PART ONE: IDENTIFICATION

Place Name:	**Kerikeri Hydro Electric Dam and Diversion Weir, above Rainbow Falls Kerikeri**
Image:	 **Image: Rainbow Falls, Kerikeri. Creator: Clark, Ron Date Period: 1950-59 Copyright: Ron Clark (1950-59) Source: Sir George Grey Special Collections, Auckland Libraries, 1207-1530**
Site Address:	Above Rainbow Falls, Kerikeri
Legal Description:	TBA
Certificate of Title:	TBA
Physical Description:	Constructed in December 1929 the dam and diversion weir formed part of the operational function of a small-scale hydro-electric power station constructed by the Alderton Utility Company to supply electricity to residents who had settled on orchard lands developed by the North Auckland Land Development Corporation (NALDC). The system was designed by chartered electrical and registered civil engineer Lloyd Mandeno (1888 – 1973) who had been employed by Edward S Little, a majority shareholder and one of the directors of the NALDC. Little was also the director of the Alderton Utility Company which was incorporated in April 1929 for the purpose of administering and overseeing the supply of electricity to member households residing on the land purchased from the NALDC. Initial construction began in December 1929, when the river was diverted to the south bank. Earth filled bags had been placed upstream from the dam and weir site to form a coffer dam. Eight ¾ inch steel pins were grouted (mixed sand, cement and water) into place on the rock bed. After the rock surfaces had been cleaned and roughened timber formwork was constructed and concrete poured until it had been built up to the required height. A photograph dating (ca. Jan 1930) from the construction period shows the dam section made of concrete extending across the width of the stream. The diversion weir was also constructed of concrete. Water was diverted via the weir and down into a water race extending a total length of 4,480 feet (1360 m) to the powerhouse to turn

	the turbines to generate electricity. The system remained in use until 1966, when the power station was deemed no longer viable by the Bay of Islands Electric Power Board and was subsequently decommissioned by the Board.				
Site Type:	Hydro-electric dam and diversion weir				
Approx. date (or range)	December 1929 – 1930 Operational 13 July 1930. Out of use 1966				
NZAA Site No:	P05/516				
NZ Heritage List:	Not listed				
Regional or District Plan Schedule					
Recorded NZTM grid reference:					
Easting:	1687154	**Northing:**	6102784	**Position:**	Concrete Dam and weir in stream extending across stream area

PART TWO: HISTORIC HERITAGE EVALUATION

Criterion	Comments	Value*
(a) Archaeological and / or scientific importance	The dam and diversion weir contributes to our understanding of infrastructure required for the generation and reticulation of electricity to service the community of Kerikeri. The site and associated structures have been surveyed by archaeologists and has been included in the NZAA site record no: P05/516 (1982)	3
(b) Architecture and technology	The structures have similar construction to other hydro electric dams and diversion weirs that utilised rapid flowing streams and rivers during the early 20th century. However the design was unique to the site being utilised, and some construction methods may have modified as an adaption to site conditions.	3
c) Rarity	Nationally such structures are not rare. Other similar examples exist using similar construction for the diversion of water ways and engineering principles around New Zealand including the Okere Falls Power Station constructed in 1899/1900 at Rotorua. The resource however is the only example of its type of construction on a small scale in Northland. An earlier hydro electric power station (1916) built for the Dominion Cement Company located at Wairua Falls, Titoki, also used a diversion weir to divert water down an open water race, though on a much larger scale. The station is currently still operational and is now managed by Northpower who purchased it in 1993.	3
(d) Representative-ness	The structures remain still intact and are identifiable as being part of a hydro-electric power station infrastructure.	3

(e) Integrity	The concrete dam instream and diversion weir are still intact and visible above the line of the falls. Both can be clearly identified as being associated with the hydro-electric power station	3
(f) Context	The dam and diversion weir form part of the hydro- electric station built to supply the reticulation of electricity to the settlers that had taken up land through the North Auckland Land Development scheme. The system serviced the electricity needs of the Kerikeri community until 1966 when it was decommissioned by the Bay of Islands Electric Power Board	3
(g) People and events	The site is closely associated with Edward S Little a former diplomat and majority shareholder/director in the North Auckland Land Development Corporation (NALDC). Little had instigated the plan for the reticulation of electricity as part of the overall project to attract new residents onto the NALDC orchard lands. He is considered one of modern day Kerikeri's founding fathers, along with George Alderton the founder of the Northern Advocate and entrepreneur, and others they had formed the NALDC. The Alderton Utility Company was formed as a result of the plans to generate electricity for the orchard scheme. The power scheme was designed and overseen by future Bay of Islands Electric Power Board electrical and civil engineer Lloyd Mandeno (1888 – 1973). Mandeno had overseen a number of hydro electrical projects including increasing the generating capacity of the Tauranga Borough Council's Omanawa Falls hydro electric station. The power scheme and the orchard based horticultural industry it powered helped to shape modern day Kerikeri.	3
(h) Identity	The dam and diversion weir are closely associated with the early 20th century orchard based horticultural industry that helped shape the modern day community of Kerikeri.	3
(i) Tangata whenua	Site is not of Maori origin	U
(j) Statutory	The hydroelectric station and associated components are subject to the Conservation Act (1987) and the ICOMOS Charter.	U
Threshold for Scheduling	Minimum of 3/High in two criteria:	3

*Outstanding – 4; High – 3; Moderate – 2; little – 1; None – 0; or Not Known or unassessed - U.

PART THREE: STATEMENT OF SIGNIFICANCE

Statement of Significance:	Dating from December 1929, the dam and diversion weir formed the beginning of an extensive water race and pipe system extending some 4,480 feet (1360 m) to the powerhouse to turn the turbines to generate electricity. This formed part of a larger scheme relating to the commercial orchard industry initiated by the North Auckland Land Development Corporation during the early 20th century. The hydro-electric station provided the electricity reticulation needs of the both the horticultural industry and the Kerikeri community until 1966 when it was decommissioned. Along with the horticultural industry, the supply of electricity helped to shape the modern day economy of the Kerikeri and the wider region. Overall the dam and diversion weir are of high historic significance.

PART FOUR: EVALUATION RECOMMENDATION

Identified criteria	(a), (b), (c), (d), (e), (f), (h)
Overall Value*	High
Overall Score*	3
Overall Context**	Regional
Eligibility for scheduling:	Yes
Extent of Place:	Yes [Refer to diagram in Part 6]
Interior protected:	No
Potential Tangata Whenua value:	Not a structure of Maori origin
Pre-1900 or gazetted archaeological site:	NZAA site no: P05/516

* Outstanding/ Score 4: of exceptional importance and interest: retention of the identified value(s)/ significance is essential.

High/ Score 3: of great importance and interest: retention of the identified value(s)/ significance is very important.

Moderate/ Score 2: of some importance and interest: retention of the identified value(s)/ significance is desirable.

Low/ Score 1: of limited importance and interest: retention of the identified value(s)/ significance is of low importance.

NA/None/ Score 0: none identified.

** Overall Context: the geographical significance at a local, regional or higher scale, should also be given.

PART FIVE: MANAGEMENT/ RISK INFORMATION

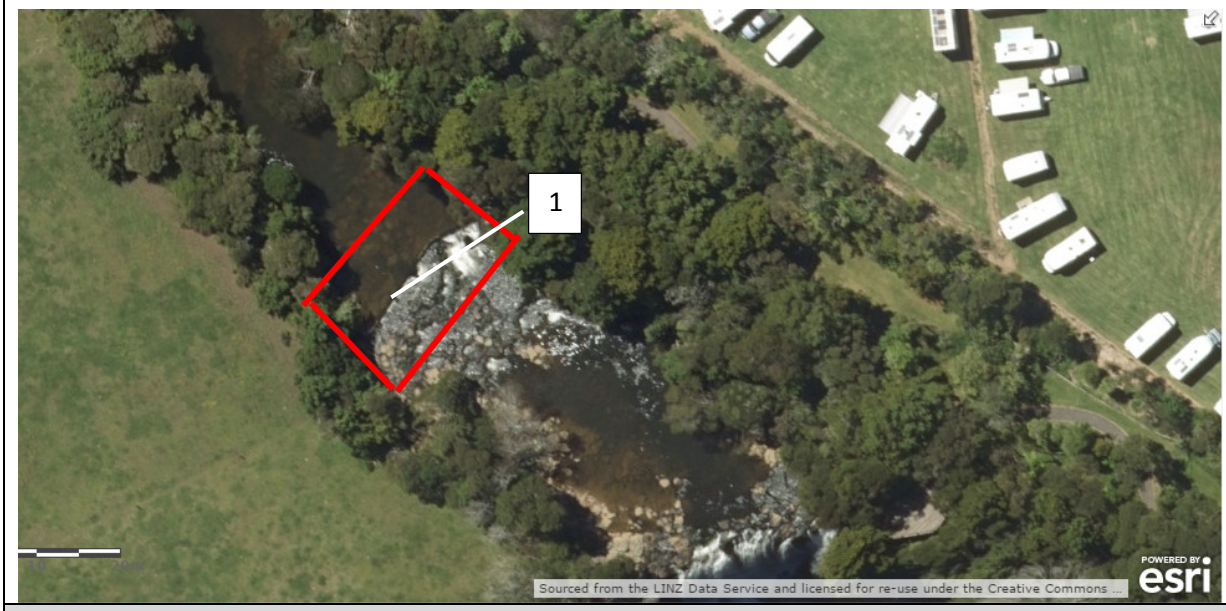
Criterion	Comments	Value*
Occupancy/ Use:	Presently abandoned/unused	4
Management	The site is not protected under the Far North District Plan (outside jurisdiction) or Regional Plan (not scheduled) but there is recognition of its heritage value by the Department of Conservation through its inclusion under the ICOMOS Charter	4
Condition:	Condition is assumed to be fair to moderate based on photographs and the Department of Conservation Heritage Assessment report (2011) however the site has not been visited	3
Fragility/ Vulnerability	The structures are still present instream, however they may be vunerable to scouring action caused by winter flooding which could weaken their structural integrity over a period of time.	4
Threats	Scouring action caused by winter flooding could potentially compromise structural integrity. Possible vandalism due to the ease of access to the site by the public could also pose a potential threat to the structures.	4
Overall risk:	Critical	4

*0 – None, 1 - Low, 2- Moderate, 3 - High, 4 – Critical

Criterion	Comments	Value*
Opportunities:	There is high opportunity available to the public to access the resource via the Kerikeri River Scenic Reserve, as well as educational opportunities through the provision by the Department of Conservation of interpretative panels outlining the history of the site and the contribution it made to the heritage of modern day Kerikeri	4

*0 – None, 1 - Low, 2- Moderate, 3 - High, 4 – Outstanding

PART SIX-EXTENT OF PLACE



NZTM coordinates:					
Easting:	1687154	**Northing:**	**6102784**	**Position:**	Concrete Dam structure extending across stream area (1)
Note	Co-ordinates are approximate only. Site has not been visited.				

ADMINISTRATION

Desktop Date:		**Site Visit Date:**		Not visited	
Site Accessibility:					
Evaluated by:	Elizabeth Clark			**Date:**	
Reviewed by:				**Date:**	
Approved by:	Jon Trewin	**Draft:**		**Final:**	16/08/2017
NRC Assessment ID:	06	**NRC Schedule ID** [Leave Blank]			

APPENDIX 1 Supporting Research

Sources Checklist:	Checked
Northland Coastal Plan Schedule	-
Kaipara District Plan Schedule	-
Far North District Plan Schedule	Y
Whangarei District Plan Schedule	-
NZAA Archsite Database	-
Heritage New Zealand List	-
LINZ /ARCGis	Y
Google Maps	Y
Whangarei Libraries Northland Room Digital Collection (http://whangarei.recollect.co.nz/)	-
Alexander Turnball Library Collection NZ National Library (https://natlib.govt.nz/)	Y
Digital NZ (http://www.digitalnz.org/)	Y
Papers Past (https://paperspast.natlib.govt.nz/)	Y
Te Ara Encyclopedia	-
NZ History online	-
IPENZ Engineering Heritage Register(http://www.ipenz.org.nz/heritage/default.cfm)	Y
Department of Conservation Kerikeri Hydro-Electric Station Heritage Assessment (2011) (http://www.doc.govt.nz/Documents/conservation/historic/by-region/northland/kerikeri-hydro-electric-station-historic-heritage-assessment.pdf)	Y

Bibliography:

Author(s)	Date	Title	Publisher	Location