

Mayor and Councillors  
COUNCIL

15 DECEMBER 2011

Meeting Status: **Public**

Purpose of Report: For Information

## **WATER SUPPLY PROJECT - UPDATE**

### **PURPOSE OF REPORT**

- 1 This report provides an update on progress made within the Water Supply project since the last update of October 2011.<sup>1</sup>

### **BACKGROUND**

- 2 After assessing 41 water supply options in August 2010<sup>2</sup> Council selected its preferred supply solutions. The preferred solution is River Recharge with Groundwater (RRwG) with the second being the Maungakotukutuku Dam (Dam). The Council approved further drilling, testing, monitoring, modelling and assessment work of the RRwG solution. Before applying for resource consent the results will be reported back to Council and stakeholders.
- 3 Also in August Council authorised the Chief Executive to negotiate the purchase of land required for the Dam, conditional upon the successful conclusion of the covenant alteration. Council also requested a cultural impact assessment with the local Iwi.

### **CONSIDERATIONS**

- 4 To confirm the final feasibility of RRwG there are a number of work activities. Work has advanced in the following areas and are discussed in turn in the body of this report:
  - Investigation bores
  - Cultural impact assessment
  - Consultation
  - Programme
  - Production bore
  - Land negotiations
  - Financial forecast

---

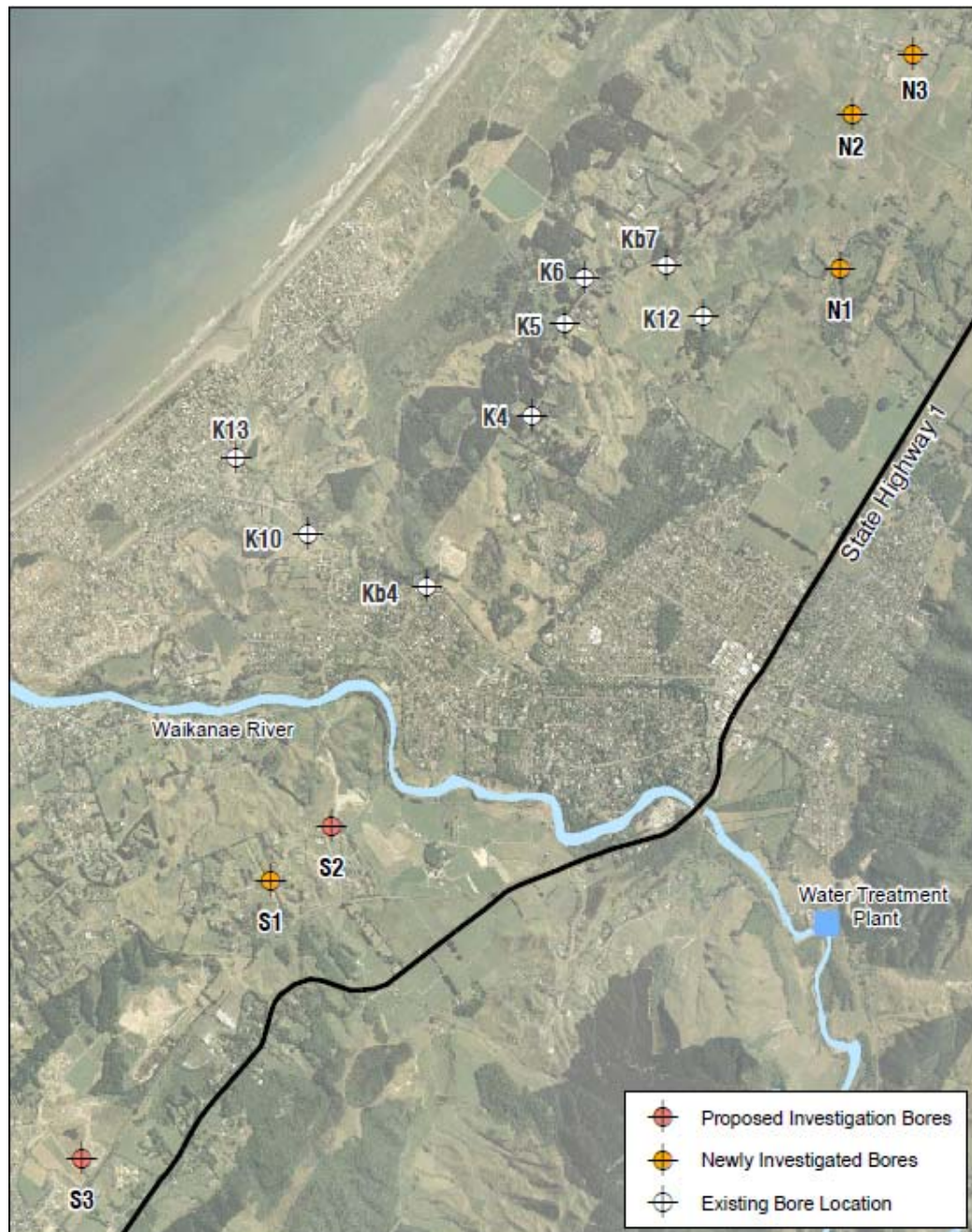
<sup>1</sup> Refer to report IS-11-363 6 October 2011

<sup>2</sup> Refer to report AS-10-922 for Council's 19 August 2010 resolutions.

## Investigation Bores

- 5 This investigation is being carried out to determine the potential water volumes and geological makeup of the aquifer. The target yield from the bores is 120l/s. This is required to provide a 50-70 year design horizon. The information collected will be incorporated in the groundwater model. The groundwater model will provide an indication of the final sustainable yield.

### *Bore Location Map*



- 6 The investigative drilling has been successful to date with three of the four bores drilled containing suitable water yield. The current status of the bore investigation is as follows

### *Bore Description*

<b>Bore Number</b>	<b>Location</b>	<b>Potential Yield</b>	<b>Status</b>
<b>N1</b>	<i>Greenhill Road, Waikanae</i>	<i>No Water</i>	<i>Completed</i>
<b>N2</b>	<i>Farmland (Ngarara Road, Waikanae)</i>	<i>20-30l/s</i>	<i>Completed</i>
<b>N3</b>	<i>Kensington Drive, Peka Peka</i>	<i>Water</i>	<i>Pump Testing</i>
<b>S1</b>	<i>Greendale Drive, Paraparaumu</i>	<i>20-30l/s</i>	<i>Completed</i>
<b>S2</b>	<i>King Arthur Drive, Paraparaumu</i>		<i>Started</i>
<b>S3</b>	<i>Waterstone Ave, Paraparaumu</i>		

- 7 Since the October 2011 report<sup>3</sup> investigation bore N3 (Kensington) has been drilled to a depth of about 94m. One of two pump tests has been completed. Once completed these tests will be used to estimate the potential yield of the bore.
- 8 Investigative drilling at S2 (King Arthur) is starting. Residents that live within 250m of the site have received several letter drops prior to the start of drilling. Interested residents have been met on site.

### **Production Bore**

- 9 As part of the Drilling Strategy<sup>4</sup> the investigative drilling contract was to provide one production bore. The purpose is to confirm the actual yield from the production bore rather than rely on estimates calculated from the investigation bore.
- 10 The Drilling Strategy defined the sequence of drilling. Subsequently, the Drilling Strategy has been reviewed and revised. The review also addressed the delays to programme caused by inclement weather, working around farming activities, additional development time and challenging ground composition.
- 11 Drilling of the production bore has been brought forward. N2 (Farmland) location was selected because it is the most cost effective location. It also allows for two drilling rigs to be employed, one for investigations and the other for drilling the production bore. Drilling is now expected to be completed by March 2012.

### **Cultural Impact Assessment**

- 12 A cultural impact assessment of the two preferred supply solutions is required to assess the impact on Te Āti Awa cultural values. The consultant (Hapai Whenua – Environmental Advocates Ltd) has completed a draft assessment that is being reviewed by the Te Āti Awa Water Working Group (WWG).

<sup>3</sup> Refer to report IS-11-363 6 October 2011

<sup>4</sup> Drilling Strategy, CH2M Beca, 1 November 2010

- 13 The WWG has had several meetings to review and amend their report. To aid in this review they have commissioned their own peer review of the NIWA Waikanae River investigation.<sup>5</sup> Their revised completion date for the Cultural Impact Assessment report is mid December 2011. At the conclusion of the Cultural Impact Assessment WWG expect to provide a report to Council in February 2012.

### Land Purchase

- 14 The Council sought to purchase the land required for the Dam to secure this water supply solution for the future. Land is required from three separate land owners. Any agreements will be subject to Council reaching a satisfactory resolution to alter the Mahaki Covenant. The covenant is discussed later in this report.
- 15 An agreement is being finalised with Ikaham Holdings Ltd for 72% of the land required. The remaining two smaller areas of land have been valued based on 'willing seller, willing buyer' using the 'before and after' method<sup>6</sup>.
- 16 The next largest area being negotiated for purchase is from Kaitawa Forests Ltd (Kaitawa). As agreed with Kaitawa, Council is developing potential offers to present to Kaitawa in 2012.
- 17 The final land negotiations with Greater Wellington Regional Council have also progressed. Council's valuation has been presented to Greater Wellington Regional Council and their valuation is expected shortly.

### Covenant Alteration

- 18 The Department of Conservation (DoC) - Mahaki Covenant on the dam site requires alteration before any land purchases are settled. The covenant needs to be altered to allow works to occur on site while still maintaining effective protection. Council's advisors Wildlands Consultants are undertaking the assessment of the environmental values to determine the required offsetting. This would form the basis for the altered covenant.
- 19 DoC has completed a review of the preliminary work and has agreed to the methodology for assessing the offset values. Wildlands Consultants are currently completing the next assessment, a detailed environmental valuation phase.

### Financial Considerations

- 20 To manage expenditure the project team regularly reviews the forecast costs. In the latest review the forecast indicated an underspend of \$250,000 this financial year. The underspend will be carried forward to the following year to help cover any variation in costs relating to the final staging of RRwG and timing of land purchase activities.

---

<sup>5</sup> The Effects of Groundwater Discharge on the Algal, Invertebrate and Fish Communities of the Waikanae River, NIWA, August 2011.

<sup>6</sup> Refer to Public Works Act 1981, Section 62(1)(b)

- 21 The forecast for years four and five are to be confirmed once the results of the drilling and groundwater modeling is known.

<i>Financial Year</i>		<i>Actual</i>	<i>Current budget</i> <i>(includes land purchase)</i>	<i>Forecast</i>	<i>Variance</i>
1	2009/10	\$1,610,000		\$1,610,000	
2	2010/11	\$1,535,000		\$1,535,000	
3	2011/12	<b>\$550,000</b>	\$2,425,000	<b>\$2,175,000</b>	<b>-\$250,000</b>
4	2012/13		\$4,400,000	<b>\$4,650,000</b>	<b>\$250,000</b>
5	2013/14		\$2,500,000	\$2,500,000	
		\$3,695,000	\$9,325,000	\$12,470,00	\$0

### Consultation

- 22 The purpose of the consultation during this phase of the project is to keep the public informed of project milestones. Public have been informed either through the project newsletters, press releases or by 'Water Update' in the local newspapers.
- 23 Since the last update in October 2011, there have been separate meetings with WWG and Greater Wellington Regional Council. WWG meetings have covered progress made by the cultural impact assessment and investigative drilling. The project team have presented Greater Wellington Regional Council with the NIWA Waikanae River investigation report<sup>7</sup>. Great Wellington Regional Council was pleased to receive the information and is working with NIWA to clarify some items.

<sup>7</sup> The Effects of Groundwater Discharge on the Algal, Invertebrate and Fish Communities of the Waikanae River, NIWA, August 2011.

## Programme Considerations

- 24 This table reflects the adjustments to the programme made. Changes are shown in italics:

<b>Activities</b>	<b>Status</b> (Expected Completion)
<b>Information Review of Solutions</b>	<b>Completed</b>
<b>Solution Selection</b>	<b>Completed</b>
<u><b>River Recharge Preliminary design/AEE</b></u> <ul style="list-style-type: none"> <li>- develop preliminary designs</li> <li>- assess environmental effects for resource consent application</li> <li>- prepare for statutory assessment, resource consent lodgement</li> <li>- consult affected parties</li> <li>- improve hydrological model</li> <li>- understand down-stream ecological effects</li> <li>- drill test wells</li> <li>- optimise staged development</li> <li>- cultural impact assessment</li> </ul>	<u><b>July 2012</b></u> Partially complete Partially complete ( <i>May 2012</i> ) Partially complete ( <i>July 2012</i> ) Ongoing Partially complete (March 2012) Completed Partially complete ( <i>Mar 2012</i> ) Partially complete ( <i>May 2012</i> ) Progressing ( <i>early 2012</i> )
<u><b>Maungakotukutuku Dam Land Purchase</b></u> <ul style="list-style-type: none"> <li>- cultural impact assessment</li> <li>- develop covenant agreement</li> <li>- negotiate purchase agreements</li> </ul>	<u><b>2012/13</b></u> Progressing ( <i>early 2012</i> ) Progressing ( <i>June 2012</i> ) Partially complete ( <i>June 2012</i> )
<u><b>Consent Approval</b></u> <ul style="list-style-type: none"> <li>- consent application, lodged, processed, including possible hearings</li> </ul>	<u><b>2012</b></u> <i>Lodgement (July 2012)</i>
<u><b>Detailed Design</b></u> <ul style="list-style-type: none"> <li>- produce a detailed design reflecting the consent requirements and the solution selected</li> </ul>	} <u><b>2012 to 2014</b></u>
<u><b>Construction</b></u> <ul style="list-style-type: none"> <li>- procure a contractor to construct the solution</li> <li>- manage and monitor the construction</li> <li>- commission the built solution</li> </ul>	

- 25 The programme for the Water Supply project is dependent on the results of the drilling investigation. In June 2012 the Council will make a decision whether to confirm RRwG as the solution for the next 50-70 years and apply for resource consent. Consent lodgement is scheduled for July 2012.

## CONCLUSION

- 26 Overall the project is tracking within budget and to programme. The Waikanae River investigation and drilling investigations are providing promising results indicating the viability of RRwG. The land purchase activities are progressing well. The cultural impact assessment has taken longer than originally planned. A report is expected from WWG in 2012

## RECOMMENDATIONS

- 27 That the Council notes progress on the Water Supply Project as per report IS-11-440.

**Report prepared by:**

**Approved for submission by:**

Phillip Stroud

Sean Mallon

**PROJECT MANAGER**

**GROUP MANAGER  
INFRASTRUCTURE SERVICES**

**ATTACHMENTS:**