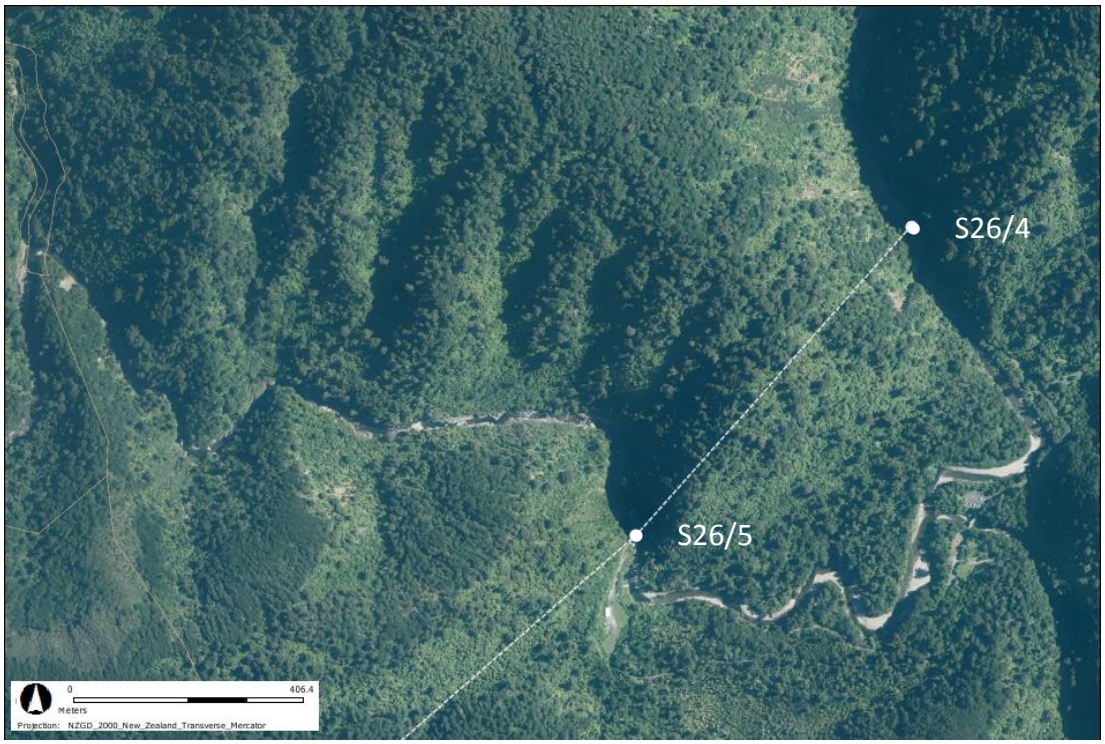
[1] Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.99-108; Cooke, P., 2007, *Our water history- on tap: Water supply in the Wellington region 1867-2006*, Greater Wellington Regional Council, Wellington

Archaeological significance
The weir is relatively modern by archaeological standards, but can complement the archival record as a source of information on mid-twentieth century water supply structures. The intake, tunnels, and pipe bridge contribute to a larger complex of water supply structures, and together with those at Orongorongo comprise a natural progression of water supply engineering works through the twentieth century.

References
Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.99-108

Cooke, P., 2007, *Our water history- on tap: Water supply in the Wellington region 1867-2006*, Greater Wellington Regional Council, Wellington,

GWRC, 2007, *Kaitoke Regional Park Resource Statement*, Greater Wellington Regional Council



Aerial photography showing the location of the intake (S26/4) and pipe bridge (S26/5) associated with the Kaitoke water supply. Direction of pipeline shown as dotted line (Source Upper Hutt City Council on-line GIS, 2015)

Kaiwharawhara Stream Diversion Tunnel (1944)
Local Authority: Wellington City Council
Grid reference: NZTM E1749541 N5431038
Archsite reference: R27/545

Inside of the stream diversion tunnel, looking southeast from northwestern end (Dodd, 2015).

Description of features
The diversion tunnel is a concrete-lined arched tunnel approximately 100 metres long. There is an open square-sided concrete lined lead in to the tunnel approximately 4 metres wide and 2.5 metres deep. The tunnel was constructed as an air raid shelter in 1944, and the concrete lined channel allowed for the diversion of the Kaiwharawhara stream through the tunnel after the war.

Archaeological significance
The tunnel is comparatively modern by archaeological standards, and as such it has limited information potential. Its archaeological significance is largely due to its connection with the second World War, and as a former air raid shelter it is part of a larger group of sites which illustrate a local response to defence. The unmodified stream bed leading up to the diversion contains pieces of metal water pipe, brick debris and historic artefacts, which may be remnant of earlier residential development along the stream edge.

References
Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.139-146

Aerial photography with 5-metre contours showing the location of the Kaiwharawhara stream diversion tunnel. (Source Wellington City Council on-line GIS, 2015)

Korokoro Dam (1903)
Local Authority: Hutt City Council
Grid reference: NZTM E1757181 N5437605 ±3m
Archsite reference: R27/538

Looking east from the bottom of the Korokoro dam spillway (Dodd, 2015).

Description of features

The Korokoro dam is a concrete gravity dam, and possibly the earliest surviving example of its type in New Zealand.[1] Visible elements of the Korokoro dam include the dam itself, with a stepped spillway and incised foundation stone on the northern side. There is a timber viewing platform on top of the dam. Downstream there are numerous pieces of decommissioned water supply pipe both in the stream bed and set in the banks. There are also pieces of the tramway rails in the stream. Pieces of water supply pipe, and concrete supports are visible in the stream bed intermittently for much of the length of the stream until it reaches Petone.

Archaeological significance

The Korokoro dam is a well preserved water supply dam which is now over 100 years old. Archaeological deposits associated with the construction of the dam maybe present in the immediate area including deposits from sites occupied by workers during construction, and the underground storage tanks added in 1907. The dam itself and broken sections of decommissioned water pipe and tramway rails in the stream bed is a source of information about early use of concrete in civil

[1] Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.51-62; Offer, R., 1997, *Walls for Water: Pioneer Dam Building in New Zealand*. Dunmore Press, Palmerston North, pp.37-38, 44-48

engineering and twentieth century water supply that can complement information from archival sources.

References

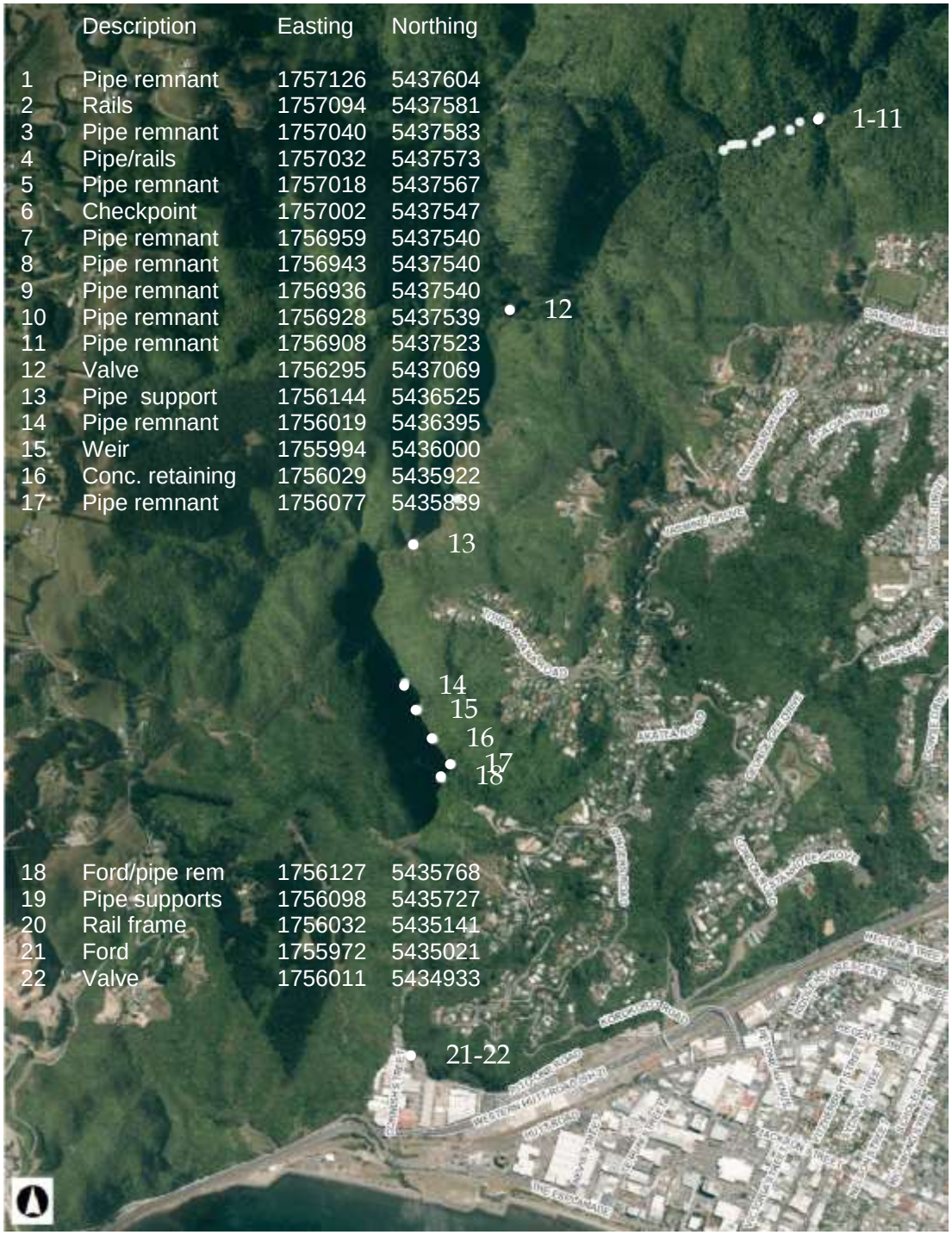
Butterworth, S., 1988, *Petone: A History.* Petone Borough Council, Petone, pp.131-133, 223

Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.51-62

Cooke, P., 2007, *Our water history- on tap: Water supply in the Wellington region 1867-2006*, Greater Wellington Regional Council, Wellington, p.12

Offer, R., 1997, *Walls for Water: Pioneer Dam Building in New Zealand*. Dunmore Press, Palmerston North, pp.37-38, 44-48

Aerial photography showing Korokoro dam and spillway (Source Hutt City Council on-line GIS, 2015)



Aerial photography showing locations of pipe sections visible during recent site inspection (Source Hutt City Council on-line GIS, 2015)

Kourarau Hydroelectric Power Scheme (1924)
Local Authority: Carterton District Council
Grid reference: NZTM E1827100 N5447700
Archsite reference: N/A

Upper reservoir dam and spillways (Dodd, 2015)

Description of features
The Kourarau Hydroelectric Power Scheme incorporates a number of features including two reservoirs, dams, spillways, pipelines, surge towers and powerhouses.[1] It extends over 3.5 kilometres of the Kourarau stream valley. The upper reservoir is contained by a concrete reinforced earth dam with concrete lined spillway. The smaller lower reservoir at the confluence of the Kourarau stream and Sailormans Creek is also contained by an earth dam with an intake tower set in the reservoir, and a scour chamber below the dam.[2] The lower dam also has a concrete lined spillway leading to a concrete weir. The two surge towers incorporated into the pipeline are not within the stream bed itself, but are visually prominent features in the landscape.

Archaeological significance
The Kourarau Hydroelectric Power Scheme is comparatively modern so archaeological values are limited. The information potentially accessible from applying archaeological recording methods to the physical remains is likely to be readily available from archival sources.

[1] Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.109-126
[2] Ibid

References

Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.109-126

Aerial photography showing the location of the Kourarau reservoirs (Source Combined Wairarapa Councils on-line GIS, 2015)

Lower Karori Dam (1874-1878)
Local Authority: Wellington City Council
Grid reference: NZTM E1746778 N5427458
New Zealand Heritage List/Rārangi kōrero reference: No.7750
Archsite reference: R27/276

Lower Karori Dam and reservoir viewed from the south (Dodd, 2015)

Description of features
The Lower Karori Dam comprises an earth dam of puddled clay, valve tower set into the dam and connected with a steel walkway, concrete spillway on the western side of the dam, and underground pipe network.[1] It also includes a second by-way on the eastern side which incorporates a concrete weir, concrete lined channels and culverts and a wooden flume. The lower Karori dam differs from earlier puddle earth dams in New Zealand in that it includes concrete facing on the upstream side for wave protection.[2] The construction of the dam also necessitated smaller temporary works to contain the water during works[3], and these are likely to be preserved underwater.

Archaeological significance
Built between 1874 and 1878, the lower Karori dam is now over 130 years old. Although it was decommissioned in 1997, it is in good condition with all of its main component features still present. The dam complex has been subject to alterations including the construction of the visitors centre in 2008 which required modification

[1] Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.7-16
[2] Offer, R., 1997, Walls for Water: Pioneer Dam Building in New Zealand. Dunmore Press, Palmerston North, p.33
[3] Alexander Turnbull Library PA1-F-171-75

to the eastern spillway,[4] and the original timber flume of the western spillway has also been replaced with a pipe. It is an early example of a municipal water supply dam, and along with the hospital water supply dams at Porirua are the only surviving earth dams in the Wellington region. This makes the physical remains of the dam, along with archival record, a valuable source of information pertaining to late nineteenth century dam construction and municipal water supply.

References

Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.7-16

Harris, J., 2009, *Archaeological investigation of the Lower Karori Dam Spillway, Karori Wildlife Sanctuary*. Unpublished client report

Offer, R., 1997, *Walls for Water: Pioneer Dam Building in New Zealand*. Dunmore Press, Palmerston North

O'Keeffe, M., 2007, *Karori Sanctuary, Wellington. Archaeological assessment of proposed visitors' centre*. Unpublished client report

Aerial photography with 5-metre contours showing location of dam, western spillway, valve tower and start of eastern byway (Source Wellington City Council, on-line GIS, 2015)

[4] O'Keeffe, M., 2007, *Karori Sanctuary, Wellington. Archaeological assessment of proposed visitors' centre.* Unpublished client report; Harris, J., 2009, *Archaeological investigation of the Lower Karori Dam Spillway, Karori Wildlife Sanctuary*. Unpublished client report

Morton Dam (1911-1988)
Local Authority: Hutt City Council
Grid reference: NZTM E1767177 N5430118
Archsite reference: R27/416

Morton Dam viewed from western downstream side. Demolished section and spillway visible in the left of frame (Dodd, 2015)

Description of features
The Morton dam (1911-1988) is a buttress dam formed by sloping concrete slabs supported by concrete pillars at regular intervals. Dimensions are 128 metres in length and 17 metres high. The stream currently passes through a 24.5 metre wide demolished section of the dam immediately north of the spillway. Features presently within the stream bed include concrete weirs and stone rubble.

Archaeological significance
Although relatively modern by archaeological standards, the dam itself is a good representative example of a buttress dam, and an important component of the wider group of structures in the Wainuiomata – Orongorongo water supply catchments. Offer[1] notes that the Morton dam is one of only two buttress dams built in New Zealand, so it is also a rare example of this type. The dam structure can be investigated and documented using archaeological methods, and although in-situ preservation is the preferred outcome, deconstruction and excavation could potentially provide information on construction methods not available from archival sources.

[1] Offer, R., 1997, Walls for Water: Pioneer Dam Building in New Zealand. Dunmore Press, Palmerston North, pp.68-70

References

Cochran C. and M. Kelly, 2012, Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review. Unpublished report to the Greater Wellington Regional Council, pp.73-84

Cooke, P., 2007, Our water history- on tap: Water supply in the Wellington region 1867-2006, Greater Wellington Regional Council, Wellington, pp.14-15

Offer, R., 1997, Walls for Water: Pioneer Dam Building in New Zealand. Dunmore Press, Palmerston North, pp.68-70

Aerial photography with contours showing location of Morton dam, approximate former edge of the reservoir, spillway, valve tower and demolished section of dam in stream bed (Source Hutt City Council, on-line GIS, 2015)

Orongorongo Water Supply Complex (1921-1926)
Local Authority: Hutt City Council
Grid reference: NZTM E1770720 N5426256
Archsite reference: R27/529-534

Orongorongo water supply main weir viewed from downstream to the northwest (Dodd, 2015)

Description of features
The Orongorongo water supply complex, constructed between 1922-26 comprises a number of individual as listed below:

Orongorongo main weir R27/529 NZTM E1770718 N5426255
The main weir is a concrete structure 3.7 metres high on the downstream side, and about 16 metres in length. It incorporates the intake and small spillway on the true left side of the stream. The water is fed into a 525 mm diameter pipe and travels along the south side of the stream to the first tunnel (R27/534). The intake and connection to the water pipeline are in two level-roofed steel reinforced structures on the south side of the weir, with steps leading to the top of the structure which has pipe handrails around the perimeter.

Big Huia intake R27/530 NZTM E1770654 N5426601
The Big Huia intake is located on the Big Huia stream approximately 150 metres upstream of the confluence with the Orongorongo River. It comprises a small concrete weir across the stream bed with the intake and valves on the true left side. The water pipe is set into the edge of a formed track, which runs along the eastern side of the stream. There is a filter chamber with an upright air vent immediately south of the intake, and maintenance debris including a discarded filter is also present.

Little Huia intake R27/531 NZTM E1770550 N5426554
The Little Huia intake is located on the Little Huia stream approximately 120 metres upstream of the confluence with the Orongorongo River. Similar in appearance to the Big Huia intake, it comprises a small concrete weir across the stream bed with the intake and valves on the true left side. The water pipe is set into the edge of a formed track, which runs along the northeastern side of the stream.

Tunnel R27/532 NZTM E1770524 N5426336
The shorter of the two, this tunnel alleviates the need for the water pipeline to negotiate a tight bend in the river to the north. The tunnel is 103 metres in length, as has the letters W W W and the date of construction, 1924 fixed to the concrete above either portal. The tram rails have been removed from the tunnel floor, and the entrance has been boarded off at one end.

Telephone creek intake R27/533 NZTM E1770249 N5426409
The Telephone creek intake is no longer in service. It comprises a small concrete weir in the stream bed approximately 175 metres upstream of the confluence. The weir has an intake pipe on the true left side, and about 20 metres downstream of there are concrete supports in the stream bed. Strewn pipe remains are visible along the stream bed with one 20 metre long section still insitu on its supports.

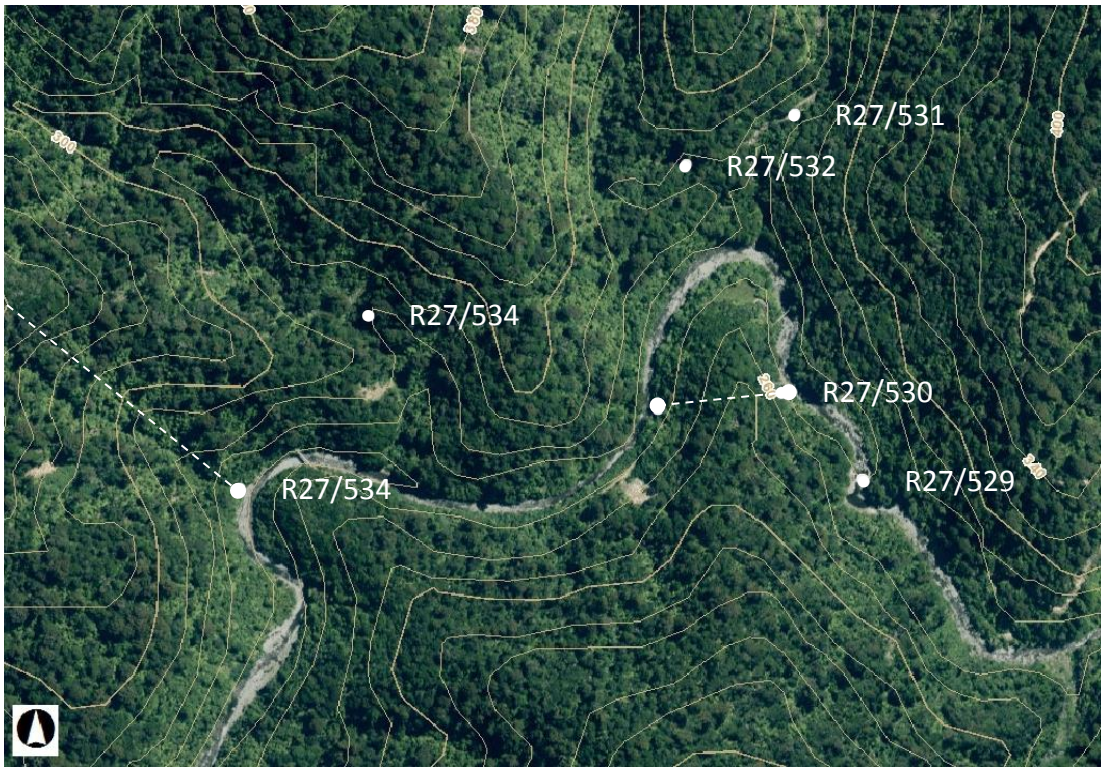
Tunnel R27/534 NZTM E1770125 N5426248
The main tunnel linking the water catchment at Orongorongo with the Wainuiomata dams is 3.2 kilometres long. Cross section dimensions are 2.1 metres wide, by 2 metres high. As with the shorter tunnel, the letters W W W and the date of construction, 1924 are fixed to the concrete above the portal. At the Orongorongo end there is a tramway turntable which allowed the trolleys to be redirected either to a tip head 8-10 metres above the river immediately opposite the tunnel entrance, or along the benched access track which incorporates the main water pipeline. The water pipe runs along the northeast side of the tunnel allowing room for the tram rails along the southwest side. From the eastern end of the tunnel the water pipe turns northeast to follow the true right bank of the river where it is buried underground for about 65 metres before surfacing again to cross the river via a pipe bridge. The tram rails has been removed from much of this section and discarded over the bank. The north-western portal for the tunnel is located at NZTM E1767828 N5428505.

Archaeological significance
The Orongorongo water supply complex is relatively modern by archaeological standards. The catchment contains a number of associated features and contemporary structures, and although the pipeline has been upgraded in recent times, the weirs, tunnels, and parts of the tramway still retain much of their original form and appearance. The original fabric remaining on site can complement the archival record as a source of information on large scale municipal water supply

engineering in the early twentieth century. In addition the area around the caretaker's residence may contain archaeological deposits, such as rubbish pits, which may provide insight into the daily life of the men who worked on the construction and maintenance of the water supply complex.

References

Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.85-98



Aerial photography with contours showing the location of the various features associated with the Orongorongo water supply. (Source Upper Hutt City Council on-line GIS, 2015)

Additional photos

Main weir viewed from downstream side to NNW

Main weir looking SE across the top of the intake structures on the true left

Big Huia intake viewed from the track adjacent to the intake structure

Big Huia intake looking across the top of the intake structure

Little Huia intake viewed from the downstream side to the south

Little Huia intake viewed from the track adjacent to the intake structure

Telephone creek weir and intake viewed from the south. Obscured by fallen rata

Telephone creek water supply pipe on concrete supports in the stream bed to the south of the weir and intake

Short tunnel, eastern portal, with water supply pipe leading into concrete abutment on the right hand side

Short tunnel, western portal

Main tunnel, south-eastern portal with inistu tram rails

Tram way turntable in front of SE portal of main tunnel

Petone Woollen Mills Weir (1903)
Local Authority: Hutt City Council
Grid reference: NZTM E1755994 N5436000 ±4m
Archsite reference: R27/248

Looking southwest over the Petone Woollen Mill's weir. Intake in foreground to right of frame, spillway in background to left (Dodd, 2015)

Description of features
The remains of the Petone Woollen Mills weir comprise a concrete weir with a spillway on the true left (west) side, and an intake on the true right (east). The weir itself is approximately 20 metres in length and rises 3 metres above the stream bed on the downstream side.[1] The spillway is approximately 6 metre wide, and the intake approximately 2x2 metres. The intake is a steel grill and timber structure, now largely silted up and overgrown with vegetation. A framework of railway iron 850 metres south of the Woollen Mills weir is likely to be a fence for catching debris washed downstream during periods of flooding, but the age of this structure is unknown.

Archaeological significance
The Petone Woollen Mills weir is over 100 years old, and comprises tangible remains relating to the use of the steam by the Petone Woollen Mill in the early twentieth century. It was built by the borough council to compensate the mill, so can also be considered representative of civil engineering construction in the early twentieth century. The structure can be investigated using archaeological methods to provide information pertaining to the construction and utilisation of small scale early

[1] Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.41-50

twentieth century water supply dams, which may be able to compliment archival sources of information.

References

Butterworth, S., 1988, *Petone: A History. Petone Borough Council*, Petone, pp.131-133, 223

Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.41-50

Cooke, P., 2007, *Our water history- on tap: Water supply in the Wellington region 1867-2006*, Greater Wellington Regional Council, Wellington, p.12

Offer, R., 1997, *Walls for Water: Pioneer Dam Building in New Zealand*. Dunmore Press, Palmerston North, pp.37-38, 44-48

Aerial photography showing Petone Woollen Mills weir on the southwest side of the walking track (Source Hutt City Council, on-line GIS, 2015)

Porirua Hospital Water Reservoir Dams (1893 and 1912)
Local Authority: Porirua City Council
Grid reference: NZTM E1752607 N5442528 (upper)
NZTM E1752409 N5442256 (lower)
Archsite reference: R27/413; R27/547

Standing on upper reservoir dam looking towards the valve tower and trolley rails (Dodd,2015)

Description of features
The upper reservoir complex (1893) comprises a dam, valve tower connected with a set of trolley rails to the western edge, a concrete spillway, and a water intake and disconnected pipeway through the reserve.[1] The dam of the lower reservoir complex (1912) has been deconstructed, but concrete debris from the abutments and the spillway are still present on site, as well as the intake valve which is still visible above vegetation in the former reservoir bed and occasional sections of pipe debris in the stream bed below. Stone revetting above the track that runs alongside the western side of the reservoir is probably contemporary with the reservoir.

Archaeological significance
Over 120 years old, the upper dam and reservoir comprise a rare example of a nineteenth century water supply dam. It is also an important component of the wider group of structures associated with the Porirua hospital and Lunatic asylum which was established in 1887.[2] The dam structure can be investigated and documented using archaeological methods, and although in-situ preservation is the

[1] Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.27-40
[2] Williams, W., 1987, *Out of mind out of sight: The story of Porirua hospital*. Porirua Hospital, Porirua, pp.116-118

preferred outcome, deconstruction and excavation could potentially provide information on construction methods not available from archival sources.

References

Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.27-40

Offer, R., 1997, *Walls for Water: Pioneer Dam Building in New Zealand*. Dunmore Press, Palmerston North, p.38

Williams, W., 1987, *Out of mind out of sight: The story of Porirua hospital*. Porirua Hospital, Porirua, pp.116-118

Aerial photography with contours showing the location of the upper and lower reservoir dams (Source Porirua City Council, on-line GIS, 2015)

Upper Karori Dam (1908)
Local Authority: Wellington City Council
Grid reference: NZTM E1746070 N5426675 ±5m
New Zealand Heritage List/Rārangi kōrero reference: No.7749
Archsite reference: R27/546

Looking east along the top of the Upper Karori dam (Dodd, 2015)

Description of features
The Upper Karori dam is a monolithic concrete which spans the upper Kaiwharawhara gully in a gentle curve over a length of 111.25 metres. It has a maximum height of 24.71 metres and a 1.5 metre walkway across the top of the dam.[1] The valve tower is set into the southern side two-thirds along the length of the dam, and there is a spillway on the eastern side.

Archaeological significance
Although relatively modern by archaeological standards, the dam itself is a good representative example of a monolithic concrete dam, and an important component of the wider group of water supply structures in the upper Kaiwharawhara valley. The dam structure can be investigated and documented using archaeological methods to provide information on early twentieth century civil construction methods and the workings of the municipal water supply not available from archival sources.

References

[1] Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.63-72

Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.63-72

Aerial photography with 5-metre contours showing the location of the Upper Karori dam and reservoir (Source Wellington City Council on-line GIS, 2015).

Wainuiomata Waterworks Dam (1884-1950)
Local Authority: Hutt City Council
Grid reference: NZTM E1766730 N5429510
Archsite reference: R27/332

Wainuiomata water works dam, looking southeast along the face of the dam (Dodd, 2015)

Description of features
The Wainuiomata waterworks dam (1884-1950) is an earth diversion dam with a concrete-face wall and spillway near the southern end.[1] The concrete wall north of the 21-metre wide spillway extends 112 metres, and at the time of construction was 10-metres high. The stream currently passes through a 24.5 metre wide demolished section of the dam immediately north of the spillway. Features presently within the stream bed include the spillway and concrete weirs. Disconnected scours, a diversion tunnel and the old water intake survive underground beneath the dam. Other areas of archaeological interest include the site of the former 1884 boat shed at the end of the narrow peninsula north of the spillway.

Archaeological significance
Over 130 years old, the dam itself is a rare example of a nineteenth century water supply dam, and one of the oldest surviving dams in New Zealand. It is also an important component of the wider group of structures in the Wainuiomata – Orongorongo water supply catchments. The dam structure can be investigated and documented using archaeological methods, and although in-situ preservation is the

[1] Cochran C. and M. Kelly, 2012, Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review. Unpublished report to the Greater Wellington Regional Council, pp.17-26

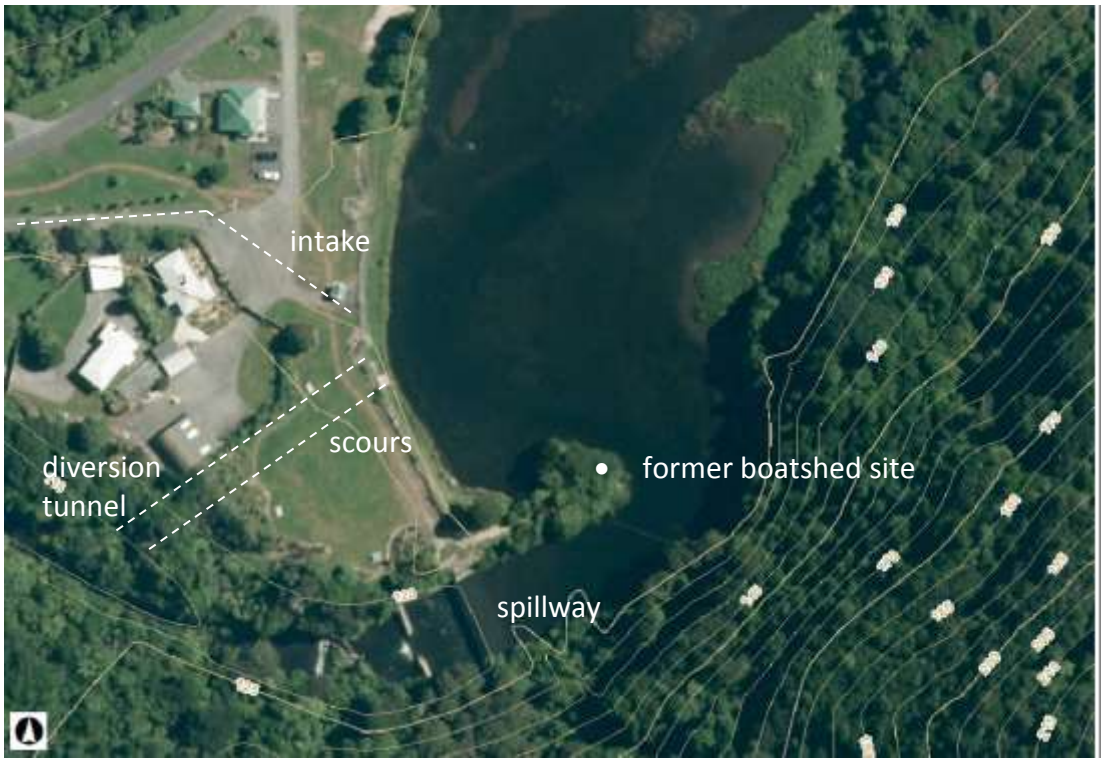
preferred outcome, deconstruction and excavation could potentially provide information on construction methods not available from archival sources.

References

Cochran C. and M. Kelly, 2012, *Freshwater Historic Heritage of the Wellington Region: Survey for the Freshwater Plan Review*. Unpublished report to the Greater Wellington Regional Council, pp.17-26

Cooke, P., 2007, *Our water history- on tap: Water supply in the Wellington region 1867-2006*, Greater Wellington Regional Council, Wellington, pp.9-11

Offer, R., 1997, *Walls for Water: Pioneer Dam Building in New Zealand*. Dunmore Press, Palmerston North, pp.37



Aerial photography with contours showing the Wainuiomata waterworks dam with spillway to the south, and former location of the boatshed on the narrow headland jutting out into the reservoir. Intake, scours and diversion tunnels indicated with dotted lines (Source Hutt City Council, on-line GIS, 2015)