

22 November 2012



WASTEWATER TREATMENT PLANT AND LANDFILL JOINT COMMITTEE

A Joint Committee of the Porirua and Wellington City Councils

Notice is hereby given that, commencing at 3.30pm on TUESDAY 27 NOVEMBER 2012, a meeting of the WASTEWATER TREATMENT PLANT AND LANDFILL JOINT COMMITTEE will be held in the PORIRUA CITY COUNCIL CHAMBER, ADMINISTRATION BUILDING, HAGLEY STREET, PORIRUA CITY, to conduct the business set out as under.

TERMS OF REFERENCE

To provide governance for the joint services entered into by the Porirua and Wellington City Councils through the joint venture agreements for the Wastewater Treatment Plant and the Spicer Valley Landfill.

MEMBERSHIP

Porirua City Council:

Cr T M Sheppard (Chairperson)
Cr S M Dow
Cr B E Kropp

Wellington City Council:

Cr N Best (Deputy Chairperson)

Gary Simpson
CHIEF EXECUTIVE



SCOPE OF ACTIVITY

To consider and make recommendations to both Councils regarding:

- *overview, input and policy formulation in the areas of management of the Spicer Valley joint landfill operation, and the Wastewater Treatment Plant, as set out in the joint venture agreements, entered into by both Councils, including development of Trade Waste Bylaws.*
- *proposals for infrastructural development relating to the joint ventures*
- *new initiatives relating to the joint ventures*
- *the Spicer Forest partnership agreement between Greater Wellington Regional Council, Wellington City Council and Porirua City Council on land surrounding the Spicer Valley Landfill*
- *the budget for operation of the joint ventures for inclusion in the Councils' Annual Plans / Long Term Council Community Plans*
- *receipt of the Annual Report of the joint ventures for inclusion in the Councils' Annual Reports*
- *any proposed service changes*

POWER TO ACT

The powers of the Joint Standing Committee as described in the Deed Relating to Joint Works dated 22 December 1986 and the powers of the Joint Committee as described in the Agreement Relating to Joint Refuse Disposal Works dated 2 May 1983

Setting of fees and charges related to the operation of the Spicer Valley Landfill and recommending the basis for charging for trade wastes at the Wastewater Treatment Plant

Decisions on acceptance of wastes into the Spicer Valley Landfill and Wastewater Treatment Plant

ORDER OF BUSINESS

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1. APOLOGIES	
2. CONFIRMATION OF MINUTES	
Meeting held 7 August 2012	
<u>CHAIRPERSON'S RECOMMENDATION</u>	4
<i>That the minutes be adopted as a true and correct record.</i>	
3. ITEMS FOR DECISION	
3.1. SPICER LANDFILL IMPROVEMENTS – UPDATE NOVEMBER 2012	7
Report #826534 of the General Manager Asset Management and Operations dated 5 November 2012.	
<u>CHAIRPERSON'S RECOMMENDATION</u>	
<i>That the Wastewater Treatment Plant and Landfill Joint Committee note the progress on environmental improvement and asset life enhancement made to Spicer Landfill documented in the report titled Spicer Landfill Improvements – Update November 2012 (PCC #826534).</i>	

**3.2. DECISION BY WELLINGTON CITY COUNCIL TO SUSPEND
FORMATION OF A COUNCIL CONTROLLED TRADING
ORGANISATION – INTERIM RESPONSE FROM
WELLINGTON CITY COUNCIL** 25

Report #827179 of the General Manager Asset Management and Operations dated 5 November 2012.

CHAIRPERSON'S RECOMMENDATION

That Porirua City Council note that Wellington City Council is reviewing Council Controlled Organisations as a service delivery vehicle and that Wellington City Council will consider this review on the 29 November 2012, and will inform its approach to specific options for shared waste services.

3.3. WASTEWATER TREATMENT PLANT PERFORMANCE 34

Report #831317 of the General Manager Asset Management and Operations dated 20 November 2012.

CHAIRPERSON'S RECOMMENDATION

1. *That the Council note the Wastewater Treatment Plant performance is now fully conforming with Resource Consent requirements. This is after a significant period in 2011/12 and part of 2012/13 when faecal coliform treatment limits were not met. There is a capital works programme in place at the Wastewater Treatment Plant to address past and current non-compliance with the resource consent condition for faecal coliforms.*
2. *Further risk against future poor effluent results should be mitigated by bringing forward renewal expenditure of \$270,000 from 2013/14 to the current financial year to upgrade one of the two existing clarifiers.*

WASTEWATER TREATMENT PLANT AND LANDFILL JOINT COMMITTEE

Minutes of Joint Committee meeting held in the Council Chambers, Administration Building, Hagley Street, Porirua on Tuesday 7 August 2012 at 3.30pm.

PRESENT

Porirua City Council: Cr T M Sheppard (Chairperson)
Cr S M Dow

Wellington City Council: Cr N Best

IN ATTENDANCE

Mayor Nick Leggett
Cr A M Coffey

OFFICERS

Porirua City Council: G Simpson Chief Executive
P Bailey General Manager Asset Management and Operations
P Keller Solid Waste Manager
J Saywell Waste Water Assets Manager
C Hopman Manager Waste and Water Services
S Mika Committee Advisor

Wellington City Council: M Mendonca Business Unit Manager CitiOperations

APOLOGY

From Councillor B E Kropp was sustained on the motion of Councillors T M Sheppard and N Best

26/12 CONFIRMATION OF MINUTES

Meeting held 11 April 2012.

RESOLVED (Best / Sheppard)

That the minutes be adopted as a true and correct record.

CARRIED

27/12 JOINT WASTE MANAGEMENT INVESTIGATION – UPDATE AS OF JULY 2012

Report #789472 of the General Manager Asset Management and Operations dated 16 March 2012

Moved (Sheppard / Dow)

That the report be received

The meeting adjourned at 3.43pm and resumed at 3.52pm.

RESOLVED (Sheppard / Best)

That Wellington City Council be requested to report to the Joint Committee by 7 November 2012 on their 27 June 2012 decision to stop work on the proposed joint waste management Council Control Trading Organisation with Porirua City Council and to clarify a way forward to enable enhanced cooperation between the two Councils.

CARRIED

The meeting closed at 3.59pm.

Approved and adopted as a true and correct record:

.....
CHAIRPERSON

.....
DATE



Asset Management & Operations
05 November 2012

SPICER LANDFILL IMPROVEMENTS – UPDATE NOVEMBER 2012

PURPOSE

This report is for information. It sets out the progress of environmental improvements and asset life enhancements at the Spicer Landfill.

SIGNIFICANCE OF DECISION

The matters considered in this report do not trigger the Porirua City Council's Significance Policy.

RECOMMENDATIONS

That the Wastewater Treatment Plant and Landfill Joint Committee note the progress on environmental improvement and asset life enhancement made to Spicer Landfill documented in the report titled Spicer Landfill Improvements – Update November 2012 (PCC #826534).

Report prepared by:

Report reviewed by:

Jamie MacDuff
PROJECT MANAGER (CONTRACT)

Peter Keller
SOLID WASTE MANAGER

Approved for submission by:

Peter Bailey
GENERAL MANAGER ASSET MANAGEMENT AND OPERATIONS

1 EXECUTIVE SUMMARY

- 1.1 This update reports on the background and progress of environmental improvements and asset life enhancements made to the Spicer landfill.
- 1.2 The paper sets out the reasons for investment decisions, provides insight into issues encountered and how they were resolved, provides a snapshot of the current status of the landfill and sets out an outline of future matters to be addressed.

2 CONTRIBUTION TO COUNCIL'S STRATEGIES

Relationship to Council's Strategic Priorities

A City of Villages	A Healthy Harbour	A Growing City	A Great City Experience
	✓		✓

- 2.1 The recent environmental improvements and expansion upgrades at the Spicer landfill ensure that the landfill is managed in a sustainable way that allows for the safe disposal of domestic, commercial and industrial residual waste. Waste reduction is encouraged to provide a great city experience and support a healthy and protected harbour.

3 ASSOCIATED PORTFOLIOS

Relationship to Council's Portfolios of Responsibility

Sport, Leisure and Recreation	Community and Social Development	Infrastructure and Environment	Economy and Arts	Planning and Regulatory	Finance and Audit
		✓		✓	

Relationship to Project Portfolios

Emergency Management	Sister Cities	Village Planning	Harbour	City Centre	Community Empowerment
			✓		

4 BACKGROUND

- 4.1 The Spicer landfill is one of three large regional landfills servicing the needs of the greater Wellington region. The 73 hectare Spicer forest (Pinus Radiata) is located above and around the head of the Spicer Valley. It adjoins Department of Conservation reserve land to the south west, and a private forest (the forest of Tane) to the south. The Te Arorua walkway (which is a component of the New Zealand National Walkway) runs along the ridge line above the Spicer Forest and additional track development is being negotiated to extend the track down into the Ohariu Valley. The Mitchell Stream (a tributary of the Porirua Stream) flows alongside the landfill and down through the adjoining industrial park.
- 4.2 When the Spicer landfill was first developed in 1976 it was expected to operate for approximately 30 to 40 years. Over the intervening years a number of smaller regional

landfills have closed so that the "catchment" serviced has grown to include the northern wards of Wellington City; a population equivalent of approximately 70,000. For various reasons including ease of motorway access, the landfill has also proved popular with commercial waste operators.

- 4.3 By 2005, the forecast closure date of the landfill was refined to between 2012 and 2013. The cost of developing a new landfill was estimated to be prohibitively expensive at \$46M in 2005 dollars. Territorial Authorities across New Zealand were becoming aware that a commitment to a zero waste strategy would be unlikely to eliminate the long run need for landfill disposal. At a local level, closure of the Spicer landfill would result in the loss of a significant revenue stream to the two Council's involved in the Joint Venture to operate the landfill.
- 4.4 In 2006, the Joint Venture Committee began a review of options, including waste minimisation, separation and treatment schemes. This work concluded that whilst the existing landfill could, if carefully managed, have its closure date extended to 2017/18 without new capital investment, very significant long term operational costs would be incurred to mitigate or compensate for gas and leachate discharges. The analysis also indicated that the long run cost of solid waste treatment (including environmental treatment and aftercare costs) was predicted to favour land filling for the foreseeable future. The Joint Venture decided that continued use of land filling practices with new capital investment was warranted.
- 4.5 The rationale for further capital investment in land filling practices (as opposed to other means of solid waste treatment) was influenced by the Joint Venture's need to:
 - Improve the control of discharges of green house gases, storm water and leachate from the existing landfill asset
 - Continue to dispose of sewage sludge from the nearby Wastewater Treatment Plant
 - Continue to generate a sustainable income stream from the landfill operations making the practice self funding
 - Have the flexibility to trial other alternative solid waste recovery and treatment technologies as these become proven and viable.
- 4.6 Consideration then focused on increasing the life of the Spicer Landfill whilst improving its environmental performance. A strategic options review was undertaken, followed by detailed financial analysis of landfill expansion options. The investment option that gave the best investment return, under a range of possible future scenarios, was a large multistage expansion of the landfill out to 2045 and beyond that also addressed environmental issues.
- 4.7 The investigation concluded that a multistage expansion investment represented a low risk approach that kept future options open for both Joint Venture Councils. The Joint Venture Committee and each of the two respective Councils resolved to invest in a staged expansion of the Spicer Landfill and agreed to officers proceeding to apply for an adjusted designation

for an expanded landfill and the resource consents to permit the major earthworks required for Stage 2 (*Resolution 32/09 Future of Spicer landfill, 24 November 2009*).

- 4.8 The following sections outline the issues considered and resolved in completing the first part of the upgrade and staged expansion of the landfill between fiscal years 2010 and 2012. Ongoing and future activities are also identified.

5 ISSUES CONSIDERED AND RESOLVED

- 5.1 Filling plans: Prior to 2006, land filling took place in a relatively haphazard manner, dictated by weather and operational decisions of the landfill operator. Consequently large areas of the landfill remained open and exposed to vermin, gulls etc. When clean fill was used to cover waste, the fill layer was typically shallow and porous. Gas control was non-existent and rainfall created large volumes of leachate (refer Appendix Figure 1: Spicer Landfill 2005. Multiple Filling Areas).
- 5.2 The new multi-stage expanded landfill design provided forecast filling capacity until at least 2045. An overall filling and staging plan was developed so that land filling is more constrained to a specific area of the site at any one time (refer Appendix Figures 2 through 6).
- 5.3 Landfill Gas Management: A "Stage 0" investment. Environmental legislation (National Standards for Air Quality) and associated regulations came into effect in October 2004. These required large landfill owners to manage methane emissions from landfill gas. Further, the Climate Change Response Act 2002 created obligations for landfill owners to report their green house gas emissions and to surrender New Zealand Units (NZUs) under the Emissions Trading Scheme (ETS) from 1 January 2013. Methane emissions from the landfill were set to create significant operational liability for the Joint Venture.
- 5.4 Unfortunately the Joint Venture had sold landfill gas extraction rights to Nova Gas Limited in a 1995¹. In effect the Joint Venture found itself with a large landfill with no gas collection system in place and no rights to manage green house gas emissions. The risk to landfill worker health and safety was high and the possibility of a landfill gas fire was real; methane could be detected in gases bubbling out of the landfill in many areas. A small gas extraction system and flare (based on salvaged parts from the abandoned Nova Gas plant) was installed to manage the landfill gas from around the original kiosk location. The proportion of the total landfill gas being flared from that small flare was small, about 7% of the theoretical production; the rest was escaping to atmosphere (refer Appendix Figure 7: Small gas flare serving old weigh station and kiosk (2006)).
- 5.5 After many months negotiating the surrender of the gas extraction rights, an agreement was reached in late 2007 which led to a settlement giving Nova Gas a first right to make Council an offer for any subsequent commercial use of the LFG from the Spicer Landfill (although Council is under no obligation to accept such an offer).

¹ A contract between PCC and Nova Gas allowed Nova Gas to extract gas and convert it to natural gas for sale into its Wellington gas network. By 2000, Nova Gas had effectively abandoned its attempts at gas extraction at the landfill and had closed its plant. The gas collection network built by Nova Gas in the lower area of the landfill was abandoned and over time it became inoperable as settlement crushed the light weight pipes that had been used.

- 5.6 Council proceeded to install deep gas wells, a gas collection pipe network and a new 'high tech' gas flare and back up flare designed to safely convert methane and other volatile substances to less damaging atmospheric compounds (refer Appendix Figure 8: New Gas Flares (Primary & Backup) serving entire landfill (2012)).
- 5.7 The percentage of methane now being extracted from the landfill range is 50 to 65% of the theoretical production². This improvement has significantly reduced the 'carbon footprint' of the landfill and has lowered the estimated cost of purchasing emissions credits from 1 January 2013 from several million dollars to a value likely to be in the range \$60,000 to \$500,000 per annum (depending on the market cost of emission credits³).
- 5.8 Environmental Performance Improvements: Stage 1. Due to the haphazard manner of filling, some of the collected storm water was mixed with sediment from roads and earth worked areas. The storm water heading to the settlement pond at the base of the landfill was, therefore, frequently heavily loaded with sediment. Despite this, the pond was rarely at capacity; an indication of high conversion of rainfall into leachate (Refer appendix Figure 9: Sediment Pond before improvements (2010)).
- 5.9 Surface water channels at the base and edges of the front face were porous and poorly maintained; this allowed rain water to leach into the landfill. High leachate production from rainfall generated high leachate flows to the sewer system, placing high volumes and loads on the Council sewage treatment plant and pipe network (Refer appendix Figure 11: Poor Storm water control creating leachate).
- 5.10 The lower or 'front' face area of the landfill had not been sufficiently capped with impermeable clean fill. Instead only a thin veneer of poor quality clean fill had been placed over the refuse; over time this fill had become deeply incised with ruts and had become overgrown with scrub. Leachate flowed from the front face in numerous locations (Refer appendix Figure 12: Front face after stripping vegetation. Note leachate discharges (dark strips) 2010)).
- 5.11 In 2010, the sediment pond was cleaned out and upgraded. The old front face was completely stripped and a new impermeable fill was placed over the surface. A new leachate interceptor (a deep drain) was placed up inside the centre of the landfill and surface water was diverted to edge drainage channels (Refer appendix Figure 13: New impervious capping layer to front face 2010).
- 5.12 Overall sediment control is now much improved (Refer appendix Figure 10: Improved Sediment Pond (2011)), and the pond now fills to the overflow level.
- 5.13 The degree of separation of surface water from leachate is also now significantly improved and flow rates of leachate are little affected by rainfall. Surface waters are effectively leachate free.

² Note there is evidence that Spicer produces much less gas than theoretical, and that most of the actual gas production is now being captured.

³ At a price of \$7/tonne of CO₂ the cost is \$178,000. At \$20/tonne, the cost is \$523,000. As at 4 pm Friday 19 October the price is \$3/tonne.

- 5.14 Stage 2 – Phase 1.1 Capacity Expansion: In early 2011, Council commenced construction of a new impermeable filling cell over the top of the old landfill. This required the creation of a new earth bund and an impermeable clay and plastic liner (Refer appendix Figure 14: Stage 2; Phase 1.1 - bund, impervious liner and new gas wells 2012).
- 5.15 The entire area had a new leachate drainage system installed; additional gas wells were sunk and connected to the gas pipe network. Improvements were made to the western surface water edge drain.
- 5.16 This new filling area has up-to-date features to protect the environment and is now ready to be used. This area is expected to last until sometime around 2017 (Refer appendix Figure 15: Finished Stage 2, Phase 1.1. New cell almost ready for filling (August 2012)).
- 5.17 Improved facilities: In 2004, the Council constructed a weighbridge and kiosk over a previously filled area (Refer appendix Figure 16: Original kiosk and weigh station built on refuse). A piled foundation supported the weighbridge but not the kiosk, which over the following years settled with the waste beneath. The kiosk and the adjacent road had to be regularly lifted at significant cost to keep pace with the settlement. The kiosk required steps to access the door and it was beginning to teeter on overly high foundations. The concrete piles supporting the weighbridge were driven through the waste to solid ground but in doing so they punctured a gas membrane previously placed by Nova Gas in the late 1990's. Consequently, the kiosk and weighbridge could experience methane levels above the explosive limit, requiring a dedicated methane extraction system.
- 5.18 In 2011, a new weighbridge pit and kiosk were constructed on solid ground near the eastern edge of the landfill so that gas and settlement issues would not affect the operation of these facilities. A new access road was also formed to improve the internal roading layout with consideration given to traffic safety and circulation (Refer appendix Figure 17: New Kiosk and weigh station on solid ground).
- 5.19 New borrow area for future materials needs: Low permeability clay based materials for the landfill improvements and expansions were originally planned to be imported to site at some considerable cost. However, the discovery of excellent materials within the lower area of the landfill boundary allowed the development of a 'lower borrow area' that can supply the landfill with high quality material suitable for ongoing lining/capping works.
- 5.20 The lower borrow area is able to supply the subsequent landfill development stages over the next 30 years and can ultimately be used for a number of commercial or recreational uses if desired. It is currently in a 'resting' phase with sediment control measures in place, including settling ponds and mulch cover (Refer appendix Figure 18: Lower Borrow Area (August 2012)).

6 CURRENT STATUS

- 6.1 The foundation works (to Stage 2 phase 1.1) for capacity and asset life extensions of the Spicer Landfill (of 30 or more years depending on filling rates) have now been completed.
- 6.2 The capital works programme has come in on budget, but about six months later than originally planned (over a project period of five years). As it has turned out, the six month

delay to final completion of new filling area has worked out favourably. Reduced waste volumes over the last few years has caused filling of the current filling area to slow and the waste operator is only now ready to commence filling in the new stage 2 phase 1.1 area.

- 6.3 As noted, the new multiple-stage filling plan is in place, and should see the landfill able to continue to accept waste streams for at least a further 30 - 40 years at current filling rates.
- 6.4 Surface emissions of LFG have been very significantly reduced and a regular surface gas emission monitoring program is in place to ensure worker health and safety and minimise fire risk. The new gas flare keeps a continuous log of flared methane volumes and flow rates.
- 6.5 The overall level of financial liability under the New Zealand emissions trading scheme (coming into force on 1 January 2013) has been reduced from a likely level of several million dollars per year to several hundred thousand dollars per year.
- 6.6 Surface water controls are now in place across the landfill and these are proving effective in separating the few remaining surface leachate discharges and reducing sediment entrainment. Green waste mulch has been placed across large areas of the landfill and this is proving highly effective as a surface cover to prevent sediment from being generated.
- 6.7 Only a single working face and tipping area is now in operation. Plans to transfer operations to the new Stage 2 Phase 1.1 tipping area are in place and tipping operations in this area are expected to begin in early December 2012. Once this is complete, the old area filling area will be capped with high quality impermeable fill, top soiled, mulched and hydrosseeded.
- 6.8 Access, circulation and safety of traffic movements have been improved with a clockwise circulation approach for all traffic and separation of heavy trucks from domestic cars. The new weighbridge and kiosk sit on stable rock foundations that no longer need to be monitored for gas emissions or regularly adjusted and levelled due to settlement. And an added bonus, the view of the Porirua harbour from the new kiosk is spectacular.

7 OPERATIONAL IMPLICATIONS

- 7.1 The Spicer Landfill remains a Joint Venture jointly owned by Porirua City Council (78.5%) and Wellington City Council (21.5%). Operational management is undertaken by Porirua City Council. Governance is via the established Joint Venture Committee. Extensive reviews of this structure against alternative operational models (including formation of a CCTO) were undertaken in 2011 but no conclusions were reached. At this point, no further analysis of operating models or structures is planned. Decisions on future cell expansion capital investments and governance of operations will continue to be taken by the Joint Venture Committee.
- 7.2 Day to day landfilling operations are contracted out. The current contract with Envirowaste runs until October 2016 and includes provisions that allow for cell construction and gas infrastructure expansions concurrently with operations.

8 FUTURE STATUTORY REQUIREMENTS

- 8.1 Emissions Trading Scheme: From 1 January 2013, the Joint Venture will be required to purchase certified emissions credits based on the level of green house gas emissions from the landfill. As noted, the level of liability associated with these purchases is now very significantly reduced. The actual cost of purchasing credits is not yet known, as it will be determined by market prices.
- 8.2 Resource Consents: Four resource consents for the operation of the landfill were granted by Greater Wellington Regional Council's Environment Committee in 1996. These include:
- To discharge contaminants onto or into land for the purpose of landfill wastes
 - To discharge landfill gas, odour and dust to air
 - To divert and discharge stormwater the landfill site to the Mitchell Stream
 - To take water as leachate for disposal offsite.
- 8.3 These four resource consents expire on 30 June 2030. It is possible that Greater Wellington Regional Council (GWRC) will decide to review the consent conditions before the consents expire, the next opportunity for formal review is 2016.
- 8.4 Stormwater and sediment discharge: One demanding condition is the requirement for no conspicuous discolouration of the Mitchell stream from the sediment ponds.
- 8.5 Whilst the recent construction works have much improved the degree of sediment carried to the sediment pond, the size of the pond and the arrangement and sizing of some of the pipework feeding it make ongoing compliance possible but demanding on the contractor. Options to reduce risk of non compliance are currently being investigated and will be the subject of a further report to the Committee in 2013.
- 8.6 Further Expansion: The next expansion phase of the landfill (Stage 2, Phase 1.2) is a relatively straightforward uphill extension of the filling area just completed and no significant consent or designations needs are anticipated for that activity. However, the subsequent expansion to Stage 2, Phase 2 will require a westward extension of the current designation boundary on the western side.
- 8.7 Whilst the nature of the Stage 2 operations at the landfill will remain similar to existing operations, the Greater Wellington Regional Council may take a position that additional earthworks associated with land filling activities will require regional bulk earthworks consents. In considering these matters, the Greater Wellington Regional Council may consider that public notification is required.
- 8.8 Early forward planning is now commencing so that storm water risk management, designation changes and consents can be efficiently progressed within the timeframes required for the subsequent expansion phases.

9 FINANCIAL IMPLICATIONS

- 9.1 Planned future cell expansions and gas infrastructure works are budgeted for in the current Long Term Plan (2012 – 22).
- 9.2 The costs and benefits of improved stormwater management are currently under investigation will be reported on in 2013.

10 CONSULTATION

- 10.1 At the July 2012 annual meeting, the Spicer Landfill Community Liaison Group was made aware of the longer term landfill expansion works.

11 CONCLUSION

- 11.1 The capital works projects from 2010 to 2012 for the initial expansion and environmental improvements to the Spicer Landfill have been completed on budget. The environmental improvements make the operation of the landfill more sustainable and reduce the exposure to sediment discharge risks and Emissions Trading Scheme charges. Forward planning is underway for further environmental improvements and subsequent expansion phases.

APPENDIX 1: FIGURES



Figure 1: Spicer Landfill 2005. Multiple Filling Areas

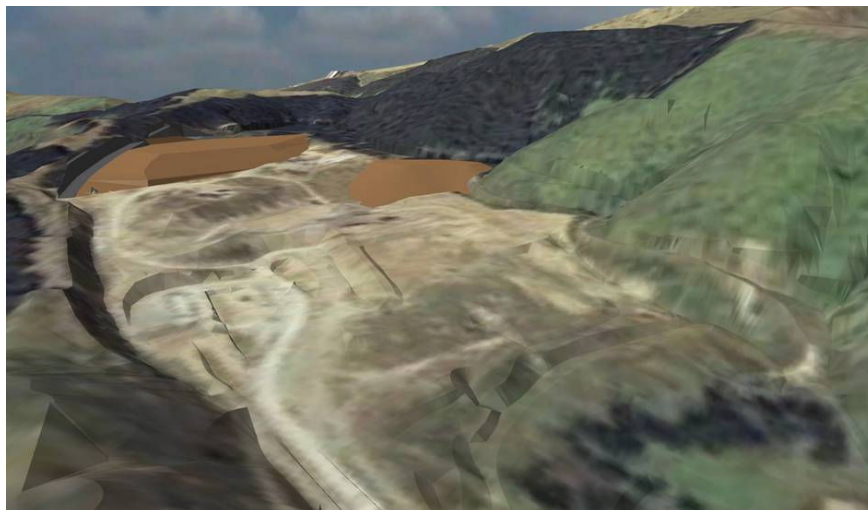


Figure 2: New Filling Plan: Stage 0 (2010 - 11) – now complete

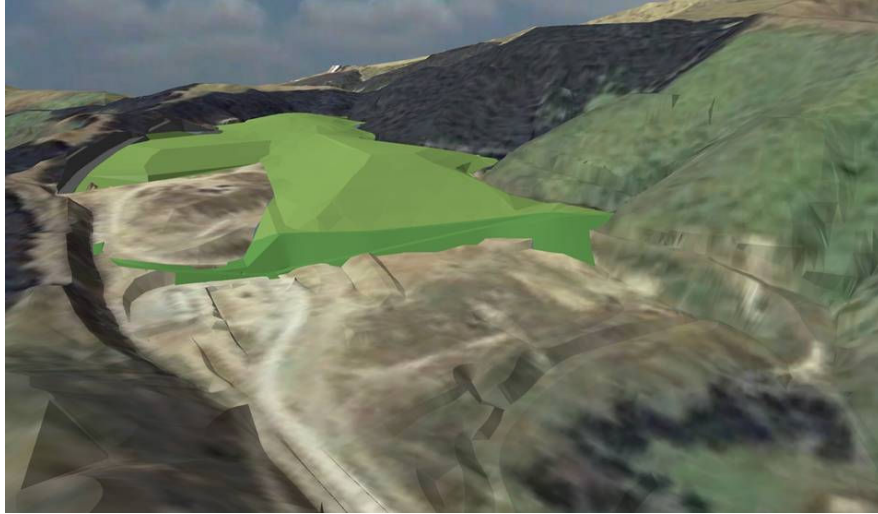


Figure 3: New Filling Plan: Stage 2, Phase 1 (2012 – 18)

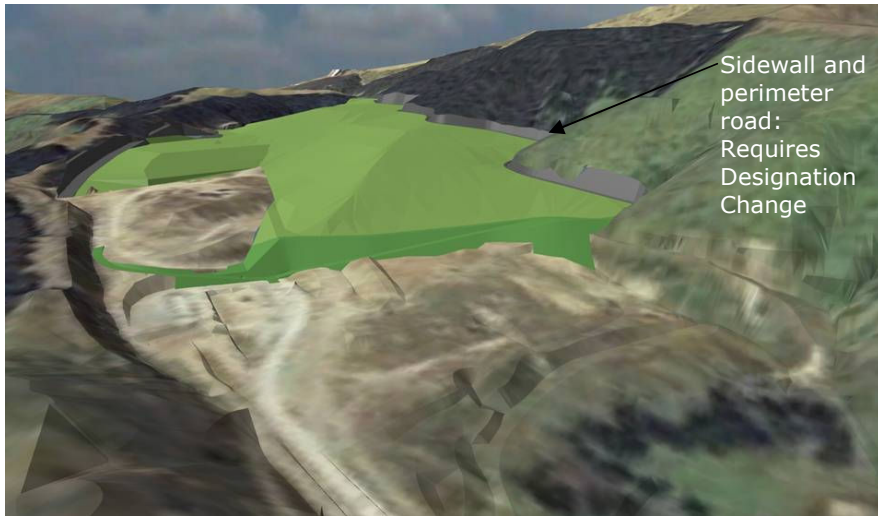


Figure 4: New Filling Plan: Stage 2, Phase 2 (2019 – 2027)

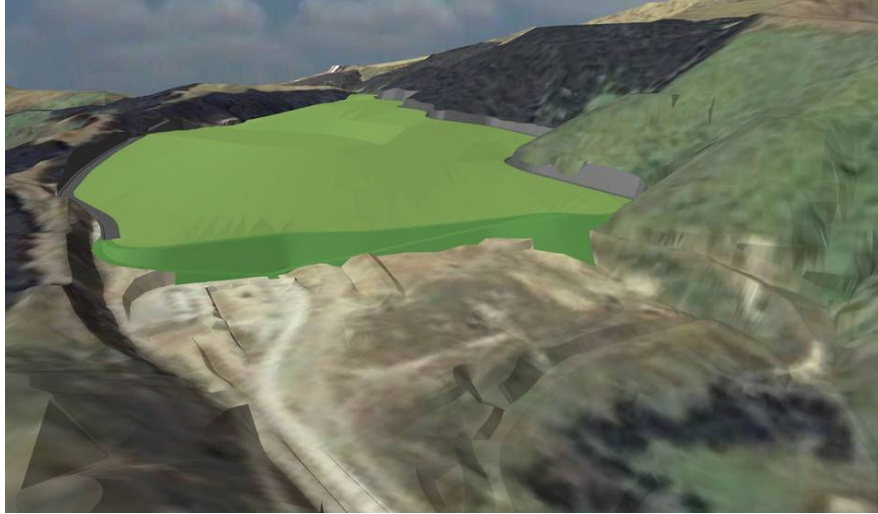


Figure 5: New Filling Plan: Stage 2, Phase 3 (2028 - 38)

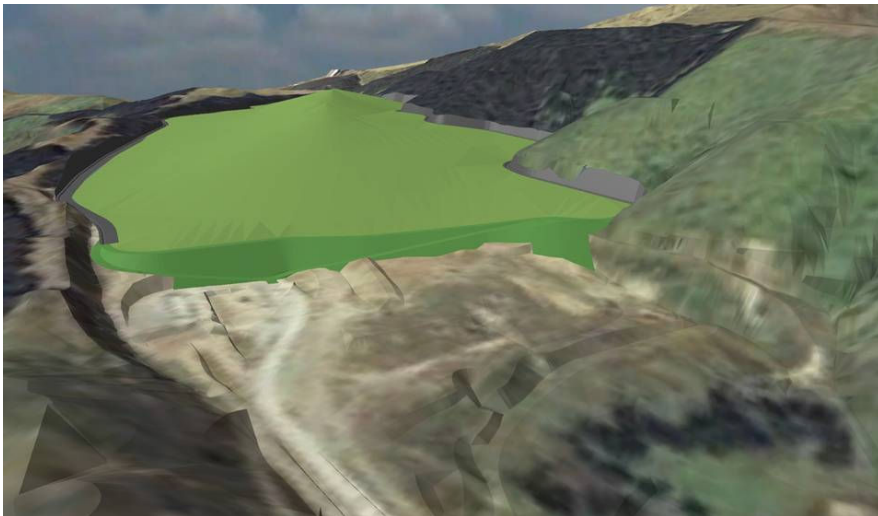


Figure 6: New Filling Plan: Stage 2, Phase 4 to completion (2038 - 45)



Figure 7: Small gas flare serving old weigh station and kiosk (2006)



Figure 8: New Gas Flares (Primary & Backup) serving entire landfill (2012)



Figure 9: Sediment Pond before improvements (2010)



Figure 10: Improved Sediment Pond (2011)



Figure 11: Poor Storm water control creating leachate



Figure 12: Front face after stripping vegetation. Note leachate discharges (dark strips) 2010



Figure 13: New impervious capping layer to front face 2010



Figure 14: Stage 2; Phase 1.1 - bund, impervious liner and new gas wells 2012



Figure 15: Finished Stage 2, Phase 1.1. New cell almost ready for filling (August 2012)



Figure 16: Original kiosk and weigh station built on refuse in 2002



Figure 17: New Kiosk and weigh station on solid ground 2011



Figure 18: Lower Borrow Area (August 2012)

**DECISION BY WELLINGTON CITY COUNCIL TO SUSPEND
FORMATION OF A COUNCIL CONTROLLED TRADING
ORGANISATION - INTERIM RESPONSE FROM WELLINGTON CITY
COUNCIL**

PURPOSE

This report tables a letter from Wellington City Council for the Committee's consideration. The letter is in response to a resolution of the Joint Committee meeting of 7 August 2012 requesting a report by Wellington City Council on its 27 June 2012 decision to stop work on the proposed Council Controlled Trading Organisation with Porirua City Council.

SIGNIFICANCE OF DECISION

The matters considered in this report do not trigger the Porirua City Council's Significance Policy.

RECOMMENDATIONS

That Porirua City Council note that Wellington City Council is reviewing Council Controlled Organisations as a service delivery vehicle and that Wellington City Council will consider this review on the 29 November 2012, and will inform its approach to specific options for shared waste services.

Report prepared by:

Peter Keller
SOLID WASTE MANAGER

Approved for submission by:

Peter Bailey
GENERAL MANAGER ASSET MANAGEMENT AND OPERATIONS

1 EXECUTIVE SUMMARY

- 1.1 In July 2011, the Wastewater Treatment Plant and Landfill Joint Committee recommended that a project be established to investigate the potential benefits, costs and risks of jointly managing waste services under a Council Controlled Trading Organisation (CCTO).
- 1.2 At the 30 November 2011 Committee meeting, officers reported on the outcome of the first stage of investigative work which was completed by Deloitte.
- 1.3 The Committee agreed that a joint high level proposal be prepared for inclusion in the 2012-2022 Long Term Plan (LTP). A high level proposal was included in both Councils' Long Term Plans.
- 1.4 The Committee also agreed that "further work as required to confirm the particular mechanics for the delivery of the identified benefits and a more detailed transition business case be carried out".
- 1.5 Officers from both Councils had been working to clarify the benefits of joint waste management services and develop the transition business case. However, this work was stopped after Wellington City Council (WCC) considered submissions on its Long Term Plan and decided to "stop work on a joint waste management Council Controlled Organisation with Porirua City Council".
- 1.6 At the Committee meeting of 7 August 2012 the Committee resolved that Wellington City Council be requested to report to the Joint Committee by 7 November 2012 on their 27 June 2012 decision to stop work on the proposed joint waste management Council Control Trading Organisation with Porirua City Council and to clarify a way forward to enable enhanced cooperation between the two Councils (refer attachment section 11.2).
- 1.7 An interim response has been received in the form of a letter from Wellington City Council to the chair and members of the Committee (refer attachment section 11.1).
- 1.8 The letter notes that it was not Wellington City Councillor's intention to stop work indefinitely but to put it on hold pending Wellington City Council's decision to seek review of Council Controlled Organisation's as service delivery vehicles.
- 1.9 The letter further notes that Wellington City Council will consider this review on the 29 November 2012, and that this "will further inform our approach to specific options for shared waste services."
- 1.10 Hence further information as to the future direction may be available following Wellington City Council's meeting of 29 November 2012.

2 CONTRIBUTION TO COUNCIL'S STRATEGIES

Relationship to Council's Strategic Priorities

A City of Villages	A Healthy Harbour	A Growing City	A Great City Experience
			✓

- 2.1 Wellington City Council and Porirua City Council work collaboratively on waste-related issues. Such work is consistent with the Regional Waste Management and Minimisation Plan.

3 ASSOCIATED PORTFOLIOS

Relationship to Council's Portfolios of Responsibility

Sport, Leisure and Recreation	Community and Social Development	Infrastructure and Environment	Economy and Arts	Planning and Regulatory	Finance and Audit
	✓	✓		✓	✓

Relationship to Project Portfolios

Emergency Management	Sister Cities	Village Planning	Harbour	City Centre	Community Empowerment
✓		✓	✓	✓	✓

4 BACKGROUND

- 4.1 As a result of shared ownership of the Spicer Landfill, Porirua City Council (PCC) and Wellington City Council (WCC) have a working relationship in solid waste. In addition to this partnership, both Councils have worked together on strategic planning for waste management in the preparation of the Regional Waste Management and Minimisation Plan, as required by the Waste Minimisation Act 2008.
- 4.2 The Wastewater Treatment Plant and Landfill Joint Committee (the Committee) considered the question of joint management at their 25 July 2011 meeting. The Committee recommended that a project be established to investigate the potential benefits, costs and risks of Porirua City Council and Wellington City Council jointly managing waste services under a Council Controlled Trading Organisation (CCTO).
- 4.3 At the 30 November 2011 Committee meeting, officers reported on the outcome of the first stage of investigative work, completed by Deloitte.
- 4.4 The Committee agreed that a joint high level proposal be prepared for inclusion in each Council's 2012-2022 Long Term Plan (LTP). The Committee also agreed that "further work as required to confirm the particular mechanics for the delivery of the identified benefits and a more detailed transition business case be carried out".
- 4.5 A joint high level proposal regarding joint waste management services was included in both Councils' Long Term Plans.
- 4.6 Officers of both Councils had been working together to clarify the benefits and develop the transition business case for a solid waste Council Controlled Trading Organisation, with the aim of reporting back late in the 2012 calendar year.
- 4.7 After receiving submissions on its Long Term Plan, Wellington City Council decided to stop work on the solid waste Council Controlled Trading Organisation investigation. A copy of the extract from Wellington City Council's resolution from the meeting of 27 June 2012 is attached at the end of this report (refer attachment section 11.3)

- 4.8 At the Committee meeting of 7 August 2012 the Committee resolved "That Wellington City Council be requested to report to the Joint Committee by 7 November 2012 on their 27 June 2012 decision to stop work on the proposed joint waste management Council Control Trading Organisation with Porirua City Council and to clarify a way forward to enable enhanced cooperation between the two Councils" (refer attachment section 11.2).

5 DISCUSSION AND OPTIONS CONSIDERED

- 5.1 An interim response has been received in the form of a letter from Wellington City Council to the chair and members of the Committee dated 26 October 2012 but received 5 November 2012. A copy is attached in section 11.1.
- 5.2 Note that the wording in the letter replaces the words "stop work" in the resolution quoted above in 4.8 with "suspend".
- 5.3 This is clarified further in the letter where the author notes that it was not Wellington City Councillor's intention to stop work indefinitely but to put it "on hold" pending the Council's decision to seek review of Council Controlled Organisation's as service delivery vehicles.
- 5.4 The letter further notes that Wellington City Council will consider this review on the 29 November 2012, and that this "will further inform our approach to specific options for shared waste services."

6 OPERATIONAL IMPLICATIONS

- 6.1 The Wellington City Council decision of 27 June 2012 stopped progress on the implementation of a joint Council Controlled Trading Organisation.
- 6.2 The 26 October 2012 letter from Wellington City Council suggests that rather than a permanent stop, the process is on hold, and further information as to the future direction may be available following Wellington City Council's meeting of 29 November 2012.

7 FINANCIAL IMPLICATIONS

- 7.1 There are no clearly identifiable financial implications at this stage.

8 STATUTORY REQUIREMENTS

- 8.1 The matters considered in this report do not trigger the Porirua City Council's Significance Policy.

9 CONSULTATION

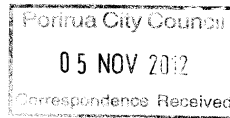
- 9.1 A high level proposal was included in both Councils' Long Term Plans and officers were progressing a joint Statement of Proposal; this proposal would have been a basis for further consultation if work had not been stopped.

10 CONCLUSION

- 10.1 At the Committee meeting of 7 August 2012, the Committee resolved that Wellington City Council be requested to report to the Joint Committee on their decision to stop work on the proposed Council Controlled Trading Organisation with Porirua City Council, and to clarify a way forward to enable enhanced cooperation between the two Councils.
- 10.2 An interim response has been received in the form of a letter from Wellington City Council to the chair and members of the Committee.
- 10.3 The letter notes that it was not Wellington City Councillors' intention to stop work indefinitely but to put it on hold pending the Council's decision to seek review of Council Controlled Organisation's as service delivery vehicles.
- 10.4 The letter further notes that Wellington City Council will consider this review on the 29 November 2012, and that this "will further inform our approach to specific options for shared waste services."
- 10.5 Hence further information as to the future direction may be available following Wellington City Council's meeting of 29 November 2012.

11 ATTACHMENTS:

- 11.1 Letter to the chair and members of the Joint Committee dated 26 October 2012



26 October 2012

Chair and members of the Wastewater Treatment Plant and Landfill Joint Committee
Porirua City Council
PO Box 50218
PORIRUA 5240

Dear Chair and members of the Wastewater Treatment Plant and Landfill Joint Committee

Re: Decision by WCC to suspend formation of a Joint Waste CCO

On 7 August 2012, this Committee requested that Wellington City Council (WCC) report back on:

1. The decision to suspend work on the proposal to form a Waste CCO with PCC; and
2. Options for moving forward and how to best enhance the cooperation between the two Councils.

Wellington City Council, upon concluding its 2012 -21 LTP considerations, turned its attention to a range of strategic issues influencing its 2040 strategy for the city. Amongst those issues is the method of delivering services to our community and the role elected members perform in defining, specifying and controlling the outputs of those services.

Within that context, elected members instructed the Council's CEO to undertake a review and report on the benefits/risks associated with the operation of various CCOs utilised by Council to deliver services.

On 27 June 2012, Wellington City Councillors voted to suspend work on the proposed joint waste management CCO with Porirua City Council¹. It was not Wellington City Councillors' intention to stop this work indefinitely but to put it "on-hold", pending the Council's earlier decision to seek to review and clarify the role of CCOs as service delivery vehicles.

¹ Wellington City Council Committee of 27 June 2012.

On 29 November 2012, Wellington City Council will consider the instructed review of the Council's CCOs. This will further inform our approach to specific options for shared waste services.

Regardless of this review WCC and PCC share ownership of some strategic assets and our focus will not deviate from the effective and transparent management of these assets and from exploring any possible ways to strengthen the joint venture relationship between our cities.

I trust that this will continue to be the focus of our future discussions.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Celia Wade-Brown', written in a cursive style.

Celia Wade-Brown
Mayor

11.2 Extract from Joint Committee Minutes from the meeting of 7 August 2012

WASTEWATER TREATMENT PLANT AND LANDFILL JOINT COMMITTEE

MEETING HELD 7 AUGUST 2012

27/12 JOINT WASTE MANAGEMENT INVESTIGATION – UPDATE AS OF JULY 2012

Report #789472 of the General Manager Asset Management and Operations dated 16 March 2012

Moved (Sheppard / Dow)

That the report be received

RESOLVED (Sheppard / Best)

That Wellington City Council be requested to report to the Joint Committee by 7 November 2012 on their 27 June 2012 decision to stop work on the proposed joint waste management Council Control Trading Organisation with Porirua City Council and to clarify a way forward to enable enhanced cooperation between the two Councils.

CARRIED

11.3 Extract from Wellington City Council Resolution from the meeting of 27 June 2012:

"RESOLVED:

THAT Council:

1. *Receive the information.*
2. *Note that the Strategy and Policy Committee considered the issues raised in written and oral submissions at its meeting of 12 June 2012.*
3. *Note that the 2012-22 Long-Term Plan (attached as appendix 1) has been prepared based on the decisions and recommendations of the Strategy and Policy Committee meeting of 12 June 2012 following the special consultative procedure, and note that all changes from the draft are highlighted with a minor correction as follows:*

Executive Summary – Priority 3 A well-managed city

It is noted that the Council voted to stop work on the proposed joint venture with Porirua City Council on a joint waste management Council Controlled Organisation until we have completed a review of our approach to Council Controlled Organisations on a joint waste management Council Controlled Organisation with Porirua City Council.

Activity Statement 2.2 Waste Reduction and Energy Conservation

Further work on joint waste management governance options is deferred until after a review of Council Controlled Organisations is completed later this year. It is noted that the Council voted to stop work on a joint waste management Council Controlled Organisation with Porirua City Council."

WASTEWATER TREATMENT PLANT PERFORMANCE

PURPOSE

The purpose of this report is to inform the Wastewater Treatment Plant and Landfill Joint Committee of the performance of the Porirua Wastewater Treatment Plant. This is in terms of Compliance with Resource Consent targets and the actions being taken to address any deficiencies.

SIGNIFICANCE OF DECISION

Council's significance policy is activated due to the extent that there has been a material change in the level of service in carrying out a significant activity in Council's Strategic Asset, the Wastewater Treatment Plant.

RECOMMENDATIONS

That the Wastewater Treatment Plant and Landfill Joint Committee recommend:

1. That the Council note the Wastewater Treatment Plant performance is now fully conforming with Resource Consent requirements. This is after a significant period in 2011/12 and part of 2012/13 when faecal coliform treatment limits were not met. There is a capital works programme in place at the Wastewater Treatment Plant to address past and current non-compliance with the resource consent condition for faecal coliforms.
2. Further risk against future poor effluent results should be mitigated by bringing forward renewal expenditure of \$270,000 from 2013/14 to the current financial year to upgrade one of the two existing clarifiers.

Report prepared by:

Chris Hopman
MANAGER WASTE AND WATER SERVICES

Approved for submission by:

Peter Bailey
GENERAL MANAGER ASSET MANAGEMENT AND OPERATIONS

1 EXECUTIVE SUMMARY

- 1.1 The 2011/12 Annual Report highlights that Council has significantly underperformed at the Wastewater Treatment Plant (WWTP) in terms of compliance with its resource consent conditions. Only 19% compliance was reported against a target of 100%. This is due mainly to high faecal coliform levels which have been at similar or slightly lower levels than previous years.
- 1.2 Public awareness of non-compliance is low. This non-compliance issue could be a risk to Porirua City Council's reputation if it was not understood that Council had developed a comprehensive capital programme to ensure compliance in 2013.
- 1.3 Full compliance for the Wastewater Treatment Plant was achieved on 6 November 2012 after 37 consecutive days when faecal coliforms were under resource consent condition limits. Measurements are based on a 90 day geomean result.
- 1.4 There is still some risk in maintaining resource consent compliance in the near future. This risk will be mitigated in May 2013 when the new high volume blowers are installed. Aging plant, in a corrosive marine environment, is also a risk requiring to be addressed by carrying forward some renewal works.

2 CONTRIBUTION TO COUNCIL'S STRATEGIES

Relationship to Council's Strategic Priorities

A City of Villages	A Healthy Harbour	A Growing City	A Great City Experience
	✓	✓	

- 2.1 Provide information on how this issue aligns or contributes to Council's current strategic focus areas in the Long Term Plan or other key strategies.

3 ASSOCIATED PORTFOLIOS

Relationship to Council's Portfolios of Responsibility

Sport, Leisure and Recreation	Community and Social Development	Infrastructure and Environment	Economy and Arts	Planning and Regulatory	Finance and Audit
		✓		✓	✓

Relationship to Project Portfolios

Emergency Management	Sister Cities	Village Planning	Harbour	City Centre	Community Empowerment
✓			✓		

4 BACKGROUND

- 4.1 The 2011/12 Annual Report highlights that Council has significantly underperformed at the Wastewater Treatment Plant (WWTP) in terms of compliance with its resource consent conditions. Only 19% compliance was reported against a target of 100%. This is due

mainly to high faecal coliform levels which have been at similar or slightly lower levels than previous years (19%-37%).

- 4.2 The Joint Venture has spent \$4.3m on improvements to the Wastewater Treatment Plant in 2011/12 to improve both effluent quality and capacity. Most of this cost has been for a new clarifier. This new clarifier has meant that more flow can be processed through the plant with reduced levels of suspended solids and biochemical oxygen demand (BOD).
- 4.3 This expenditure is continuing in 2012/13 with the purchase of new forced air blowers at a cost of \$1.5m which will result in significantly improved faecal coliform levels. Lower levels will enable the Joint Venture to meet the Wastewater Treatment Plant resource consent after the blowers have been commissioned.
- 4.4 The Council also has an ongoing extensive sewer renewal programme in place. \$1.6m has been budgeted in the 2012/13 financial year to reduce inflow and infiltration in wastewater pipelines in Porirua city.
- 4.5 Council staff use an independent monitoring company (ELS) to report all monitoring results to Greater Wellington Regional Council staff, Titahi Bay Residents Association and Porirua City Council staff. Greater Wellington Regional Council is aware of transgressions at the Wastewater Treatment Plant as well as Council's longer term capital projects which will improve results.
- 4.6 Public awareness of non-compliance is low. This non-compliance issue could be a risk to the Joint Venture's reputation if it was not understood that the Joint Venture had developed a comprehensive capital programme to ensure compliance in 2013.
- 4.7 The risk has lessened recently by reconditioning the existing forced air blowers giving operators enhanced air capacity. By approaching a vigilant treatment regime the operations staff have managed to ensure all resource consent conditions have been met. Over the last 36 days they have reduced the average faecal coliform level to 147 fc/100mls. This is well below the resource consent limit of 1000 and only just above the bathing water limit of 140.
- 4.8 The reconditioned forced air blowers are at their limits of effectiveness and dissolved oxygen levels can be extremely low during parts of the day. The new blowers may not be installed until May 2013 and as temperatures warm, faecal coliform levels rise. The results may still mean some non-compliance this financial year.
- 4.9 Non-compliance, as in previous years has been reported in the Annual Report.
- 4.10 One other risk area at the Wastewater Treatment Plant is the accelerating corrosion of some steel components. An example of this is the recent collapse of the centre ring of one of the original clarifiers. Temporary makeshift repairs have been completed and a full inspection of the clarifier is to be undertaken after the clarifier has been emptied. An initial review has indicated that remedial work is required either on a temporary or more permanent basis.

5 DISCUSSION AND OPTIONS CONSIDERED

5.1 There are two options available:

- Continue with the current capital upgrades at the Wastewater Treatment Plant.
- Accelerate upgrade work at the Wastewater Treatment Plant and bring future planned capital work forward to the 2012/13 financial year.

5.2 Continuing with the current capital upgrade works should mean that all resource conditions are met after the new blowers are installed in May 2013. There is some risk that with warmer summer temperatures dissolved oxygen levels in the effluent may drop and faecal coliform levels may rise outside resource consent levels. Should this occur it will be more difficult to retrieve the plant to within consentable limits once the new blowers are installed. This risk will be mitigated by the new blowers delivering 40% more oxygen into the effluent than with the existing blowers. From a results perspective the situation will not be very different from previous years results except that future compliance once the new blowers have been installed will be more certain.

5.3 Accelerating upgrade work by bringing capital works forward does little to alter the above scenario. The only risk lies within the existing plant and the fact that it is starting to show its age. An example is the collapse of the centre ring of one of the two original clarifiers. Temporary repairs have been made but these are makeshift. Ideally permanent repairs costing \$270,000 and budgeted for in 2013/14 could be brought forward. This would reduce any risk of clarifier failure and subsequent deterioration in effluent quality.

6 OPERATIONAL IMPLICATIONS

6.1 Poor compliance results in increased labour requirements, monitoring and adjusting the process, wasting additional sludge and increased cleaning of the ultraviolet sterilisation plant.

6.2 Accelerating the renewal expenditure on one of the original clarifiers reduces the risk of future deterioration of the Wastewater Treatment Plant effluent quality.

7 FINANCIAL IMPLICATIONS

7.1 Poor compliance results in increased operational costs for labour, sludge disposal and uv cleaning.

7.2 There is a risk of extra costs should Greater Wellington Regional Council prosecute for non-compliance with the resource consents.

7.3 There would be cash flow implications to Council by bringing renewal expenditure of \$270,000 forward by approximately six months from 2013/14 to the current financial year.

8 STATUTORY REQUIREMENTS

- 8.1 Statutory requirements include Annual Plan reporting, complying with resource consent conditions or consulting Greater Wellington Regional Council when consent conditions aren't being met, and how any non-compliance is being resolved or mitigated.

9 CONSULTATION

- 9.1 Greater Wellington Regional Council, Titahi Bay Residents Association and Porirua City Council receive reports from ELS detailing the results of monitoring. Annual reports are distributed and regular meetings are held with Greater Wellington Regional Council to ensure people are informed of the current plant performance and measures being implemented to improve compliance.

10 CONCLUSION

- 10.1 Compliance with resource consent conditions is low and has been for a number of years. This has been rectified in the short term by reconditioning the existing blowers. A longer term solution will be the installation of new air blowers scheduled for May 2013. Further risk reduction to address poor effluent quality results can be addressed by bringing forward 2013/14 planned renewal expenditure into the current financial year.