

# RESOURCE CONSENT CERTIFICATE

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**Resource Consent:** AUTH135741.01.01

**File Number:** 60 25 28A

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*Pursuant to the Resource Management Act 1991, the Regional Council hereby grants consent  
to:*

Hauraki District Council - Paeroa Office  
PO Box 17  
Paeroa 3640

(hereinafter referred to as the Consent Holder)

**Consent Type:** Water Permit

**Consent Subtype:** Dam

**Activity authorised:** Use and maintenance of an existing 4 metre high dam in/on the bed  
of the Waitakaruru River to impound water

**Location:** Waitakaruru River, Steen Road - Waitakaruru

**Consent duration:** This consent will commence on the date of decision notification and  
expire on 15 October 2020

**Subject to the conditions overleaf:**

## **General**

1. The dam authorised by this resource consent shall be undertaken in general accordance with the application for this resource consent being the document titled "Steen Road Dam: Assessment of Environmental Effects" dated 17 July 2015 and recorded as document number 3456537 of the Waikato Regional Council's document recording system unless inconsistent with the conditions below which shall prevail.
2. The consent holder shall pay to the Waikato Regional Council any administrative charge fixed in accordance with section 36 of the Resource Management Act 1991, or any charge prescribed in accordance with regulations made under section 360 of the Resource Management Act 1991.

## **Operation and maintenance**

3. The consent holder shall be responsible for the structural integrity and maintenance of the dam, and for the provision and maintenance of any erosion control works that may become necessary as a result of the exercise of this consent.

Note: A separate resource consent may be required as a result of the need to undertake erosion control works. Any such consent shall be obtained by the consent holder at their expense prior to any works being undertaken.

4. The consent holder shall be responsible for maintaining the dam and the river in the immediate vicinity of the dam free of flood debris and other obstructions.
5. The consent holder shall keep a log of what maintenance has been undertaken, which shall be made available to the Waikato Regional Council at all reasonable times.
6. During maintenance activities the consent holder shall ensure that the release of cement/grout, sediment and other contaminants to the Waitakaruru River are minimised as far as practicable.

## **Progress Report**

7. The consent holder shall provide a Progress Report to the Waikato Regional Council by the second and fourth anniversaries of the commencement of this consent. This report shall as a minimum provide the following information:
  - Whether a decision to remove or keep the dam has been made;
  - If no decision has been made then the anticipated date for when such a decision will be made;
  - If the decision has been made and the decision is to remove the dam then the likely timeframe and process in which this is to occur;
  - If the decision has been made and the decision is to keep the dam beyond the expiry of this consent then confirmation that a fish passage design will be provided as per condition 8 below (this is required for the first progress report only).

## **Fish Passage**

8. If the decision is to retain the dam beyond the expiry of this consent then by the fourth anniversary of the commencement of this consent the consent holder shall provide to the Waikato Regional Council a fish pass design (concept level) prepared by an appropriately experienced independent expert. The Waikato Regional Council shall approve the independent expert. The fish pass shall provide for the passage of swimming fish above the dam.

*In terms of s116 of the Resource Management Act 1991, this consent commences on 15<sup>th</sup> October 2015*

# Consent Evaluation Report

**Applicant:** Hauraki District Council - Paeroa Office **File No.:** 60 25 28A  
**Address of Site:** Waitakaruru River, Steen Road, Waitakaruru **Project Code:** RC22744  
**Consent Type(s):** Water Permit **Application Number:** APP135741

## 1 Background and Description of Application

Aecom on behalf of the Hauraki District Council, has applied to reauthorize the Steen Road Dam which is located within the Waitakaruru River at Steen Road. This dam was built in 1927 to take water for the Waitakaruru and nearby rural Community. The applicant has recently completed an upgrade to the overall Plains Water Supply scheme and has recently finished the construction of a water supply reservoir in an old disused Quarry located off line and upstream of the dam. As a result water is no longer taken from the dam and associated intake structure, and all water coming down the river now flows over the dam.

The last time this dam was consented the applicant indicated that the dam would be removed once the reservoir was in place and operational. At the time however, it was identified that significant planning for the removal would be required to ensure that no downstream effects on the waterway and adjacent land would occur. The applicant is now re-evaluating the long term future of the dam including the complexities around the potential removal. In the meantime however, the dam requires authorisation until its fate is determined.

The applicant has provided a description and pictures of the dam within the application documentation which I do not intend to repeat here – refer to document numbered 3456537 on the Waikato Regional Council's document recording system. In summary the dam consists of the following:

- Height - 4 metres
- Width - 6 metres
- Impoundment area – 0.45 hectares (estimate)
- Total upstream catchment is approximately 21.5 kilometres
- Upstream catchment consists of a mixed use of forestry, agriculture, quarrying and some native bush

Reference Id	Activity Description
AUTH135741.01.01	To maintain an existing 4 metre high dam in the bed of the Waitakaruru River to impound water, Steen Road, Waitakaruru.

The dam was authorised via AUTH119768.01.01 which expired on 18<sup>th</sup> July 2015. This application was received on 20<sup>th</sup> July 2015 therefore s124 is not available for the dam i.e. the dam is currently unauthorised.

The applicant has requested a 5 year term whilst determining the fate of the dam.

## 2 Application made and activity status under the Plan

Reference Id	Activity Status
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AUTH135741.01.01	Controlled – Rule 3.6.4.10 – Waikato Regional Plan
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### 3 Process matters

The application was received by Waikato Regional Council on 20 July 2015 and relevant process matters are as follows:

Date	Process Detail
20/07/2015	Lodged
22/07/2015	Active
23/07/2015	On Hold – request for further information sent to applicant's representative
06/09/2015	Off hold - Further information received
07/09/2015	Active

### 4 Statutory matters

#### 4.1 Identification of relevant matters

Matter	Relevant (Yes/No)	Comment (if relevant)
Application received before 3/12/2013? (If yes, 2013 amendments do not apply)	N	
Bundling	N	
Controlled activity	Y	Conditions of consent have been recommended in line with the matters for which WRC has reserved control over
Restricted discretionary activity	N	
S89A (MNZ comment) for Coastal Permits only	N	
Permitted baseline effects disregarded? (S104(2))	N	
Value of investment/s124 applies (S104(2A))	N	
S105	N	
S107	N	
Settlement Act or River Act – Vision and Strategy	N	
Hauraki Gulf Marine Park Act 2000	Y	
Regulations: - Water Measurement	N	
Statutory acknowledgements	None known	

## 4.2 Effects of the activity

The dam is an existing structure that has been in existence for a number of years. As such the only effects considered here are the passage of fish and the impact on in stream processes i.e. sediment movement within the waterway. Dr Bruno David has provided some comment on the ability of the dam to impact on fish passage as follows:

*"There is certainly an impact for swimming fish species (detailed further below), of which a number of species are known from below the dam (and up to it) but not above. Some 'climbing' fish including banded kokopu and long and shortfin eels appear to be capable of scaling the dam although it is likely that greater numbers of these species would also be found upstream if the dam were not present as ease of access would be easier and risk of predation lower.*

*Given the current operation of takes and former consenting arrangements there are no other potential downstream barriers that I am aware of.*

### **Supporting information**

*Relative to other streams and rivers entering into the Southern Firth of Thames, the Waitakaruru river (upstream of the suicide road bridge) still maintains good water quality and instream habitat for aquatic organisms. Consequently the reach scale diversity of fish that has been recorded from this particular stream is very high compared to other water courses in the area.*

*Of the 8 native (seven endemic) fish species known to occur in freshwater reaches of this stream only one, Crans bully (*Gobiomorphus basalis*) is non migratory. The remainder require access to or from the ocean at some point in their lives to complete their life cycle. The term to describe this life history strategy is 'diadromy.'*

*It is likely that the relatively higher water quality water entering the Firth from this waterbody during early spring provides an attractive 'signal' to post larval native diadromous fish that may preferentially influence their migration pathway decision.*

*The 4.6m high Steen rd dam located approximately 12km from the ocean represents the end point within the catchment for non 'climbing' fish species. In particular the dam excludes inanga, smelt, torrentfish and redfin bullies from approximately 32 km of available river network within this catchment. Of these four species, three (inanga, torrentfish, redfin bully) are currently listed as 'Declining' under the most recent threat classification ranking (Goodman et al. 2013).*

*Previous assessment of environmental effects and granting of consents (see docs memo # 1694480) was undertaken on the basis of removal of the Steen road dam. In other words the long term gains for biological diversity in this catchment that would likely be realised by dam removal were factored into decision making when previously granting this consent as illustrated in previous technical assessments (Docs#1694480). At the time (2010) it was agreed that dam removal would occur within a 2 year timeframe. The Waikato Regional Council at that time offered to undertake a before after control investigation to document the likely positive biological outcomes of dam removal and conducted a number of field visits to identify suitable sites within the catchment to execute this work.*

*At present there appears to be no reason to leave this feature in place other than the financial cost of removing it. Any likely small short term impacts from sediment release behind the dam would be greatly overshadowed by the reconnection and re-establishment of access of >32km of river network to upstream migratory fish. In many other parts of the world (e.g. US, Europe), removal of such superfluous structures (most many orders of magnitude larger than Steen road dam) is a common occurrence. As such there is an ever growing body of scientific knowledge*

*and information related to not only removal strategies and approaches but also to the generally rapid and positive response of biological communities post structure removal.*

*It is also important to recognise that the larval outputs of migratory fish from rivers into marine environments also help to support recreational, commercial and customary fisheries in a variety of ways. For instance large numbers of whitebait help to fuel the diet of marine fish within the Firth of Thames (e.g. kahawai, flounder) and returning whitebait are also targeted by recreational and customary fishermen. Native larval fish outputs should be viewed as a national stock that form an important part of the energy assimilated by marine and freshwater food-webs. Consequently supporting activities that can enhance larval output (i.e. dam removal by increasing habitat available for fish to occupy and reproduce) should be seen as a very positive contribution. Such a contribution would not only support ecosystem functioning but would also support an endemic fish fauna that presently has more than 2/3 of its species 'in decline' or worse (with the national decline in part as a result of barriers to migration).*

*A further point to note is that at present the existing dam has a large influence on the natural sediment transport within the river. Typically rivers undergo periods of scour and fill as upstream bed materials are transported downstream. If sediment supply is reduced downstream these processes are disrupted and the forming and unforming of complex habitats downstream (and upstream) are impacted. This disruption has been occurring for a long period of time in this river and evidence of these effects can be seen both upstream (e.g. silt and sediment accumulation behind the dam wall) and downstream (coarse substrates exposed due to sediment starvation) of the dam. On the upstream side the backing up of water and sediment around the dam has resulted in prolific growth of invasive aquatic weed which causes large local fluxes in dissolved river oxygen (DO) as the plants respire and photosynthesise. Although re-oxygenation occurs on the downstream side as the water cascades through a steeper gradient, upstream I have previously recorded DO values in summer that at times can be well below 'satisfactory' guideline levels for many fish species.*

*If the dam remains in place sediment will continue to accumulate behind the dam wall and will need to be regularly managed.*

*In short, in this particular situation, I would predict that dam removal would result in a net positive biological and physicochemical response by the river. It may be possible to build a fish pass to address the passage issues for swimming species, but due to the vertical nature of the dam and the steep sided section immediately below it, I suspect that the costs for construction are likely to be quite high. Further, a dedicated sampling and testing plan would be required to verify that the pass was indeed performing adequately to pass swimming species. A similar exercise has been ongoing at Taharoa (NZ Steel Mine) within our region for many years and this test case could be used to evaluate the costs and merits of such a strategy."*

It is obvious that the removal of the dam would have significant environmental benefits on fish passage and overall provide for more migratory native fish species to access additional habitat upstream of the dam. Consent conditions to address this issue have been recommended should the applicant decide that the dam is to remain long term. In particular if the decision is made to keep the dam then a fish passage will likely be required to be installed as part of any new consent process. I note that this is a matter for which WRC has reserved its control over.

The lack of sediment moving through the system has been occurring for a number of years and in fact it is likely that to some extent the waterway has adjusted to this process. The amount of sediment lost to the system by the dam has not been quantified as part of this process. However, if the dam were to remain long term then an assessment of this would be required to assess the impact this may be having on the waterway.

#### 4.3 Policies and Plans

Policy instrument	Relevant to application?	Consistent with policy instrument?	Comment (where inconsistent)
NZCPS	N		
<ul style="list-style-type: none"> <li>• Other NPS</li> <li>• Fresh water</li> <li>• Electricity Trans'n</li> <li>• Renewable electricity generation</li> </ul>	Y	Y	
RPS (operative)	Y	Y	
RPS (proposed)	Y	Y	
Regional Plan	Y	Y	
Regional Coastal Plan	N		
NES Telecommunications Drinking water sources Air pollutants Electricity transmission Contaminants in soil	N		
Any other matter considered relevant e.g. Iwi management Plans	Whaia te Mahere Taiao a Hauraki Hauraki Iwi Environmental Plan	Y	

#### 4.4 Part 2 Matters

Statutory provision	Relevant to application?	Consistent with provision?	Comment (where inconsistent)
<b>Section 6 matters</b> a) Natural character b) Outstanding features c) Indigenous d) Public access e) Relationship of Maori f) Historic heritage g) Recognised customary activities	Y	Y	
<b>Section 7 matters</b> a) Kaitiakitanga aa) Stewardship b) Efficient use ba) Efficiency of end	Y	Y	

use c) Amenity values d) Intrinsic values ecosystems f) Quality of environment g) Finite characteristics h) Trout and salmon i) Climate change j) Renewable energy			
<b>Section 5 matters</b> (sustainable management purpose)	Y	Y	

#### 4.5 Conclusions

The application to retain the dam is a controlled activity and as such must be granted. I have considered all of the relevant matters in the WRP, PRPS, RPS, Hauraki Marine Park Act, Hauraki Environmental Management Plan – Whaia te Mahere Taiao a Hauraki and the RMA and I am recommending a suite of conditions as outlined within the attached resource consent certificate.

There is no particular status nor relevance of the dam that I am aware of within any policy documentation.

I note that as part of the 2002 process to re-consent the dam and overall water supply operations, that the s42A staff report originally recommended that a fish pass be provided at the dam. The decision makers at the time agreed with the applicant that any such decision for the provision for fish passage should be made once the final decision on whether the dam is to remain is made. The 2011 re-consenting process did not provide for fish passage at the time as the applicant stated that the dam was to be removed once the new reservoir was operational, and instead provided a short term consent to allow for the planning of the removal of the dam. This additional process to provide for a period of time to decide on whether the dam remains or not is acceptable however in my opinion, a decision on the long term status of the dam should now not be delayed beyond this latest consent process. In the future should a further consent be sought for this dam then at that time any application should also seek an authorisation for a suitable fish pass that provides for swimming fish over the dam.

Overall, I consider that a five year duration for the dam is ample time in which to make a decision on whether the dam should remain long term or not. Further, in my opinion any application to re-consent the dam (should that be the decision) should also include an application for a fish pass to provide for the provision of swimming fish passage. I have therefore recommended a condition that a fish pass design be provided to WRC by the fourth year following the commencement of this consent. If the consent conditions are adhered to then this matter should be resolved within 5 years.

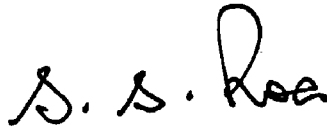
Consent conditions have been recommended in accordance with the matters for which WRC has reserved its control over and further I note that the applicant has reviewed the consent conditions attached to this report and has agreed to the inclusion of such conditions.



## 5 Recommended Decision

I recommend that in accordance with s104A resource consent application APP135741 be granted in accordance with the duration and conditions prescribed in the attached Resource Consent Certificate for the following reasons:

- The use and maintenance of the dam will have acceptable actual or potential adverse effects on the environment
- The use and maintenance of the dam is consistent with relevant policies, plans, national standards or regulations;
- The use and maintenance of the dam is consistent with the purpose of the Resource Management Act 1991.



Sheryl Roa  
Principal Advisor - Consents  
Resource Use

**Date: 14 October 2015**

## 6 Decision

I hereby grant the resource consent application in accordance with above recommendations.



Hugh Keane  
Team Leader - Infrastructure  
Resource Use

**Date: 14 October 2015**

Acting under authority delegated subject to the provisions of the Resource Management Act 1991 which at the time of decision had not been revoked.