

**First Determination Report to the Regional  
General Manager, Northern Region**

**Department of Conservation  
(Approval in Principle / Decline)**

**Application for Concession by  
Bay of Plenty Electricity Limited  
(Lease)**

**17 November 2006**



Department of Conservation  
*Te Papa Atawhai*

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## **1.0 INTRODUCTION**

The Department of Conservation received a concession application from Bay of Plenty Electricity Limited on 20 June 2005. The application is to enable the construction and operation of a hydro power scheme on the upper Kaituna River, near Rotorua. After an initial assessment of the application, the Department requested further information from Bay of Plenty Electricity Limited on 11 August 2005. A further request for additional information on alternative sites was requested on 6 September 2005. This further information was received on 25 October 2005.

An inspection of the proposed weir site by Department staff and the Bay of Plenty Conservation Board took place on 6 October 2005.

A draft of this report was sent to the applicant for comment on 15 December 2005. Extensive comments were received from the applicant on 20 March 2006.

An alteration to section 5 of this report dealing with the application's consistency with the Bay of Plenty Conservation Management Strategy was sent to the applicant for comment on 22 May 2006. Comment from the applicant was received on 22 June 2006. All comments received from the applicant are attached in an appendix to this report.

In September 2006 the applicant was given an opportunity to provide information on any additional mitigation for five adverse effects that had been assessed as significant by the Department, and for draft conditions that could be included in a concession document if a concession is granted. Further information was provided by the applicant on 31 October 2006, and is attached as an appendix to this report.

This report assesses the concession application in relation to Part IIIB of the Conservation Act 1987 and the Reserves Act 1977, and makes a recommendation on the application.

### **1.1 The Application**

The Department has received an application from Bay of Plenty Electricity Limited to site the abutment of a weir on, and inundate or flood, part of the Upper Kaituna Scenic Reserve. The purpose of the application is to enable the construction of a hydro generation plant to generate approximately 13.5 MW and provide enough power for approximately 10,000 homes or 15% of Rotorua's demand.

The Reserve is administered under the Reserves Act 1977. Section 59A of that Act provides that Part IIIB of the Conservation Act 1987 (the concession provisions) apply to reserves vested in the Crown, with necessary modifications.

The purpose of this report is to consider the application in accordance with the relevant legislation and recommend whether the application should be approved in principle, or be declined.

### **1.2 The Law**

Part IIIB of the Conservation Act 1987 sets out the provisions dealing with concessions. These include:

**Section 17S - 'Contents of the application'**

This is discussed in section 2 of this report.

**Section 17U - 'Matters to be considered by the Minister'**

This includes:

Section 17U(1)(b), consideration of the effects of the proposal.

Section 17U(1)(c), measures that can be taken to avoid, remedy, or mitigate, any adverse effects of the activity.

Section 17U(3), the purpose for which the land is held under the relevant legislation.

Section 17U(4), could the activity be reasonably undertaken in another location

These matters are discussed in section 3 of this report.

**Section 17W - Relationship between concessions and conservation management strategies and plans.**

This is discussed in section 4 of this report.

## 2.0 Contents of the Application - Section 17S

Under section 17S of the Conservation Act 1987 the applicant is required to outline details relating to the application. A copy of the complete application is attached as an appendix.

**2.1 The Applicant**

The applicant is **Bay of Plenty Electricity Limited** ("the applicant").

The applicant is a wholly owned subsidiary of Wellington based Todd BOPE Limited, which is a wholly owned subsidiary of Todd Energy Limited. Todd Energy Limited is in turn a wholly owned subsidiary of Todd Petroleum Mining Company Limited.

**2.2 Description of the Activity - Section 17S(1)(a)**

The proposed concession activity is comprised of four parts:

- The construction and siting of the left abutment of a proposed 12 metre high weir on part of the Reserve. The design of the weir is for an earth embankment with a rock channel to maintain a residual flow in the Kaituna River. The central section will have a surface of rocks set in concrete with indistinct edges to help create the look of the natural channel. The applicant states a wooden footbridge to allow pedestrian access may be constructed over the channel.
- The embankment sections will be planted in native plants and will have isolated boulders to help match the natural environment.
- The inundation of approximately 0.5 – 1.0 ha of the Reserve. This will flood a vegetated strip of reserve that is river margin approximately 1.2 kilometres in

length.

- The dewatering of a 2.5 kilometre section of the Kaituna River below the weir. This section of the river bounds the Reserve. The flow will be reduced and water levels may reduce by 2.6 metres. This final residual flow will be determined by resource consent which is outside this concession application.
- The ongoing maintenance and operation of the proposed weir and the proposed inundation.

The applicant is proposing an exclusion zone immediately upstream of the proposed weir which would be created by erecting a floating boom across the new water body to be created by the proposed inundation approximately 40 metres upstream of the proposed weir.

The inundation of the Reserve will have impacts on the Reserve including changes to the vegetation and character of the Reserve. If a concession is granted any changes to the Kaituna River itself will be considered separately under the Resource Management Act.

### **2.3 Identity and Status of Area under Application - Section 17S(1)(b)**

The Upper Kaituna Scenic Reserve ("the Reserve") is vested in the Crown and administered by the Department of Conservation as scenic reserve under the Reserves Act 1977. It comprises 53.95 hectares in total made up of Section 16 Blk VI Rotoiti (8.3200 ha) and Section 15 Blk VI Rotoiti (45.6300 ha). Certificate of Title 411/176, South Auckland Registry, Gazette 1984, page 1173.

In the Bay of Plenty Conservation Management Strategy the scenic reserve is designated as No. U15043, Upper Kaituna Scenic Reserve and is in the Otago Ecological District. The Reserve was purchased from the Crowhurst family in 1982 because of its botanical conservation values including the threatened king fern. The area was gazetted a scenic reserve in 1984.

The Reserve is bounded on its eastern edge by the Kaituna River. It consists of moderately steep slopes with low cliffs along the riverbank and supports a range of forest types dominated by rewarewa, kamahi and tawa. It is ranked as being of high botanical conservation value (Beadel 1995). It contains a significant population of the threatened king fern, that is near the southern geographical limit of this species in the Central North Island.

### **2.4 Effects of the Proposed Activities - Section 17S(1)(c)**

The applicant has identified a number of effects. These and the avoidance and mitigation measures proposed by the application are summarised in section 3.1 and detailed in the appendices.

This report has been vigilant to ensure that only effects on the Reserve have been considered. The river is not part of the Reserve. The contact point is considered to be part of the Reserve, which is that part of the riverbank, namely earth or rock, which may be wetted by water, and contains animal or plant communities, or other features which are influenced by the presence of the adjacent river. Any effects on the river itself are irrelevant to this application.

### **2.5 Proposed Type of Concession and Duration - Section 17S(1)(d) &(e)**

A lease for a term of 60 years has been applied for. A term of 60 years is sought on the basis that there are exceptional circumstances because of the structures and the capital investment involved.

## 2.6 Relevant Information relating to the Applicant's Ability to carry out the Activity - Section 17S(1)(f)

The Applicant's parent company, Todd Energy Limited, has experience and capability in project management, finance, production, operation and marketing. Todd Energy Limited manages all of the trading activities of the various power stations and business units that it owns, including all of the electricity that is generated from the various BOPE generation schemes.

The Applicant owns and operates a number of Eastern Bay of Plenty generation schemes;

### Aniwhenua Hydro Station

This is located on the Rangitaiki River. The Aniwhenua scheme was constructed in the late 1970s. The scheme consists of a 200 metre long and 10 metre high dam, a 2.2 kilometre long canal and a powerhouse. It is rated at 25 MW.

### Kawerau Geothermal Scheme

This consists of two plants; TG 1 is located at Kawerau and TG 2 is located nearby on the opposite bank of Tarawera River. It is rated at 6.4 MW

### Edgecumbe Co-generation Facility

This facility is located in Edgecumbe at the Anchor Products Edgecumbe dairy processing factory. It provides the factory's thermal and electricity requirements while also providing electricity to 4,000 BOPE customers. The facility commissioned in 1996 uses natural gas and is rated at 10 MW.

### Comment

The Applicant has considerable experience in the construction and operation of power schemes.

## 2.7 Process for a Complete Application - Section 17T(2)

This section requires the decision maker to decline a complete application within 20 working days of its receipt if the *"...application does not comply with or is inconsistent with the provisions of this Act or any other relevant conservation management strategy or plan..."*

### Comment

This is a complex issue requiring considerable investigation. Accordingly insufficient evidence was produced to warrant exercising this jurisdictional strike-out. Non-compliance with the statutory provision is still a matter for the decision maker and is considered later in this report.

## 3.0 Matters for Consideration

Section 17U(1) requires the decision maker to have regard to the following matters:

### 3.1 Summary of Effects of the Activity - Section 17U(1)(b) and any Measures to Avoid, Remedy, or Mitigate Effects - Section 17U(1)(c)

Only effects on the Reserve have been considered. The river is not part of the Reserve. The contact point is considered to be part of the Reserve and is that part of the riverbank, namely earth or rock, which may be wetted by water, and contains animal or plant communities, or other features which maybe influenced by the presence of the adjacent river. In assessing the natural character of the

margin of the river the place of the river in the wider landscape is a relevant matter. Any effects on the river itself are irrelevant to this application.

The applicant has made an assessment of the effects of the proposed activity (refer to section F and Appendix 1 of the application, attached as an appendix to this report).

These effects can generally be divided into two sections; upstream of the proposed weir and downstream of the weir. The effects on the Reserve have been assessed for significance using the following scale:

No Effect	No effects at all
Minimal Effect	Minute adverse effect that is basically unnoticeable
Temporary Effect	Adverse effect that is temporary in nature
Minor Effect	Noticeable adverse effect that has no serious effect
Significant Effect	Serious adverse effect on the environment but can be potentially remedied or mitigated
Unacceptable Effect	Serious adverse effect on the environment and cannot be remedied or mitigated
Positive Effect	Effect that results in an improvement in the environment or use of the environment

A copy of the draft assessment was sent to the applicant for comment. Further information was received from the applicant about mitigation proposals on 31 October 2006. After consideration of the applicant's comments by Department of Conservation technical staff, the assessments have been changed where appropriate.

The applicant's comments on the draft assessment and its further information are included in this report as an appendix.

### **Summary of the Effects of the Activity on the Reserve and any measures to avoid, remedy or mitigate effects.**

<b>Value</b>	<b>Effect</b>	<b>Assessment of Significance</b>
<b>Upstream Effects on the Reserve (including the weir)</b>		
<b>Landscape</b>	<b>Construction</b> Activity associated with the construction of a weir	Significant (temporary)
	<b>Structures on the Reserve</b> The proposal is to locate the left abutment of a 12 metre high weir on the Reserve.	Minor  This has been changed from significant after considering further information from the applicant.
	<b>Stability</b> Increasing the water level may result in a loss of slope stability.	Minor

<b>Value</b>	<b>Effect</b>	<b>Assessment of Significance</b>
	<b>Access for Maintenance</b> Access required for maintenance has potential to damage the reserve.	Minimal
<b>Natural Character</b>	<b>Water Level Increase</b> The construction of the weir will result in a water level increase of 7 metres at the weir. The natural character of the Reserve's river margin will change as the river changes from a swiftly flowing turbulent river to a more sedate lake-like body of water.	Significant
	<b>Change of Natural Character</b>	Significant
<b>Flora</b>	<b>Vegetation Removal</b> The removal of 1-2% (or up to 1.2 km of river margin) of the Reserve's total vegetation area in the inundated area plus a further 500m <sup>2</sup> in the construction zone.	Significant
	<b>Disposal Of Cleared Vegetation</b> If cleared vegetation is not disposed of appropriately it could have adverse effects on the Reserve.	Minimal
	<b>King Fern</b> There is potential for loss of king ferns.	Minor
<b>Fauna</b>	<b>Loss of Habitat</b> The inundation will result in a loss of approximately 1-2% of the Reserve's vegetation, with a resulting loss of habitat for fauna.	Minor
<b>Scenic Values</b>	<b>Visual Impact</b> The artificial weir and inundation will have an adverse visual impact on the Reserve's current natural and scenic setting.	Significant
<b>Recreation and Public Enjoyment</b>	The weir structure may provide an additional access capability to the reserve for recreational opportunities. This is dependent on access over private land.	Positive

Value	Effect	Assessment of Significance
<b>Historic and Cultural Values</b>	The Kaituna River and the reserve are of significance to tangata whenua. The increased water level has potential to affect wahi tapu sites.	No Effect
<b>Down Stream Effects on the Reserve</b>		
<b>Flora</b>	<b>Exposed Riverbank</b> There is increased potential for erosion of exposed riverbank.	Minor
	<b>Weeds</b> The dewatered river bed has the potential to be invaded by weeds, which could impact on the Reserve.	Minor
	<b>King Ferns</b> Potential effects from the decrease in water level.	Minimal
<b>Fauna</b>	<b>Pests</b> The dewatered river could allow more pests to enter the reserve.	No effect

A full analysis of the effects of the proposed activity on the Reserve is attached as an appendix to this report.

The Applicant has proposed a number of measures it says will avoid, remedy or mitigate the effects of the activity:

- Management and rehabilitation of the construction site.
- A construction management plan will be prepared.
- A Landscape and Ecological Rehabilitation Plan will be prepared.
- A pest management strategy appropriate to the scale of the affected area shall be prepared.
- The footprint of the works will be kept to a minimum.
- The weir will be covered in native plants and boulders.
- The new lake edge will be replanted. Should the residual or newly planted vegetation die off, then a low timber piled retaining wall could be constructed to protect the bank at water level.
- It is proposed to develop some fringing vegetation in places where the raised water level could promote slumping of the river banks.
- A method for the disposal of vegetation has been proposed that maximises safety and minimises environmental impacts, haul distances, and the clearing

for access tracks.

- Any king fern colonies under threat could be transplanted. An alternative could be to develop a secure area in which to conserve king ferns.
- Establishing a new area of tawa and other food / plants such as tree lucerne via replacement planting to enhance current food sources for birds.
- A design structure for the weir to reduce the adverse effects on the character of the river and gorge landscape.
- Consultation will be ongoing with tangata whenua during the consent process.

These measures have been considered when making the assessment of effects set out in the table above. The applicant has also proposed construction of a walking track on the Reserve from the Trout Pool to where views down the gorge are available, and undertaking general pest control in the Reserve. These additional proposals would have relevance under section 17U(1)(c) if they were mitigation measures related to adverse effects caused to the reserve. It is doubtful that the proposed walking track relates to mitigation for recreational loss in the reserve. As noted earlier the river is not part of the reserve. While the proposed pest control may be related to vegetation loss in the reserve, the Department considers that this proposal would not offset the identified adverse effects and has accorded it little weight. In addition the mitigation measures still need to be considered under section 17U(3) in determining whether that provision is complied with. This is discussed later.

### 3.2 Any Information Received under Section 17S or 17T- Section 17U(1)(d)

*Three* requests for additional information were made to the applicant. A letter was sent to the applicant on 11 August 2005. The following information was requested:

- Effects on the reserve of dewatering the river below the weir.
- A more detailed map.
- More information on the effects of locating the left abutment of the weir on the reserve.
- Information on the access required for maintenance.
- How cleared vegetation will be disposed.
- More detailed plans to remove weeds and pests.
- Computer enhanced images of the proposed weir and inundation.

A second letter was sent to the applicant on 6 September 2005. It was requested that the applicant provide additional information on alternative sites.

In September 2006 the applicant was given an opportunity to provide further information on any additional mitigation for the adverse effect on the Reserve that had been assessed by the Department as being significant, and for draft conditions that could be included in a concession document if a concession is granted. This information was received on 31 October 2006.

**Comment**

Additional information was received. This information is attached as an appendix to this report.

**3.3 Any Relevant Information which may be Withheld under the Official Information Act 1982 or the Privacy Act 1993 - Section 17U(1)(g)**

While any request for information under the Privacy Act, or the Official Information Act, would be considered on its merits and on a case by case basis, there is relevant information concerning this application which may be withheld under the Official Information Act, or Privacy Act.

**Comment**

The applicant provided financial information of a commercially sensitive nature as Attachment O to the Concession Application.

**3.4 Decline of Application - Section 17U(2)**

S17U(2) provides that:

*"The Minister may decline any application if the Minister considers that:*

*(a)The information available is insufficient or inadequate to enable him or her to assess the effects (including the effects of any proposed methods to avoid, remedy, or mitigate the adverse effects) of any activity, structure, or facility; or*

*(b)There are no adequate methods or no reasonable methods for remedying, avoiding, or mitigating the adverse effects of the activity, structure, or facility."*

**Comment**

It is considered that there is sufficient information on the effects of this proposal to enable the decision maker to assess the effects of the proposed activity.

The proposed methods for remedying, avoiding and mitigating the adverse effects of this application are outlined in section 3.1 of this report.

**3.5 Purpose for which the Land is held - Section 17U(3)**

Section 17U(3) provides that:

*"The Minister shall not grant an application for a concession if the proposed activity is contrary to the provisions of this Act or the purposes for which the land is held"*

The purposes for which scenic reserves are held can be understood from various provisions in the Reserves Act 1977. The provisions which are particularly relevant to this application are:

The long title to the Act:

*"An Act to ... make further provision for their acquisition, control, management, maintenance, preservation (including the protection of the natural environment), development, and use, and to make provision for public access to the coastline and countryside"*

Section 3 general purpose of Act:

*"... This Act shall be administered by the Department of Conservation for the purpose of –*

*(a) Providing, for the preservation and management for the benefit and enjoyment of the public, areas of New Zealand possessing-*

*(i) Recreational use or potential, whether active or passive; or*

*(ii) Wildlife, or*

*(iii) Indigenous flora or fauna; or*

*(iv) Environmental or landscape amenity or interest; or*

*(v) Natural, scenic, historic, cultural, archaeological, biological, geological, scientific, educational, community, or other special features or values:*

*(b) Ensuring, as far as possible, the survival of all indigenous species of flora and fauna, both rare and commonplace, in their natural communities and habitats, and the preservation of representative samples of all classes of natural ecosystems and landscape which in the aggregate originally gave New Zealand its own recognisable character:*

*(c) Ensuring, as far as possible, the preservation of access for the public to and along the sea coast, its bays and inlets and offshore islands lakeshores, and riverbanks, and fostering and promoting the preservation of the natural character of the coastal environment and of the margins of lakes and rivers and the protection of them from unnecessary subdivision and development."*

Section 19(1) general purposes of scenic reserves:

*"(a) For the purpose of protecting and preserving in perpetuity for their intrinsic worth and for the benefit, enjoyment, and use of the public, suitable areas possessing such qualities of scenic interest, beauty, or natural features or landscape that their protection and preservation are desirable in the public interest:"*

Section 19(2) specific purposes of scenic reserves:

*"(a) Except where the Minister otherwise determines, the indigenous flora and fauna, ecological associations, and natural environment and beauty shall as far as possible be preserved, and for this purpose, except where the Minister otherwise determines, exotic flora and fauna shall as far as possible be exterminated:*

*...*

*(c) To the extent compatible with the principal or primary purposes of the retention and preservation of the natural or scenic values, open portions of the reserve may be developed for amenities and facilities where these are necessary to enable the public to obtain benefit and enjoyment from the reserve:*

*...*

*(d) To the extent compatible with the principal and or primary purpose of the reserve, its value as a soil, water, and forest conservation area shall be maintained."*

### **Comment**

S 17U(3) directs that the decision maker does not have lawful power to grant a concession if the proposed activity is contrary to the purpose for which the land is held. The statutory scheme makes the primary purpose of scenic reserves the protection of natural and scenic values.

When considering if the proposed activities are contrary to these statutory purposes in order to apply s 17U(3), it is helpful to state at the outset what matters are relevant and how this important statutory test should be applied:

- The Decision maker must not take into account any benefits of proposed “mitigation” measures that do not relate to adverse effects arising from the proposed activity under consideration. The applicant in its comments on the draft report disagreed with this view. The applicant’s comments are not accepted because s 17U(1)(c) is clear that mitigation must relate to adverse effects of the activity. As mentioned in the section 17U(1)(c) discussion above the proposed mitigation measures where they are related to adverse effects in the reserve still need to be factored against whether the proposal is contrary to the provisions of the Act or the purpose for which the land is held. The Department considers the proposed walking track is not mitigation for an adverse effect in the reserve and so it has not been considered further. The Department does acknowledge that this matter may have relevance in assessing the effects in the RMA context. The Department does not consider that the pest control proposals would offset the adverse effects that have been identified.
- The Decision maker can not take into account any social or economic benefits arising from electricity generation. Reference in the Reserves Act provisions to managing scenic reserves to enable the “*public to obtain benefit*” from them relates to benefits that derive from protecting scenic and natural features, or to developments which are necessary for the public to obtain benefit from a scenic reserve’s scenic or natural features. The applicant also disagreed with this point due to the words “*unnecessary subdivision and development*” in s 3(c) of the Act. The applicant’s view is not accepted. This is because s 3(c) is a general provision applying to all classifications of reserves, and what may be “*necessary development*” is likely to be different in, for example, a local purpose reserve rather than a scenic reserve. Section 19(2)(c) of the Act is a specific provision enabling development in scenic reserves, which is considered more relevant than s 3(c). Further discussion on the application of s 19(2)(c) is contained below. There are also court decisions which support the view that social and economic factors are irrelevant to decision making under the Conservation Act 1987.<sup>1</sup>
- When considering if the proposed activity is contrary to the purposes for which scenic reserves are held, the decision maker must make an assessment of the nature of the activity against the relevant statutory purposes. This is a qualitative assessment of the values of the actual part of the reserve affected and the effects of the activity, rather than a quantitative assessment of the percentage of reserve likely to be affected by the proposal. The applicant has commented that the proportion of the total reserve affected is still a relevant consideration. It is accepted that the area of the total reserve affected maybe relevant, but that it is not how small the area of affected reserve is, but rather the nature and degree of the adverse effects which is the major consideration for this application. If the decision maker regards the area of total reserve affected as so small that the decision maker could not regard the activity as being contrary to the purposes for which the reserve is held, then the s 17U(3) test would be met by the application. An example would be if the decision maker considered that the scale of the effects of the activity on the Reserve were insignificant, or “*de minimis*”.

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<sup>1</sup> *Buller Electricity Ltd v Attorney-General* [1995] 3 NZLR 344; *Franz Joseph Glacier Guides v Minister of Conservation* (HC Greymouth, CP14/98, 13 October 1999)

The applicant has commented that there is no rigid threshold above which effects become contrary to the purpose for which the land is held, but rather there needs to be an overall judgment having regard to the effects and the relevant statutory provisions. Use of the term "overall judgment" is not accepted because it tends to suggest the broader assessment available under the RMA in determining sustainable management. Here the statutory test is not sustainable management but whether the proposal is consistent with the statutory provisions for which the land is held. Insignificant or "de minimis" are terms not intended to indicate any rigid threshold above which effects automatically become contrary to the purposes for which the land is held. The decision maker must make a judgement about the s 17U(3) test that is within the parameters of the Reserves Act and Conservation Act, and which primarily involves a qualitative, rather than a quantitative, assessment of adverse effects against the purposes for which the land is held.

It has been assessed that some of the effects of the proposed activity on the Upper Kaituna Scenic Reserve are significant, meaning the potential for serious adverse effects, so a judgement must be made about the nature of the proposed activity, potential effects, and relevant statutory provisions, in order to correctly apply the s 17U(3) test. A full assessment of the effects on the Reserve is discussed at paragraph 4.3 and attached to this Report as Appendix A.

When the statutory provisions set out in 3.5 above are considered as a whole the Department considers the purpose for which this land is held to be for the protection of the reserve's natural / scenic values together with public enjoyment and use. The applicant considers section 19(2)(c) to be a key provision. The Department considers section 19(2)(c) has no direct relevance. This is because the proposal to construct the weir and its associated inundation is not an amenity facilitating public enjoyment of the reserve. Section 19(2)(c) suggests that even if the development were for public enjoyment it would still need to be compatible with the retention and preservation of the natural or scenic values.

The affected part of the Reserve is a largely unmodified, scenic, wild, steep-sided, and densely vegetated area that abuts the turbulent Kaituna River. For these reasons the s 17U(3) test is a problematic hurdle for applications of this nature. The following statutory provisions are directly relevant to this application:

- While the River itself is not part of the Reserve, the part of the Reserve wetted by and influenced by the adjacent water body forms part of the Reserve's scenic, natural, landscape, intrinsic, and biological value in terms of s 3(a) of the Reserves Act.
- This riverine environment is also an area which has value for its representativeness and as a natural ecosystem, and therefore has importance for preservation of its natural character as referred to in s 3(b) of the Act.
- The affected area is clearly a margin of a river, in terms of section 3(c) of the Act, for which the promotion of its preservation is a Reserves Act statutory purpose.
- The affected area has scenic interest, beauty, and natural features or landscape, which have intrinsic worth and which scenic reserves are intended to protect and preserve in the public interest, under s 19(1) of the Act.
- The affected area is also an important ecological association that s 19(2) of the Act requires the Minister to preserve as far as possible.

- The affected area is 500 m<sup>2</sup> of the reserve for the abutment of a 12 metre high weir and between 1 and 2 ha of the reserve which will be inundated by the increase in water level.

Consideration of these provisions of the Reserves Act which help inform the purposes of scenic reserves, and the nature and scale of the activity and its potential adverse effects, leads to a recommendation that this proposal is clearly contrary to the purposes for which scenic reserves are held.

Various comments or criticisms were made by the applicant in its comments to the draft of this report:

- Applicant regards the proposed scheme as not an "*unnecessary subdivision or development*" (referring to s 3(c) of the Act) that the reserve needs to be protected from. This comment is not accepted because s 3(c) is a general provision applying to all classifications of reserves and so has less weight than s 19 which specifically deals with scenic reserves. Further, social or economic benefits arising from electricity generation are irrelevant, and this proposal is not necessary for enjoyment of the Reserve's natural and scenic values.
- Applicant commented that the draft report did not adequately or accurately consider the primary purpose of scenic reserves due to disregarding the words "*benefit, enjoyment, and use of the public*" in s 19(1)(a). This comment is not accepted because it is considered that "*use of the public*" in this context refers to general public recreation use of reserves, and not private, commercial uses, such as this application.
- The applicant comments that scenic and natural values for this Reserve should be considered in light of the reason for the Reserve's original acquisition – to protect king ferns. While this is accepted as a relevant factor to bear in mind when making a judgement about the s 17U(3) test, it is considered to be of much less weight than the relevant provisions of the Reserves Act discussed in this report which provide the overriding basis for determining the purposes for which scenic reserves are held. Further, s 19(1)(a) illustrates the breadth of values which scenic reserves are intended to protect and preserve in perpetuity – "*scenic interest, beauty, or natural features or landscape*".
- Applicant comments that the draft report gave inadequate consideration to the *Summit Road Society* court decision in terms of the desirability of developments that enable the public to obtain benefit and enjoy reserves. This criticism is not accepted as this application is about building a weir and inundating vegetation, which are not activities necessary for the public to enjoy the reserve, and is very different to the gondola scenario in the decision referred to.
- The applicant considers insufficient regard was made in the draft report to its expert report that the new water body proposed will contain high natural character values and restored natural values, so that the activity would not be contrary to s 3(c) of the Act which refers to "*preservation of the natural character of ... the margins of lakes and rivers...*" This criticism is not accepted. Careful consideration has been given to all the applicant's information in support of this application. As discussed in the Assessment of Effects in appendix A of this report this proposal does not promote the preservation of the natural character of the river margin. If the original river margin is not preserved, then that is considered to be a factor supporting the

conclusion that this activity is contrary to the purposes for which scenic reserves are held.

Having regard to the comments received from the applicant, and all matters referred to above, it is concluded that:

- There will be significant adverse effects from the construction of a 12 metre high weir involving long term occupation of space and loss of natural vegetation;
- There will be significant adverse effects from the long term inundation of 1.2 km of vegetated river margin with high natural and scenic values;
- There will be significant adverse effects on vegetation in the Reserve;
- There will be a significant landscape change which is considered to be an adverse effect on the Reserve's natural values;
- The natural character of the Reserve will be significantly changed, which is also considered to be an adverse effect.

Therefore it is recommended that the proposed activities should be considered to be clearly inconsistent, and therefore contrary to, the purposes for which scenic reserves are held as set out in the Reserves Act 1977. If that conclusion is accepted s 17U(3) provides that a concession can not be granted.

### **3.6 Consideration of Alternative Sites – Section 17U(4)**

Section 17U(4) provides that:

*"The Minister shall not grant any application for a concession to build a structure or facility, or to extend or add to an existing structure or facility, where he or she is satisfied that the activity-*

*(a) Could reasonably be undertaken in another location that-*

*(i) Is outside the conservation area to which the application relates; or*

*(ii) Is in another conservation area or in another part of the conservation area to which the application relates, where the potential adverse effects would be significantly less; or*

*(b) Could reasonably use an existing structure or facility or the existing structure or facility without the addition."*

The applicant originally referred to six alternative schemes on the Kaituna River and stated that they were not reasonably practicable, due to not being viable, unavailable due to land access, or having more serious effects on either the Reserve, or the environment generally.

A letter was sent to the applicant on 6 September 2005. It was requested that the applicant provide additional information on alternative sites. This additional information was received on 25 October 2005. It is included as Attachment E in the Request for Further Information (attached as an appendix to this report). The Applicant has limited its consideration of alternative sites to those for hydro generation. The complete report on alternative sites supplied by the applicant is attached as an appendix to this report.

The applicant states that it is important to develop energy resources on a regional basis. It provides the following factors in support of its position:

- Strong growth in the regional economy including Tauranga and the Western Bay of Plenty and Rotorua District with a consequential energy demand.
- Transmission constraints on bringing electricity into the Bay of Plenty geographic area from sources of generation outside the region.
- Government directives based on international agreements to develop renewable/sustainable resources.
- Efficiency gains to be achieved by reducing transmission losses through local generation.
- Necessity to provide local generation capacity to respond to natural disaster / disruption to essential supply and services.

The applicant states that there are very limited real opportunities for hydro generation in Bay of Plenty. Of the few opportunities available only the Kaituna River is considered to be reasonably capable of development in the current circumstances.

The Department had the information on alternative sites independently reviewed. Brian Cox, a Director of East Harbour Management Services Ltd, reviewed the report on alternative sites supplied by the applicant. East Harbour has undertaken investigations of nearly all rivers in New Zealand with regard to their potential for development for hydro generation. A copy of the review by East Harbour Management Services Ltd is attached as an appendix to this report.

#### **Comment**

The Department's independent review confirmed the Applicant's position that there are no other reasonably available alternatives for undertaking the proposed activity outside the Reserve or in another area with less effects. Accordingly it is recommended that you should not consider under s 17U(4) that the Applicant's proposed activity could reasonably be undertaken in another location that is outside the Reserve.

### **3.7 Interest in Land – Section 17U(5)**

Section 17U(5) provides that:

*"The Minister may grant a lease or a licence (other than a profit à prendre) granting an interest in land only if-*

*(a) The lease or licence relates to one or more fixed structures and facilities (which structures and facilities do not include any track or road except where the track or road is an integral part of a larger facility); and*

*(b) In any case where the application includes an area or areas around the structure or facility, -*

*(i) Either:*

*(A) It is necessary for the purposes of safety or security of the site, structure, or facility to include any area or areas (including any security fence) around the structure or facility; or*

*(B) It is necessary to include any clearly defined area or areas that are an integral part of the activity on the land; and*

*(ii) The grant of a lease or licence granting an interest in land is essential to enable the activity to be carried on."*

The proposed weir is a structure. The applicant states that the proposed exclusion zone and inundation are integral parts of the activity and as such meet the criteria in Section 17U(5)(b)(i)(B).

The applicant states in its application that although it seeks the concession in the form of a lease it does not intend to exclude the public from the new water body that will be created as a result of the proposed inundation upstream of the proposed exclusion zone. In this regard, The applicant indicates that the lease can be structured to facilitate such access.

Attachment I/J of the full application contains the full case prepared by the applicant in support of the lease.

### **Comment**

The application can be divided into three parts:

- The proposed weir.
- The proposed exclusion zone immediately upstream of the weir. This will be effected by placing a floating personnel boom on the proposed inundation approximately 40 metres upstream of the proposed weir.
- The proposed inundation.

It is considered that a lease is appropriate for the proposed weir and the exclusion zone. This is necessary for security of the facility and for the purposes of safety.

It is considered that a lease is not appropriate for the proposed inundation as there are no security or safety issues and that a lease is not essential to the activity of impounding water.

### **3.8 Exclusive Possession – Section 17U(6)**

Section 17U(6) provides that:

*"No lease may be granted unless the applicant satisfies the Minister that exclusive possession is necessary for-*

- (a) The protection of public safety; or*
- (b) The protection of the physical security of the activity concerned; or*
- (c) The competent operation of the activity concerned."*

*For the purposes of subsection (6) of this section, the competent operation of an activity includes the necessity for the activity to achieve adequate investment and maintenance."*

The applicant states that the proposed weir and inundation will by their nature exclusively occupy the affected areas of the Reserve.

The applicant has a preference for the granting of a concession in the form of a lease for the proposed weir, exclusion zone, and inundation. The applicant states in the concession application:

- In relation to the proposed weir, exclusive possession is necessary for both the protection of public safety and the protection of the physical security of asset.

- For the same reasons, exclusive possession is also necessary for the area immediately upstream of the weir. This will ensure that there is no unauthorised access to the proposed weir and canal intake from the surface waters of the impoundment itself.

#### **Comment**

It is considered that for reasons of safety and security a lease is appropriate for the proposed weir and exclusion zone.

The proposed inundation does not need to exclusively occupy the area of Reserve which it is located. There are no reasons of safety or security that should limit public access. It is considered that a licence to occupy would be more appropriate than a lease.

The structure of the concession should allow public access to occur where there are no safety or security reasons.

### **3.9 Type and Term of the Concession**

The applicant has applied for a concession in the form of a lease for a term of 60 years.

A term of 60 years is sought on the basis that there are exceptional circumstances because of the nature of structures and the capital investment involved. The applicant provided the following comments in support:

- The weir (and associated) structures are designed to have a lifetime of approximately 100 years.
- The Applicant will be committing significant capital investment to constructing and operating on an ongoing basis the proposed Upper Kaituna hydroelectric scheme, of which the proposed weir and proposed inundation form part.
- Upon expiry of the concession term the Applicant will either have to re-apply for a new concession or comply with the conditions of the concession which include rehabilitation of the concession area. A shorter term of 30 years would not appropriately reflect the intended lifetime of the structures and the level of capital investment in the structures.

#### **Comment**

The Department accepts the applicant's views on there being exceptional circumstances in this case. It is considered that:

- Should a lease be granted for the weir and exclusion zone upstream of the weir necessary for public safety it should be granted with a term of 30 years with a right of renewal for a further 30 years.
- Should a licence be granted for the balance of the inundation zone it should be granted with a term of 30 years with a right of renewal for a further 30 years.

## **4.0 Planning Instruments**

## Relationship between Concessions and Conservation Management Strategies and Plans - Section 17W

Section 17W(1) provides:

*"Where a conservation management strategy or conservation management plan has been established for a conservation area and the strategy or plan provides for the issue of a concession, a concession shall not be granted in that case unless the concession and its granting is consistent with the strategy or plan."*

### Conservation Management Strategy

The Bay of Plenty Conservation Management Strategy (CMS) does not specifically address the activity that the applicant is proposing, but the Conservation Management Strategy does make general provision for utility concessions, and also contains other strategies for integrated conservation management that are relevant to this application. The CMS contains the following relevant sections:

#### ***"4.3.1 Landscapes, Landforms, Geological Features and Soils***

##### ***Background***

*The Bay of plenty has diverse landscapes, landforms, geological features and soils derived from volcanic activity. Most protected lands have been set apart for scenery or biological conservation. This has resulted in a number of areas not being protected for their landform, geological features or soil significance.*

*Kenny and Haywood (1993)<sup>2</sup> state the objective of "earth science conservation" should ensure representativeness of landscapes, landforms, geological features, soils and the active processes to assist in understanding the development of landforms and evolution of biota. The biggest hindrance has been a lack of information on sites that are significant or representative.*

*The Bay of Plenty Geopreservation Inventory (Kenny and Haywood 1993) lists 182 sites of importance, 35 being of international importance, the highest number of any regional inventory. A further 66 sites were assessed as nationally important.*

*An inventory of representative soils is in Arand et al (1993)<sup>3</sup>*

##### ***Issues***

- 1. Departmental staff have limited awareness, information and understanding about the diversity and significance of landscapes, landforms, geological features soils and their origins.*
- 2. Because of the establishment processes of setting apart protected land there is inadequate representation of landforms, geological features and soils.*
- 3. Staff often do not recognise when a geothermal feature, landform or soil is in a degraded, vulnerable or threatened state.*

##### ***Objectives***

- 1. Management of lands in ways that conserve representative examples of geothermal features, landforms, and landscapes, and soils*
- 2. Oppose and avoid activities and structures that significantly damage landscape, landforms, geological features and soils.*

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<sup>2</sup> Kenny, J.A; Haywood, B.W ed 1993: Inventory of Important Geological Sites and Landforms in the Bay of Plenty Region.

<sup>3</sup> Arand J., Basher, L.R, Wardle, R. Wardle, K. 1993: Inventory of New Zealand Soil Sites of International, National and regional Importance

### **Implementation**

1. Upgrade the inventory of representative landscapes, landforms, geological features and soils based on the Geopreservation Inventory (Kenny and Hayward 1993) (see 4.7.1 Information Management, 4.7.2 Survey and Monitoring).
2. Oppose and avoid activities and structures that significantly damage landscapes, landforms, geological features, and soils (see 4.6.1 mining and Quarrying, 4.6.2 Utilities and Related Structures).
3. Raise the understanding and awareness of Departmental staff about the significance of landscapes, landforms, geological features, and soils through education programmes (see 4.2.2 Advocacy and Education for Conservation Management).
4. Foster appropriate research on landscapes, landforms, geological features and soils.

#### **4.3.4 Threatened Species**

*Objective: The conservation of threatened species and their habitats.*

*Implementation 2: Active management in consultation with tangata whenua and other groups will be determined by the following*

- *Priority plants and animal species in the Conservancy (identified in table 4.1 and Beadel 1992a.)*
- *Relative vulnerability of species, ecosystems and habitats*
- *Threats to species, ecosystems and habitats from predators, herbivores and loss of ecosystems and habitats.*
- *Where loss of a particular species could mean the loss of the entire or a substantial part of that species.*
- *Availability of appropriate effective conservation management techniques and*
- *Existing species recovery plans.*

*Implementation 3: Where possible threatened species will be protected in their natural ecosystems.*

*Implementation 6: Specimen removal will not be authorised where it may adversely affect the population of that species.*

*Implementation 12: Protect and manage, in conjunction with tangata whenua threatened species of cultural importance.*

#### **4.6.2 Utilities and Related Structures**

##### **Background**

*There are public and private structures and utilities located on lands administered by the Department. Currently in the Bay of Plenty there are:*

- *Telecommunications structures on some prominent hill tops including Mount Ngongotaha, Mount Te Aroha, Te kopia (Scenic Reserve), Rainbow Mountain, and Moutohora (Whale) Island;*
- *Water, gas and other pipelines;*
- *High voltage transmission lines;*
- *Dams, storage lakes and associated roadways, structures and buildings. These can be for water supply or hydro-electric generation or both.*
- *Access ways and bridges, mostly across marginal strips and streams.*

*Most utilities require consents under the Resource Management Act 1991 and Building Act 1991 as well as one or more of an easement, permit, lease or licence from the Department.*

##### **Issues**

1. *Many important sites for structures and utilities are on lands administered by the department. There is pressure for an increase in the number of facilities.*

2. Structures and utilities have already damaged ecologically and culturally significant sites in the Conservancy, e.g. the summit of Mount Te Aroha.
3. Wahi tapu sites and Maori cultural values can be adversely affected by inappropriately located and maintained structures and utilities.
4. Structures and utilities are often visually prominent and can adversely affect landscape attributes.
5. There may be increasing pressure from power supply companies wanting to locate or undertake activities which have an impact on lands administered by the Department.
6. Power generation buildings and structures may damage natural and historic resources and recreation attributes by:
  - Flooding and modifying terrestrial ecosystems e.g. geothermal ecosystems.
  - Degrading freshwater ecosystems and preventing fish passage.
  - Damaging natural character / landscape attributes; and
  - Damaging recreation attributes e.g. angling, canoeing, walking and rafting.
7. Upgrading or constructing, access roads and power lines to structures and utilities may damage natural and historic resources, cultural values and scenic attributes.
8. Maintenance of utilities such as vegetation control along transmission lines and pipelines can adversely affect natural and historic resources.
9. If fish passage is not provided for, dams and culverts can block migration.

### **Objective**

*Permitted structures and utilities on lands administered by the Department where there are no alternative sites and where they avoid, remedy or mitigate adverse effects on natural and historic resources and cultural values.*

### **Implementation**

1. All persons responsible for a structure or utility will require a concession.
2. All applications for concessions must conform with 4.6.7 Concessions.
3. Encourage public utility operators to locate away from land administered by the Department.
4. Encourage operators to share sites and reduce the size of their structures.
5. Maintenance and upgrading of roads through lands administered by the Department will be carried out in a way that minimises effects.
6. Operators will be required to provide unrestricted public access except where there are conflicts with public safety and security.

### **4.6.7 Concessions**

#### **Objective**

*Concessions that ensure conservation of natural and historic resources, the recognition of cultural values and accurate interpretation and also provide for the following (one or both):*

- *public enjoyment;*
- *business"*

### **Bay of Plenty Conservation Board**

The Bay of Plenty Conservation Board was consulted on the proposal by staff from the Department and the applicant. The Board undertook a site inspection on 6 October 2005. The Board provided the following response:

#### **Conservation Management Strategy (CMS)**

*"The Board assessed the relevant sections of the CMS in regard to this application. In the Boards view, they consider that the application is not inconsistent with the CMS.*

*In the development of this view the Board noted, that a proposal and an application of this type, scale and in this location were not envisaged and considered when the CMS was developed in the late 1990's hence, the CMS is silent on such matters.*

*The Board acknowledges that the majority of the concerns and reservations that it holds in regard to the proposal and the application can not be considered at this point in time nor are part of the concession application. The Board acknowledges that these are outside of the Boards and Departments concession jurisdiction and are more aligned to its advocacy role under the Conservation Act.*

*The Board acknowledges that it has some concerns in regard to the proposed water flow regime and its possible impacts, potential loss of the wild and scenic character of this section of the river at the site and adjoining sections. The Board understands that these matters will be identified and canvassed via the pending Resource Consent process that will follow. The Board acknowledges that these are matters for the Regional Council to consider in their assessment of the proposal when the consent application is lodged.*

*The Board would like to advise the Department that it will consider further its position on the Resource Consent process and possible engagement in that process when it is appropriate.*

#### **Advice**

*The Board would like to advise the Department that it considers this application to be 'large scale and high impact'. As noted above, that in the development of the CMS, a proposal like this was not taken into consideration, hence the CMS provisions have not addressed this sought of proposal in any detail and is silent. This proposal will have a high interest from the general public."*

#### **Comment**

The Conservation Act s 17W(3) provides that a concession shall not be granted unless the concession and its granting are consistent with a CMS. While mindful of the Conservation Board's advice, the Board's view appears to be confined to the concession provisions in the CMS.

Section 4.3.1 of the CMS (Landscapes, Landforms, Geological Features and Soils) states the Department will "*Oppose and avoid activities and structures that significantly damage landscape, landforms, geological features and soils*". The Department interprets oppose and avoid in this context as indicating that an activity which significantly damages landscapes, etc is inappropriate. The term "landscape" is defined in the glossary to the CMS as "*The visual expression of the interaction between cultural and natural processes. This definition means that the landscape is more than the scenery or a view.*" It has been assessed in this report that this proposal will have a significant effect on the landscape of the Reserve.

On 22 June 2006 the applicant commented that it disagreed that the application was inconsistent with the CMS. It is the applicant's view that the concession application is consistent with section 4.3.1 of the CMS because, with reference to the Landscape, Natural Character and Scenic / Visual Amenity Assessment prepared by John Goodwin of Boffa Miskell, the concession activity does not "*significantly damage*" the landscape.

The Department's own assessment is that it is not possible to assess effects on natural character of the margin of a river without considering, either the river itself as part of the wider landscape within which it is a focal feature, or the effects of the changes in river hydrology on the characteristics of the land / water interface. This assessment concluded that the effects on natural character will be significant and will remain significant notwithstanding mitigation measures, simply by virtue of the loss of ecological integrity by cultural manipulation of river hydrology.

The application is considered not to be consistent with the CMS, and it is recommended that a concession can not be granted under s 17W(1) of the Conservation Act.

### **Conservation Management Plan**

There is no Conservation Plan for the area under application.

## **5.0 Conclusion**

- 5.1** The information provided by the applicant is sufficiently complete to allow consideration of the application.
- 5.2** The effects of the proposal have been assessed. Some of the effects are considered to have a significant adverse impact upon the Reserve. The applicant was given the opportunity to suggest further mitigation measures to address these effects. Despite this, the Department considers there remain four separate significant adverse effects arising from the proposed activity.
- 5.3** The natural and scenic character of the Reserve's margin will be adversely affected if the river changes from a turbulent river with rapidly flowing sections to a more sedate open lake-like body of water. The interface between the river and the Reserve is a significant aspect of the natural character of the Reserve.
- 5.4** The purpose of scenic reserves is the protection of natural and scenic values together with public enjoyment and use. It is considered that the construction of a 12 m weir and inundation of up to 1.2 km of vegetated river margin reserve with high natural and scenic values is contrary to the purposes for which scenic reserves are held.
- 5.5** Section 19(1)(a) of the Reserves Act sets out general purposes of scenic reserves and refers to "*protecting and preserving in perpetuity [scenic reserves] for their intrinsic worth, and for the benefit, enjoyment, and use of the public...*". It is considered the words "*use of the public*" primarily refers to general recreational activities available to all and not to a private commercial scheme as is proposed by the applicant.
- 5.6** An application for a concession which is contrary to the purposes for which the land concerned is held can not be lawfully granted under s 17U(3) of the Conservation Act 1987. It is concluded that this application is contrary to the purposes for which the land is held.
- 5.7** The Department's independent review confirmed the applicant's position that there are no other reasonably available alternatives to it for undertaking its proposed hydro generation activity elsewhere.

- 5.8 The application is considered to be inconsistent with section 4.3.1 (Landscapes, Landforms, Geological Features, and Soils) of the Bay of Plenty Conservation Management Strategy, which requires the Department to “*oppose and avoid activities that significantly damage landscapes, landforms, geological features and soil.*”
- 5.9 A concession must not be granted unless it is consistent with a Conservation Management Strategy, under s 17W(1) of the Conservation Act 1987. The report concludes that the application is not consistent with the Bay of Plenty Conservation Management Strategy.

## 6.0 Applicant’s Comments

The applicant was sent a draft of this report for comment on 15 December 2005. Comments were received from the applicant on 20 March 2006. Further comment on section 5 of this report, relating to the application’s consistency with the Conservation Management Strategy was requested on 22 May 2006. Final comment was received on 22 June 2006.

A further opportunity was given to the applicant to provide more information on mitigation of significant adverse effects and draft conditions that could be included in a concession document if a concession is granted. This information was received on 31 October 2006.

The applicant’s comments and its further information were considered and incorporated in this report as appropriate. After consideration of the comments, parts of this report were changed accordingly. Any changes to draft report made after consideration of the applicant’s comments have been noted above.

## 7.0 Recommendation

***It is recommended that you:***

1. ***Note that the Department has assessed various effects of the proposed activity on the Reserve as having a significant adverse effect.***
2. ***Note that the Applicant has commissioned expert reports that provide an opinion that all adverse effects on the Reserve from the proposed activity will be no more than minor and will not significantly damage landscapes.***

***Either:***

3. ***Agree that the Concession application must be declined on the basis that adverse effects on the Reserve are significant and the proposed activity is therefore contrary to the purposes for which the land is held, and is also inconsistent with the Bay of Plenty Conservation Management Strategy,***

***Or:***

4. ***Agree that because of the difference between the Department's and the applicant's assessment of the adverse effects of the proposal on the Reserve, that the application should be approved in principle to allow it to be publicly notified to enable public input into the final decision.***

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**Henry Weston  
Conservator  
Bay of Plenty**

**Date:** November 2006

**Community Relations & Technical Support Manager comments:**

**Date:**

**Conservancy Solicitor comments:**

**Date:**

**Recommendations:**

1. **Agree / Disagree**

2. **Agree / Disagree**

3. **Agree / Disagree**

4. **Agree / Disagree**

**Decision:**

5. **Approve in Principle / Decline Concession Application**

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**General Manager Operations (Northern)**

**Date:**

**Appendix A – Assessment of Effects**

**Appendix B - Additional Information**

**Appendix C – Review of Alternative Sites by East Harbour Management Services Ltd**

**Appendix D – Applicants Comments dated 17 March 2006**

**Appendix E – Applicants Additional Comments dated 20 June 2006**

**Appendix F – Concession Application**

**Appendix G – Applicants Additional Information dated 31 October 2006**

## Appendix A – Assessment of Effects

### Upstream Effects (including the Weir)

	EFFECT	APPLICANT'S COMMENTS (the Department response is in italics)
<b>VALUE: Landscape</b>	<b>CONSTRUCTION</b>	
<b>Potential Effect as Described by the Applicant</b>	Construction will take two earthwork seasons to complete. Construction of the weir is likely to include the temporary diversion of the Kaituna River within the existing river boundaries to allow the weir to be constructed in the dry.	
	This will include the construction of an access road, a coffer dam (50 metres upstream of the weir) and the weir. The actual footprint of the weir will depend on ground conditions in the construction zone.	
<b>Proposed Mitigation</b>	Good management and rehabilitation avoids significant adverse effects. These effects cannot be entirely avoided but can be actively managed to avoid or reduce adverse effects.	
	Consideration has been given to alternative design structures for the weir to reduce the adverse effects on the landscape quality and character of the river and gorge landscape. The outcome is the potential construction of a roller compressed concrete structure which will allow a more natural interface with the water.	
	A construction management plan will be prepared as part of the resource consent process, setting out in detail the proposed works programme, timing, management of and measures to avoid, remedy or mitigate potential adverse effects.	
	The footprint of the works will be kept to a minimum	

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
	to avoid unnecessary vegetation clearance.	
<b>Further Mitigation</b>	Re-vegetation techniques will be employed that ensure the most rapid re-establishment of plant cover.	The site of the abutment on the Reserve will take a number of years to be fully rehabilitated. The techniques to be used will be detailed in the Landscape and Ecological Rehabilitation Plan.
<b>Analysis</b>	The proposed access road will be established on private land.	
	The construction site will need to be well defined and monitored closely.	
	Specific construction methods and techniques will be outlined in the works approval.	
<b>Recommendation</b>	That the Department has input into the construction management plan.	
	That an appropriate works approval be developed if a concession and resource consent is issued.	
	An appropriate bond is sought to cover the construction period.	
	There should be provision for public access to the weir allowing the public to cross the river at this point.	
	Although outside of the scope of this concession application, the Department should discuss the design of the weir with applicant to ensure that it is constructed using natural materials where possible i.e. the dam is constructed of earth rather than concrete.	
	<b>Significant (temporary)</b>	The effects of the construction of a weir on the reserve are localised and of a short-term nature. Appropriate management will reduce these effects. A construction management plan will be prepared as part of the resource consent

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
		process, setting out in detail the proposed works programme, timing, management of and measures to avoid, remedy or mitigate potential adverse effects. BOPE is in full agreement that the Department has input into the preparation of the construction management plan. <i>In conclusion John Goodwin of Boffa Miskell states that in the short term the effects will be more than minor.</i>
	<b>STRUCTURES ON THE RESERVE</b>	
<b>Potential Effect as Described by the Applicant</b>	The applicant has supplied plans and photographs of the proposed weir. Two alternative designs for the weir have been supplied. These show the location of the left abutment on the Reserve. It is indicated that the abutment will occupy 500 m <sup>2</sup> of the reserve.	
<b>Proposed Mitigation</b>	The weir will be covered in grass.	
<b>Analysis</b>	The weir will be 12 metres high and applicant requires an area of 500 m <sup>2</sup> . The plans and photographs show the location of the left abutment on the Reserve. No fences are shown and the weir has been constructed or is covered in grass, softening the visual effects of the structure.	
<b>Recommendation</b>	Any structures should be constructed using natural materials where possible. Where this is not possible appropriate landscaping should be undertaken to minimise the visual effects of any structures.	
<b>Assessment</b>	<i>Minor</i>	Minor – refer to Landscape effects above. No detailed analysis appears to have been carried out as the basis of this conclusion. There appears of the viewpoints and significance of a 500 m <sup>2</sup> area being affected.
	<b>STABILITY</b>	
<b>Potential Effect as</b>	The river deviates around the toe of what appears to	This is located near the weir site and does not

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
<b>Described by the Applicant</b>	be a large historic block slide.	affect the whole inundation area.
	All large trees that will be inundated will cut and the trunks removed to avoid the hazards associated with trees extending above or close to the new water level and floating tree trunks.	
	The new river level will also saturate the roots of trees and shrubs above the new river level. Plants and trees that are unaccustomed to saturation and do not satisfactorily adapt, will probably die over time.	The status quo in terms of shoreline stability can be protected by shoreline management which would need to comprise: <ul style="list-style-type: none"> <li>- early clearing of big trees and bushes</li> <li>- placement of wave protection matting between stumps in sensitive areas</li> <li>- establishing plant species that thrive with a saturated root system well prior to raising the river level.</li> </ul>
	Any bare surfaces may erode.	
<b>Proposed Mitigation</b>	Raising the river means that active erosion of the streambed and hence the potential for ongoing creep of the slide will be halted.	Not mitigation but monitoring and careful management of bank erosion including early establishment of water tolerant species would be part of the management.
	The key to success of shoreline protection are the identification of species that will thrive in the wetter environment and allowing plants to become well established before raising the river level.	
	Should the residual or newly planted vegetation die off, then a low timber piled retaining wall could be constructed to protect the bank at water level. These would be designed to integrate with the adjoining river edge, with the use of appropriate materials and colour.	This is a last resort measure – should vegetation die off and not be able to be reinstated.
	The new lake edge will be replanted to compensate for any edge effects resulting from inundation.	
<b>Analysis</b>	There is an increased risk of erosion and slumping from the raised water levels. This may impact	This may occur but careful management would avoid a change to the status quo.

	EFFECT	APPLICANT'S COMMENTS (the Department response is in italics)
	negatively on the UKSR. Slips may occur and these areas of bare ground will be suitable for weed species to establish.	
	Planting is likely to be difficult in this steep inaccessible terrain and should not be considered adequate mitigation for the loss of any mature vegetation.	It should be noted that the affected margins are in part steep rock faces and in part less steep slopes. Planting would be required on the slopes rather than cliff faces and, though difficult, is considered to be achievable.
	Pest control will be needed to stop browsing on new plantings.	Pest control is proposed.
	It is proposed to construct timber retaining walls where new plantings are unsuccessful in stopping erosion from occurring. Timber retaining walls will substantially detract from the naturalness of the area and are considered a hard engineering solution.	Agree – hence the reference as last resort measure. As above, only part of the affected area is erodible slopes as opposed to rocky cliffs.
<b>Recommendation</b>	Weed control should be undertaken at the edge of the new water level.	
	The Department should include procedures for vegetation removal in the works approval.	
	The vegetation removal should be monitored.	
	Pest control work should be undertaken to protect any new plantings	
	Timber retaining walls should be considered only as a last resort.	Agreed
	<b>Minor</b> (changed from significant after considering the applicants comments)	BOPE considers this assessment should be <b>Minor</b> as mitigation can be undertaken to address or avoid the identified effects. <i>Agreed. It is considered that due to the very steep nature of the terrain involved planting will be impractical at many sites and slumping /slips are likely to occur. These will be difficult to mitigate. But as an effect of the overall project agree, it is <b>minor</b>.</i>

	EFFECT	APPLICANT'S COMMENTS (the Department response is in italics)
	<b>ACCESS FOR MAINTENANCE</b>	
<b>Potential Effect as Described by the Applicant</b>	Access for maintenance will be required to remove fallen trees and repair any erosion to the banks or weir.	
	Access will be by weir itself or by small boat or barge.	Note that access will also be required to follow through pest management programmes within the reserve.
	There will be no tracked or wheeled machines on the Reserve.	
	Frequency of access will depend on the environmental factors. It is expected this might require access 1 to 2 times per year for periods of up to 5 days.	
<b>Proposed Mitigation</b>	No mitigation is proposed.	
<b>Analysis</b>	The access for maintenance that is proposed requires no physical access to the reserve.	
<b>Recommendation</b>	The detailed procedures relating to access for maintenance should be included in the concession agreement.	
<b>Assessment</b>	<b>Minimal</b> (Changed from minor after consideration of the applicants comments)	<b>Minimal</b> may be more accurate. <i>Agreed as access will be restricted to the water and for a maximum of 5 days per year.</i>
<b>VALUE: NATURAL CHARACTER</b>	<b>WATER LEVEL INCREASE</b>	
<b>Potential Effect as Described by the Applicant</b>	The construction of the weir will result in a water level rise of 7 metres at the weir. This water level will remain relatively stable.	
	Avoiding a change in the range of water levels of the Trout Pool is a key baseline objective, to avoid adverse effects on recreational users and tangata whenua values.	
	The setting of the appropriate water level will avoid	

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
	any adverse effects.	
<b>Further Mitigation</b>	The re-vegetation measures recommended elsewhere are referred to. These incorporate the same species as are present along the area to be inundated. They will re-establish along the higher water line, without the loss of biodiversity. A protocol would be established should sites of cultural significance be encountered.	
<b>Analysis</b>	There is the potential for the inundation to affect wahi tapu sites and there will be a loss of biodiversity. It is considered that the loss of vegetation resulting from water level increase is significant.	The studies prepared by Ray Hooker and David Wickliffe and reviewed by Don Stafford have not identified any potential sites that may be affected by inundation or by any other works. Kei Merito has stated that he "concurrs with the cultural viewpoint provided in the application". Refer to the Bay of Plenty Technical Scoping of Application Report conducted over the period 30 June to 15 July 2005. Loss of biodiversity will be minor and consist mostly in the loss of a strip of forest and scrub.
<b>Assessment</b>	<b>Significant</b>	.
<b>CHANGE OF CHARACTER</b>		
<b>Potential Effect as Described by the Applicant</b>	The natural character will change as the river changes from a swiftly flowing, turbulent river with rapidly flowing sections through to a more sedate open lake-like body of water.	
	The natural character of the margins of the water will remain the same, as a steep sided landform clothed in native vegetation.	
<b>Proposed Mitigation</b>	The new body of water will also have a high degree of natural character, apart from the immediate area around the weir.	
<b>Analysis</b>	It is the Departments assessment that the activity will have a significant effect on natural character that	Boffa Miskell has assessed the effect on natural character in accordance with the methodology

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
	<p>cannot be remedied. It is the view that it is not possible to assess effects on the natural character of the margin on a river without considering either the river itself as part of the wider landscape within which it is a focal feature, or the effects of changes in river hydrology on the characteristics of the land/water interface.</p> <p>It is assessed that effects on natural character will be significant, and will remain significant notwithstanding mitigation measures, simply by virtue of the loss of ecological integrity incurred by cultural manipulation of river hydrology.</p>	<p>developed for the Ministry for the Environment Natural Character Environmental Performance Indicators. This identifies that the natural characters score before and after the weir is constructed remains high. The essential character of the river environment will be maintained. This assessment also identifies that there will be limited changes to the ecological attributes of natural character in the river.</p>
<b>Recommendation</b>	With the proposed activity it is not possible to mitigate this change in natural character.	The resulting natural environment will retain a high degree of natural character.
<b>Assessment</b>	<p><b>Significant</b> This assessment was changed from <b>unacceptable</b> after considering the applicants' comments as the effects can be mitigated.</p> <p>There is a differing expert opinion on the effect the proposal will have on the natural character.</p>	<p>Refer [to the] attached Boffa Miskell Report attached [Appendix E]. Unacceptable is not accepted as, although the effect will be significant it can be remedied or mitigated. The long term outcome will be <b>Minor</b> overall.</p> <p>It may be considered that, by making the waterbody more accessible, future generations may be able to view and enjoy the natural character of the reserve and its interface with the river, an enjoyment which is not possible at present.</p> <p>The applicant provided further analysis in an additional report that was requested.</p>
<b>VALUE: FLORA</b>	<b>VEGETATION REMOVAL</b>	
<b>Potential Effect as</b>	The potential inundation will affect 0.5 to 1.0 ha of	

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
<b>Described by the Applicant</b>	the UKSR. This equates to 1 – 2% of the UKSR.	
	The vegetation directly affected is not of any significant value. In general the potential effect on the total habitat is considered to be less than minor.	
	The lowermost riparian vegetation especially the bryophyte community of the rock shelves and faces will largely be lost as a result of changes to habitat.	
<b>Proposed Mitigation</b>	These could be mitigated by the development of some fringing vegetation in places where the raised water level could promote slumping of the river banks.	
	A management plan will be developed in consultation with DOC to address potential mitigation measures to relocate and revegetate with native species to compensate for the potential loss of vegetation. Consideration should be given to fencing as well as weed and pest control to enhance areas of existing native vegetation and proposed planting within the reserve and protect the reserve from further damage by animal pests.	
	The new lake edge will be replanted to compensate for any edge effects resulting from inundation.	
	Species will be grown from seed collected from within the ecological district. Plantings will be mulched with forest duff and mulched native vegetation.	
	Ongoing maintenance of any revegetation areas will continue until the planting area is well established. This will include the implementation of an active weed and pest control programme.	
<b>Analysis</b>	The AEE concludes that the vegetation of the Reserve on the whole is "mainly of a scenic rather	Refer to the Bioresearches Memo [in the applicant's comments, Appendix E]. The Beadel

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
	<p>than botanical value" and of "limited diversity". Bruce Clarkson in his 1982 report<sup>4</sup> concludes that the reserve supports "a range of forest types in good condition" with a "relatively rich flora" with a "large component of ferns and allies ....including substantial colonies of king fern". It was on the basis of these botanical conservation values including the threatened king fern that the reserve was purchased in 1984. On this basis it is ranked as being of high botanical conservation value (Beadel 1995<sup>5</sup>).</p>	<p>ranking was based on the Clarkson report of ten years earlier and a field inspection was not carried out. Field inspection by Bioresarches identified that although there were king fern present the UKSR did not warrant a high botanical ranking and the UKSR is of scenic rather than botanical value. Therefore, although the reserve was created for the protection of king fern rather than scenic objectives, it is not of high botanical value. <i>The Department considers that the UKSR is of scenic and high botanical conservation value.</i></p>
	<p>Within the inundated area there will be complete loss of mature forest dominated by mainly tawa and rewarewa. Given the proposed length of the concession this will result in a net conservation loss.</p> <p>Although only 1-2 % of the total reserve's vegetation will be removed, it is notable that this will comprise up to 1.2 km of vegetated river margin, which is an important part of the vegetation in this reserve.</p>	<p>The "complete loss" should be seen in the context of the small (1-2%) area of the UKSR affected and the mitigation proposed. "Complete" implies total loss of all such vegetation and this is not proposed. <i>All vegetation will be lost within the inundated area and vegetation will be removed from the construction zone.</i></p>
	<p>The AEE states that there is vegetation damage caused by mustelids. All mustelids are carnivores.</p>	<p>The AEE does not state that the vegetation has been damaged by mustelids; it and the appended reports state that vegetation and (associated) wildlife values have been damaged by a range of pest species. Mustelids are indeed carnivores.</p>
<b>Recommendation</b>	<p>The area of vegetation to be removed is marked on-site before removal commences.</p>	

<sup>4</sup> Clarkson B. Report to the Lake Rotoiti Scenic Reserves Board on the vegetation and flora of the Crowhurst property (Pt Okere 1A BLK VI Rotoiti S.D)

<sup>5</sup> Beadel S.M . Vegetation and Flora of Lands administered by the Bay of Plenty Conservancy (1995)

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
	That the removal is monitored.	
	The Department in conjunction with the applicant develop a management plan for the reserve to mitigate the loss of vegetation.	
<b>Assessment</b>	<b>Significant</b>	Refer [to the] attached Bioresearches Memo and Appendix 9 – 6.2: Bioresearches conclusion was that the effect would not be significant but would be <b>Minor</b> . <i>The removal of 1-2% (comprising up to 1.2 km of river margin) of vegetation in the inundated area plus a further 500 m<sup>2</sup> in the construction zone is considered significant.</i>
<b>DISPOSAL OF CLEARED VEGETATION</b>		
<b>Potential Effect as Described by the Applicant</b>	Cleared vegetation will be transported across the river on a small boat or barge. Once the vegetation has been gathered at a suitable location on the right bank it will be trucked to a consented disposal area.	
<b>Proposed Mitigation</b>	A disposal has been proposed that maximises safety and minimises environmental impacts, haul distances, and the clearing for access tracks.	
<b>Analysis</b>	There is potential for willow to be dispersed down the river during the clearing operation and to establish in the Reserve.	
<b>Recommendation</b>	That the works approval detail procedures for disposing of removed vegetation including willow.	
<b>Assessment</b>	<b>Minimal</b>	
<b>KING FERN</b>		
<b>Potential Effect as Described by the Applicant</b>	A small number of colonies of king ferns are located in the upstream section of the Reserve. However they are unlikely to be affected by the inundation.	
<b>Proposed Mitigation</b>	Any colonies under threat from inundation could be transplanted. An alternative initiative would be to develop a secure (fenced, pest controlled) dedicated	

	EFFECT	APPLICANT'S COMMENTS (the Department response is in italics)
	area in which to conserve transplanted colonies.	
<b>Analysis</b>	The population of king fern is significant. King fern is a nationally threatened species with a status of Chronically Threatened "Serious Decline". It is near the southern limit in the Central North Island and is one of several strongholds in the Bay of Plenty. The description of communities is accurate and detailed. It is questioned how thoroughly the king fern populations have been surveyed given that the survey was undertaken in one hour by raft. Given this the probability of missing plants would have to be considered high.	King fern affected by the project will be close to the water in more accessible locations. The probability of missing plants is strongly refuted. The population of king fern was not considered significant and has been damaged by pigs and goats, etc. <i>It is acknowledged that the survey of king fern was extensive.</i>
	The AEE is unclear on both the population size and the effects of the proposal on the population.	The application in Application – Appendix 9 is very specific about king fern in the potentially affected areas and in general.
	Moving threatened king ferns should be considered a last resort as it has uncertain success and is an extremely difficult task in this terrain.	In our opinion it has been established that king fern is a species that transplants readily. <i>Transplanting is considered difficult given the steep to vertical terrain and the height from the river required to transplant, accounting for the increased water level once the weir is in place.</i>
	A more appropriate and useful mitigation would be to implement a long term pest control programme for the reserve. This would benefit the entire population of king fern in the reserve.	
	The report notes that king fern are available commercially. In terms of this proposal this is of limited value as it is unlikely that the plants would be sourced locally.	It is a factual statement. However the local populations (particularly on the east bank where less pest damage has occurred) are considered to be of regional significance. It is not proposed to bring in king fern but to protect existing colonies from further pest damage and thus enable colonies to thrive. Some may be transplanted, as has been proved to be feasible

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
		from commercial production.
<b>Recommendation</b>	That a pest control programme for the entire reserve will be implemented to protect the remaining king ferns.	Such a pest control programme would be a component of the proposed management plan to be developed as mitigation for the effects of the project on the UKSR.
<b>Assessment</b>	<b>Minor</b> This has been changed from significant after considering the applicants' comments	Disagree as only a small percentage of the UKSR may be affected and the small number of king fern colonies in the affected area are not likely to be affected by inundation. Refer attached Bioresearches Memo and Application – Appendix 9 page 36 [Appendix B]. <b>Minor</b> or potentially <b>Positive</b> as the existing colonies will be protected and pests controlled, unlike the present situation.
<b>VALUE: FAUNA</b>		
<b>Potential Effect as Described by the Applicant</b>	Approximately 1 to 2 % of the total Reserve habitat would be flooded by the construction of the scheme. The effect of that reduction on the populations of common and abundant species of native birds would be no more than minor.	
	Overall the long-term impacts on the Reserve would be no more than minor and there would not be any significant reduction in its wildlife values.	
<b>Proposed Mitigation</b>	Establishing a new area of tawa and other food / plants such as tree lucerne via replacement planting would be an appropriate measure in mitigation to enhance current food sources for birds.	
	The river along the eastern perimeter of the downstream section of the impoundment would be quiescent as a result of the weir. That change would be beneficial to both shags, including the threatened black shag, and waterfowl.	
	From a wildlife perspective, the net result is likely to	

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
	enhance the overall wildlife values of that section of the river.	
	Overall the long-term impacts on the Reserve would be no more than minor and there would not be any significant reduction in its wildlife values. The new flow regime will increase the quantity and quality of habitat for waterfowl and shags.	
<b>Analysis</b>	It is debatable whether alteration of the rivers characteristics will have any positive effects for bird species.	This analysis directly opposes the conclusions reached by Bioresearches (Application – Appendix 9) [Appendix B]. They concluded that there would be a potential positive gain for habitats of some waterfowl and fish. <i>The analysis was made on the basis that the proposed modifications to the water flow by impounding water would reduce its benefits to some types of waterbird species and improve it for others. In the case of "others" it is more likely to benefit common species of waterbirds especially waterfowl, where as, if left as a natural moving waterway it would perhaps benefit a wider range of waterbird species.</i> <i>It is possible to predict with some degree of accuracy the potential changes in species composition that might occur should the river flow be altered.</i>
	The best way to improve the water body for breeding water bird including waterfowl is to plant along the margins and undertake predator control in the area.	
<b>Recommendation</b>	No mitigation is required.	
<b>Assessment</b>	<b>Minor</b>	
<b>VALUE: SCENIC VALUES</b>	<b>VISUAL IMPACT</b>	
<b>Potential Effect as Described by the</b>	Although the visual impact of the weir will be high when viewed from the immediately surrounding area,	

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
<b>Applicant</b>	there is only a small transitory viewing audience.	
	The reserve will still exhibit the same scenic values as currently exist.	
	The potential impact on the reserve is considered to be minor.	
<b>Proposed Mitigation</b>	Consideration has been given to alternative design structures for the weir to reduce the adverse effects on the landscape quality and character of the river and gorge landscape. The outcome is the potential construction of a roller compressed concrete structure which will allow a more natural interface with the water.	
<b><i>Further Mitigation</i></b>	An alternative design has been considered. This is an earth embankment with a central / rock channel. The central section will have a surface of rocks set in concrete with indistinct edges to help create the look of the natural river channel including the agreed residual flow. A wooden footbridge can be constructed across the central channel if desired. The embankment will be planted in native plants and will have isolated boulders to help match the natural plants.	With respect to structures on the reserve the effects are unchanged. The alternative design is considered as a visual effect elsewhere in the assessment.
<b>Analysis</b>	The scenic values of the Reserve will change from its original river margin character to a more sedate lake like body of water. There will be the presence of man-made structures in the form of a weir . This may increase if the proposed mitigation of constructing a walking track is undertaken though it is unlikely that any track would penetrate any distance into the reserve given the steep terrain.	
<b>Assessment</b>	Significant	The effect will be very localised. Once construction has been completed and the area

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
		affected reinstated, John Goodwin's conclusion in the Application is the overall effect on the scenic values will be <b>Minor</b> . Refer to the attached Boffa Miskell Report [Appendix E] and the Application – Appendix 10 -5.3 [Appendix B] and elsewhere. He acknowledges that the visual impact of the weir will be high when viewed from the immediately surrounding area, which is not easily or frequently accessed by the public.
<b>VALUE: RECREATION AND PUBLIC ENJOYMENT</b>		
<b>Potential Effect as Described by the Applicant</b>	Increase in fishable water.	
	Opportunities to provide non-motorised boat access to the UKSR.	
	The proposed lake would increase views and the potential recreational use and passive use of the Reserve.	
<b>Proposed Mitigation</b>	A walking track could be provided from the Trout Pool car park down the left bank to where view down the gorge are available, This would need to be designed in conjunction with DOC and the Rotorua District Council and could include an upgraded carpark, signage and interpretative information at the end of the Trout Pool Road.	
	Depending on the final weir design access options could also be developed to allow public access to view the weir.	
	Access to the water could also be provided, for fishing and to launch non-motorised craft.	
<b>Analysis</b>	Recreational use of the proposed lake is outside the scope of this concession application.	
	The development of a track in the area would provide recreational opportunities within the UKSR. However	This is logical as the opportunity would not have been foreseen – enhanced access is only arising

	<b>EFFECT</b>	<b>APPLICANT'S COMMENTS (the Department response is in italics)</b>
	the development of walking track or other recreational facilities are not identified as strategic opportunities for the Bay of Plenty Conservancy.	as a potential result of the project.
	This increased access needs to be balanced by the loss of access to the area of the reserve to be occupied by the weir. This area is one of the few locations where there is reasonable access from the river onto the reserve.	Access proposed would enable access to the scenic reserve and the botanical values for which the reserve was purchased. Access would be available to the general public whereas access from the river at the weir site is very difficult and limited to only those willing to make the journey by raft or kayak.
	The development of a walking track and other facilities would require on-going maintenance in the long term.	This could form part of the conditions to the concession.
<b>Recommendation</b>	Investigate a long term management agreement with BOPE that includes development and maintenance of any track and other recreational facilities.	<b>Minor</b> and potentially <b>Positive</b> in some respects – as ensuring access and enjoyment is a purpose under the Reserves Act. Refer to [the] attached Boffa Miskell Report (4) [Appendix D] and Application – Appendix 10 [Appendix D].
<b>Assessment</b>	<b>Positive</b>	
<b>VALUE: HISTORIC AND CULTURAL VALUES</b>		
<b>Potential Effect as Described by the Applicant</b>	The Kaituna River is of high significance to tangata whenua.	
	A review of historic, cultural and archaeological characteristics has not revealed specific values other than the generally applicable scenic and remote value of the river and its surrounding environment as a whole.	
	No adverse impacts have been identified for these values in the affected area of the Reserve.	
	Any stands of para (king) fern need to be preserved.	
<b>Proposed Mitigation</b>	Consultation will be ongoing with tangata whenua	

	EFFECT	APPLICANT'S COMMENTS (the Department response is in italics)
	during the consent process. Mitigation measures for para are discussed under vegetation.	
<b>Analysis</b>	Effects on the king fern and possible mitigation measures are discussed in the section on vegetation	
<b>Recommendation</b>	Further information is needed before an accurate assessment can be made	
<b>Assessment</b>	<b>No effect</b> Changed from <b>uncertain</b> after consideration of the applicants' comments.	Clarification needed. This is inconsistent with the cultural studies lodged as part of the application and accepted by Kei Merito of DoC. No effect is considered to be more accurate in this case. <i>Agreed – no effect</i>

### Down Stream Effects

VALUE	EFFECT	APPLICANTS COMMENTS (the Department response is in italics)
<b>VALUE: FLORA</b>	<b>EXPOSED RIVERBANK</b>	
<b>Potential Effect as Described by the Applicant</b>	Much of the section of river downstream of the proposed weir is very steep-sided or vertical. It is expected that the area below the existing water level would be colonised by bryophytes and ferns.	
<b>Proposed Mitigation</b>	No mitigation is proposed.	
<b>Analysis</b>	The applicant's description of the effect is considered accurate.	
<b>Recommendation</b>	No mitigation is required.	
<b>Assessment</b>	<b>Minor</b>	
	<b>WEEDS</b>	
<b>Potential Effect as</b>	Invasion by weeds would be minimal as much of the	

VALUE	EFFECT	APPLICANTS COMMENTS (the Department response is in italics)
<b>Described by the Applicant</b>	section of the river below the weir is very steep-sided or vertical. It is anticipated that, as with the section of river upstream of the proposed weir, the colonisation by weeds would be restricted to wider parts of the river.	
<b>Proposed Mitigation</b>	No mitigation is proposed.	
<b>Analysis</b>	The applicant's description of the effect is considered accurate. The effects of removing weeds above the weir need to be considered especially those relating to willows.	
<b>Recommendation</b>	Conditions relating to weed removal above the weir should be included in the works approval. The Concession agreement should include a condition requiring the applicant to monitor the area for weed infestations and remove any weeds if necessary.	
<b>Assessment</b>	<b>Minor</b>	
<b>KING FERNS</b>		
<b>Potential Effect as Described by the Applicant</b>	The ferns are located on the top of the very steep river bank, some 10-15 metres above the existing water level. Given their location they will not be affected by any decrease in the existing water level.	
<b>Proposed Mitigation</b>	No mitigation is proposed.	
<b>Analysis</b>	The effects on king ferns in this area are considered minor.	
<b>Recommendation</b>	That applicant's comments are accepted.	
<b>Assessment</b>	<b>Minimal</b> (Changed from minor after consideration of the applicants comments)	No effect or Minimal would be more accurate as the ferns will not be affected. <i>Agreed – minimal as the change in water level could possibly have some effect.</i>
<b>VALUE: FAUNA</b>		
<b>Potential Effect as Described by the</b>	Deer, pigs and goats are considered to be present in the Reserve. It is not known whether these animals	

VALUE	EFFECT	APPLICANTS COMMENTS (the Department response is in italics)
<b>Applicant</b>	presently cross the river. Given that most of the riverbanks are steep or vertical and the river is deep and fast flowing it seems likely that the ability of these animals to cross the existing river is very limited.	
<b>Proposed Mitigation</b>	No mitigation is required.	
<b>Analysis</b>	The Reserve is bounded to the east by the Kaituna River and to the west by an area of forest. It is more likely that any pests will invade the reserve from the forest.	Agree – should the project proceed then the current barrier provided by the river would be reinforced by the canal and secure access to the east.
<b>Recommendation</b>	That the applicant's comments be accepted.	
<b>Assessment</b>	<b>No effect</b> (Changed from minimal after consideration of the applicants comments)	<b>No effect</b> may be more accurate as a barrier will remain in place and the discussion relates to pest species only, rather than indigenous fauna. <i>Agreed</i>

