

**IN THE MATTER** of the Resource Management Act  
1991

**AND**

**IN THE MATTER OF** a review of resource consent  
conditions under 128 of the  
Resource Management Act 1991

**BY** **MANAWATU-WANGANUI  
REGIONAL COUNCIL**

**AND** an application for change of consent  
conditions under section 127 of the  
Resource Management Act 1991

**BY** **HOROWHENUA DISTRICT  
COUNCIL**

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**STATEMENT OF EVIDENCE OF GALLO SAIDY  
ON BEHALF OF HOROWHENUA DISTRICT COUNCIL**

2 September 2016

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## INTRODUCTION

1. My name is **Gallo Saidy**.
2. I hold the position of Group Manager – Infrastructure Services at Horowhenua District Council ("**HDC**"). My role covers asset management, service delivery and strategic development in relation to Water, Wastewater, Stormwater, Property, Parks & Recreation, Roads, and Municipal Solid Waste. I am authorised to present this evidence on behalf of HDC.
3. My evidence is given in relation to the review of resource consent conditions initiated by Horizons Regional Council ("**Horizons**") and the application for change of consent conditions by Horowhenua District Council ("**HDC**") in relation to the Levin Landfill located at 665 Hokio Beach Road (the "**Landfill**").

## EXECUTIVE SUMMARY

4. The Landfill was first opened in the 1950s and has been utilised since. The present consents relate to both the old unlined landfill, which is now closed, and the current lined landfill. It is the only Landfill in the Horowhenua District and it also receives waste from the Kapiti Coast District, which does not have a landfill.
5. The Landfill is one of Horowhenua District's largest assets, with a replacement cost at \$6,830,000. Closing the Landfill before it is utilised to capacity would create a significant financial burden for HDC:
  - (a) if the Landfill was closed in mid-2015, its net present value would have been negative \$10,281,015; and
  - (b) if the Landfill was to be closed after Stage 3 is full, its net present value would be between negative \$4.2m and negative \$5.2m.
6. At a disposal rate of 30,000 tonnes per annum the net present value of the Landfill is \$735,394. Once income, operational costs, and development costs are taken out, the Landfill would generate net income of between \$268,968 and \$482,640 per year over the years 2014/2015 to 2023/2024.
7. HDC does not oppose the continued operation of the Neighbourhood Liaison Group ("**NLG**"). Rather it seeks that the role of the NLG be clearly defined and that it is enabled to operate in an efficient and effective manner.
8. HDC has significant concerns with the existing condition 2 and proposed condition 2A. It was known at the time the consents were granted that leachate was present in groundwater beyond the Landfill site. I am unaware of any options available to HDC that would achieve the complete avoidance of contamination escaping to neighbouring properties or to the Tatana Drain as required by these conditions (even if third party landowner approval and resource consents to allow works could be obtained).
9. HDC has, however, commenced consideration of various mitigation options which range in cost from \$86,000 - \$347,000 for establishment and annual costs of \$19,000 – 56,000. HDC's expert advice is that at present it is unknown if any of these options will work and also whether they will

cause other adverse environmental effects. I support the proposed extra monitoring recommended by Dr Ausseil and Mr Douglass and a condition on reporting as discussed by Mr Edwards.

10. HDC has also commenced significant work to better identify the sources of, and try to reduce, potential odour effects from the Landfill in line with the 2015 recommendations from Dr Boddy. The costs involved are considerable; \$120,000 spent on investigations and \$170,000 on mitigation measures to date with a significant tender process of approximately \$500,000 underway for the flare. These sums of money are significant to a small council and HDC's resources to complete these recommendations (in addition to this review process) are at capacity. HDC must be prudent in ensuring that it implements cost efficient and environmentally effective options. HDC is committed to working towards implementing the recommendations proposed by Dr Boddy.

#### **QUALIFICATIONS AND EXPERIENCE**

11. I have the following qualifications and experience:
  - (a) Master of Science in Sanitary Engineering (MSc) from UNESCO-IHE Institute for Water Education, Delft, Netherlands;
  - (b) 1st Class Honours Degree in Civil Engineering (BSc. Honours Degree) from Leeds Metropolitan University; and
  - (c) I am a current Chartered Civil Engineer (CPEng).
12. I am a member of a number of relevant associations including:
  - (a) Institute of Professional Engineers MIPENZ;
  - (b) Water New Zealand; and
  - (c) Institute of Public Works Engineering Australasia New Zealand.

#### **BACKGROUND AND ROLE**

13. Since appointment as Group Manager of Infrastructure at HDC in April 2014 my role in relation to the Landfill has been overall strategic management of the Landfill. I have been to the site numerous times over the last few years, attended NLG meetings and more recently the Whakawatea Forum meetings.

#### **SCOPE OF EVIDENCE**

14. My evidence addresses the following matters:
  - (a) background to the operation of the Landfill;
  - (b) the NLG and Whakawatea Forum;
  - (c) Tatana Drain and leachate conditions;
  - (d) odour effects; and
  - (e) response to the Horizons report.

## BACKGROUND TO THE OPERATION OF THE LEVIN LANDFILL

15. In this section I:
- (a) provide a brief general overview of the Landfill, including its history, operation and applicable resource consents;
  - (b) address the costs and revenues associated with operating the Landfill, including the costs of complying with the current conditions of consent; and
  - (c) outline HDC's investigations and current thinking in respect of alternative ways of dealing with the Horowhenua District's solid waste in future.

### *The Landfill and its history*

16. The Landfill is located on Hokio Beach Road, on undulating, sandy land of some 72 hectares surrounded by pastoral farmland, 4 kilometres west of Levin and 3 kilometres east of the coast. Hokio Stream – which flows from Lake Horowhenua to the sea – passes close by the northern boundary of the Landfill. Figure 1 and Appendix 2 to the evidence of Mr Bashford on behalf of Horizons provides general location maps.
17. I understand the first rubbish dump in this vicinity (adjacent to the current site) was opened in the 1950s. A second rubbish dump was opened in the 1970s.
18. These developments of course predated the introduction of the Resource Management Act 1991 and the type of environmental controls now commonly imposed through resource consents. The Parliamentary Commissioner for the Environment report entitled "Levin landfill: Environmental management review" dated August 2008 ("**PCE Report**") stated that:
- "Before 1992, most New Zealand landfills were no more than local dumps that were often poorly sited, designed and managed. It is estimated that there were more than 1,000 such landfills. With the introduction of the RMA, more stringent requirements began to be introduced. As a result, many small dumps were closed; nationally, the number of dumps decreased from 327 in 1995 to 115 in 2002."*
19. The PCE Report referenced the Tonkin and Taylor report it commissioned, summarising Tonkin and Taylor's findings as:
- "Tonkin and Taylor find that the old landfill is not atypical of older landfills in New Zealand, and was "developed and operated to what were, by and large, the standards of the day"."*
20. In 1994, HDC lodged resource consent applications to:
- (a) enable the closure and ongoing discharges from the old landfill; and
  - (b) replace the old landfill with a new landfill (ie, the current lined Landfill).
21. The applications appear to have been highly challenging and controversial, including with tangata whenua. It was not until 2002 that resource consents approving the construction of the Landfill were granted via an Environment Court consent order (following appeals against Horizons'

decision to grant four of the five consents applied for by HDC). The (current) Landfill was opened in 2004, and the old landfill was closed and subsequently capped.

22. The resource consents granted for both the old and modern landfills via the 2002 consent order remain in place, and it is the conditions of those resource consents that are the subject of this review. Among other things, the conditions placed on the resource consents in 2002 provided for the establishment of the NLG. I discuss the operation of the NLG later in my evidence.
23. This is not the first time the conditions have been subject to review. Following the release of the PCE Report in 2008, Horizons initiated the first review of the conditions of consent (as recommended by the PCE Report). All parties (HDC, Horizons and submitters) agreed on a set of revised set of conditions, formalised via a decision report released by Horizons on May 2010. The conditions of consent have not been changed since that 2010 review.
24. Following the grant of resource consents in 2002, the Landfill has been constructed in stages.

#### *The operation of the Landfill*

25. The operation of the Landfill is addressed in detail in Mr Landmark's evidence. The national trend in the 1990s of reducing the number of operational landfills was followed in Horowhenua: the Foxton, Foxton Beach, Tokomaru and Shannon landfills were all closed by 1996. The Landfill is the only landfill in the Horowhenua District.
26. The Landfill is not open to the public. In addition to kerbside collection services, there are five HDC owned and operated recycling stations throughout the Horowhenua District, and two HDC owned and operated waste transfer stations, in Foxton and Shannon. There is also a privately owned and operated waste transfer station in Levin. Waste received at the Landfill is all transported by truck.
27. The Landfill is operated by MidWest Disposals Limited ("**MidWest**") under contract to HDC, as explained in Mr Landmark's evidence.
28. The amount of waste disposed of at the Landfill varies from year to year as explained in Mr Landmark's evidence, but has been steadily increasing, and since 2010/2011 has been over 30,000 tonnes per year.
29. In addition to waste from the Horowhenua District, the Landfill also receives waste from the Kapiti Coast District, which does not have a landfill. While providing income for HDC, this also reduces the transport costs and effects (including carbon emissions) from longer transport of Kapiti Coast District waste north to Bonny Glenn.
30. The resource consents that allow for the operation of the Landfill expire in 2037. It is likely that the Landfill will reach capacity several years ahead of that time. In 2013 and 2015 MWH prepared reports for the HDC modelling possible future cost and income flows in respect of the Landfill ("**MWH Modelling Reports**"). The MWH Modelling Reports set out that:
  - (a) if 30,000 tons of waste per year are disposed at the Landfill, the Landfill will reach capacity in 2031/2032; and
  - (b) if 40,000 tons of waste per year are disposed at the Landfill, the Landfill will reach capacity in 2027/2028.

*Landfill infrastructure, costs and income*

31. The Landfill is a significant asset for the HDC. Landfill valuation in 2014 put the replacement cost at \$6,830,000 with an outstanding debt of \$4,747,000.
32. There are various costs associated with the Landfill. These include:
  - (a) operational costs:
    - (i) environmental monitoring costs, including costs associated with the adjacent closed areas;
    - (ii) remediation of the Landfill borrow area;
    - (iii) pumping of leachate (and trade waste charges that must be paid to dispose of that leachate off site, at the Levin wastewater treatment plant);
    - (iv) fees and administration costs for the disposal of that portion of Landfill waste which is "Council controlled" (ie, not brought to the Landfill by MidWest);
    - (v) pump maintenance fees;
    - (vi) building and land maintenance;
    - (vii) professional advisory fees; and
  - (b) development costs, associated with the construction of the further (consented) "stages" of the Landfill.
33. The Landfill also generates income, through fees charged for the disposal of waste. The majority of the waste from the Horowhenua District, and all of the waste from Kapiti Coast District, disposed of at the Landfill is brought to the Landfill by MidWest. Under its contract with HDC, MidWest pays HDC a fee for each tonne of waste it disposes (whether the source is the Horowhenua District or Kapiti Coast District) at the Landfill.
34. The balance of costs and income associated with the Landfill varies depending on the amount of waste received. The MWH Modelling Reports identify the "net present value" of the Landfill to HDC, under different scenarios, including:
  - (a) utilising the Landfill to its capacity: disposing of various amounts of waste (from 12,000 to 40,000 tonnes per year) until all stages are full;
  - (b) utilising the Landfill only until Stage 3 is full: disposing of various amounts of waste until that time; and
  - (c) closing the landfill in June 2015;
35. Modelling of the various scenarios made it clear that closing the Landfill before it is utilised to capacity would create a significant financial burden for HDC:
  - (a) if the Landfill was closed in mid-2015, its net present value would have been negative \$10,281,015;

- (b) if the Landfill was to be closed after Stage 3 is full, its net present value would be between negative \$4.2m and negative \$5.2m.
36. The reasons for this are that:
- (a) closing the Landfill early would curtail the income received by HDC;
  - (b) some of the costs associated with the Landfill would be ongoing, anyway, including environmental monitoring and aftercare remediation costs;
  - (c) HDC would then need to pay to transport and dispose of waste generated in the Horowhenua District elsewhere – the most obvious option being at Bonny Glen Landfill near Marton (a return trip of over 150km).
37. All modelled scenarios under which the Landfill is utilised to capacity give a more beneficial financial picture. In particular, the modelling showed that if the Landfill receives at least 27,500 tonnes of waste per year, it will have a positive net present value.
38. The most beneficial modelled scenario provided for the disposal of 30,000 tonnes per year at the Landfill. This would require the continued disposal of waste from the Kapiti Coast District at the Landfill. Disposal of 30,000 tonnes per annum would provide a net present value of \$735,394. Once income, operational costs, and development costs were taken out, the Landfill would generate net income of between \$268,968 and \$482,640 per year over the years 2014/2015 to 2023/2024.
39. On the other hand, if the Landfill was to only receive waste from the Horowhenua District, the Landfill would have a negative net present value, and would lose money each year. The MWH study concluded that if 12,000 tonnes of waste were disposed at the Landfill each year (an amount estimated as the level of waste sent to the Landfill solely from the Horowhenua District each year), the net present value of the Landfill would be negative \$4,148,103. This is still financially more beneficial than closing the Landfill early.
40. Closing the Landfill – either immediately, or at some other point before it reaches its consented capacity – would have a significantly adverse financial impact for HDC, and ultimately Horowhenua District ratepayers.
41. It is important that the financial burden of closing the Landfill before it is fully utilised is seen in the context of local economic conditions. Information from the 2013 Census shows that in Levin less than 50% of adults were employed full time or part time. Overall, Census data shows Horowhenua District to have an average household income below the national average, with low incomes concentrated in the main urban areas like Levin, Shannon and Foxton.
42. As the community of ratepayers contributing to the cost of landfill improvements is generally low-income, the costs involved in closing the Landfill early would be particularly burdensome on the community economic well-being of Levin and other urban areas in the Horowhenua District. On the other hand, the current operation of the Landfill provides a net financial benefit for HDC and its ratepayers, which contributes to the economic well-being of the Horowhenua District.



43. HDC has no plans to change the current landfill mode of service delivery to the Horowhenua District.

## **NEIGHBOURHOOD LIAISON GROUP**

### *Original consent conditions*

44. As discussed above, the HDC lodged an application for resource consents for a new landfill site (adjacent to the old one) and for continuing discharges from the old landfill in September 1994. Following consultation with members of the public including tangata whenua, several major changes were made to the consent application and the revised application was lodged with HRC in October 1995. Horizons granted all but one of the resource consents in 1998. However, appeals on all consents were lodged with the Environment Court. Following a lengthy mediation process, the resource consents were approved in 2002 via an Environment Court consent order.
45. One of the changes to the consents that resulted from the consent order was the insertion of conditions 32, 33, and 34 of discharge permit 6009 requiring the formation of the NLG. The NLG was to include representatives of the Lake Horowhenua Trustees, the owners and occupiers of specified properties adjoining the Landfill, a representative from each of the HDC and HRC and other parties invited by the HDC (NLG members could provide potential names). The conditions provided, amongst other things, that the NLG:
- (a) receive a copy of the annual report;
  - (b) be allowed to inspect operations on the site;
  - (c) be consulted as a group prior to any review of the consent conditions;
  - (d) be provided with a copy of all monitoring reports and non-commercially sensitive documentation pertaining to the operation of the landfill;
  - (e) be kept informed about whether progress is being made towards a regional landfill; and
  - (f) receive formal acknowledgement and consideration of members' written suggestions.

### *The PCE Report*

46. In the 2008 PCE Report the PCE noted that the HDC had been in non-compliance with conditions 33-34 having failed to convene an NLG meeting since January 2005, or to provide annual reports.
47. The PCE Report recommended that:
- (a) HDC develop and maintain clear responsibilities for providing information and invitations to the NLG;
  - (b) the NLG be informed before any consent conditions were reviewed.
48. The PCE Report considered that it was important, given the level of public concern (particularly among tangata whenua) regarding the Landfill, that effective neighbourhood liaison was maintained. The PCE Report recommend that because of the importance of the issues of water

quality and waahi tapu to the Ngati Raukawa and Muaupoko, that representatives from each iwi be given an opportunity to be included in the NLG.

49. The PCE Report emphasised that:

*"At the same time, it is important that such a forum is not perceived, by HDC or the NLG, as a means for the community to interfere with site operations undertaken in accordance with the conditions of the consents, nor as a medium for enforcing consent conditions. Similarly, the NLG cannot require [HDC] to comply with recommendations arising from the meetings. Rather, the purpose of such a group is to ensure that the consent holder provides the opportunity for site neighbours and interested groups to meet with them and discuss issues related to the site as they affect the local community. Such liaison is only likely to be effective, however, if supported by the consent holder – in this case HDC."*

#### 2010 review

50. One of the recommendations in the PCE Report was for Horizons to undertake a review of the Landfill consent conditions as a priority.

51. The 2010 review decision, which reflected an agreement among the parties, amended several conditions including conditions 32-34 so that:

- (a) the original discretion of Horizons to initiate a review of consent conditions was replaced with a review being required unless the NLG agreed that a review was unnecessary;
- (b) other parties could be invited to join the NLG by the NLG itself, rather than HDC; and
- (c) the NLG gained the right to be consulted prior to any request for changes to conditions under section 127 of the RMA.

52. The 2010 review decision stated that:<sup>1</sup>

*"The importance of the NLG cannot be underestimated. It will be the conduit for all parties to keep abreast of any developments at the landfill into the future. The NLG will enable the relationship between the Horowhenua District Council and members of the Group to go forward from the springboard of the pre hearing meetings into the future."*

#### Relationships within the NLG since 2010

53. It is my understanding that despite occasional issues (as would be expected), the NLG generally operated well following the 2010 review. However, in recent years (and certainly during the period I have been employed by HDC) operation of the NLG began to deteriorate largely due to:

- (a) the number of people involved in the NLG (currently approximately twenty-six members, some of whom have multiple representatives); and
- (b) preparations and reports related to the impending 2015 review of consent conditions, and parties starting to position themselves for this review.

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<sup>1</sup> At paragraph 20.

54. My experience of the NLG is that it has fallen into the exact problem identified in the PCE Report. It seems that the members of the NLG consider it to be a means for the community to interfere with the operation of the Landfill, and even to try and influence the ongoing future of the Landfill. This has led to progressively confrontational discussions on matters far beyond the ambit of the NLG. The NLG has used the changes initiated through the 2010 review process to try and force particular operational outcomes on HDC.
55. Due to the number of participants at any meeting, it has been impossible to productively discuss and address matters, leading to the frustrations that all parties are encountering. The NLG meeting was being used as a forum to discuss matters that are outside the operations and management of the Landfill, such as leachate treatment at the Levin Wastewater Treatment Plant and the contamination of the Levin Wastewater Discharge site ('the Pot') due to leachate.
56. Particular issues that have arisen through the NLG meetings are related to:
- (a) the ability of the NLG to decide whether or not there is a review of the consent conditions; and
  - (b) the current provision enabling NLG members to raise "any matter" the "NLG member believes the Permit Holder should address in order to meet the conditions of the consent(s)" has led to argument on matters that have not assisted in improving operations at the Landfill nor relationships among the parties.
57. It is this breakdown in function that led the HDC to seek the amendment of the NLG conditions to try and align it to the situation originally provided for and commented on in the PCE Report. My experience is that in order for the NLG to operate effectively:
- (a) the management and members of the NLG must be clear and contained;
  - (b) the NLG must have a clear purpose – to review and comment only; and
  - (c) Horizons only, not the NLG, should be able to decide if a review is required, in line with Horizons' statutory functions as consent authority.
58. I realise that these proposed changes to the NLG conditions have caused considerable discussion and concern. However, the HDC is not proposing to stop the NLG process. HDC seeks to reset the NLG, to be more in line with how it was originally constituted, and make it more efficient and effective. My experience is that the Whakawatea Forum, discussed below, is an example of the more constructive dialogue that occurs when there are a manageable number of people involved with a clear set of issues to be addressed. I also consider the use of a facilitator has greatly assisted the Whakawatea Forum.
59. To this end I largely support the changes proposed by Mr Bashford in his evidence. In particular, I agree with Mr Bashford that Horizons, rather than the NLG, should determine whether to initiate a review of consent conditions. I also welcome Mr Bashford's suggestions as to how a clearer purpose for the NLG could be provided.

60. However, HDC does propose some amendments to what Mr Bashford has proposed, (as discussed in the evidence of Mr Edwards), to reflect the problems I have experienced during the NLG meetings. For example:
- (a) I consider that experts can assist the NLG in achieving the resolution of issues. However, requiring approval of NLG members before these technical advisors can attend NLG meetings is not necessary or helpful, and will simply result in unnecessary argument.
  - (b) NLG representation must be kept small to enable efficient and effective operation of the group (as demonstrated by the Whakawatea Forum experience).
  - (c) It is important that HDC staff and contractors can attend NLG meetings to hear concerns directly, so that they can be efficiently addressed.
  - (d) My experience is that an annual meeting of the NLG is appropriate. Stating that meetings can or should occur at other times if "80% of the people attending the meeting agree" is unclear and simply invites more argument.
  - (e) The purpose of the NLG must be objectively clear, and focused on reviewing and commenting on environmental monitoring results in relation to the environmental mitigation at the Landfill in accordance with the conditions of consent. Wording broadening that scope to "matters of concern", and reference to what "NLG members believe" simply create uncertainty and conflict around the role of the NLG.

*The Whakawatea Forum*

61. At the pre-hearing meeting on 6 April 2016, it was agreed that a forum should be established for the purpose of providing an opportunity for fresh discussion of long standing issues associated with the Landfill. In order to enhance the discussions HDC agreed that the Whakawatea Forum could consider issues outside of the scope of the review relevant for the present hearing. Therefore, there are issues raised and discussed through the Whakawatea Forum that are irrelevant to this review.
62. It was agreed that the Whakawatea Forum was to be established by the community representatives on the NLG. The forum was overseen by an independent facilitator (Ms Christine Foster) to assist with the work and meetings of the Whakawatea Forum. Ms Foster has provided a summary of the Whakawatea Forum process in her memo dated 11 August 2016.
63. In June, community representatives of the Whakawatea Forum wrote to HDC:
- (a) suggesting a preliminary meeting to confirm the membership and other details of the Whakawatea Forum; and
  - (b) requesting funding from HDC.
64. HDC agreed to provide funding for an independent facilitator for the work and meetings of the Whakawatea Forum (Ms Foster), and separate funding (of \$20,000) to support the Whakawatea Forum. In particular, HDC agreed to fund the time and work of technical experts engaged by community members of the NLG as part of the Whakawatea Forum process.

65. At the initial meeting on 11 July 2016 it was agreed that the membership of the Whakawatea Forum would be made up of:
- (a) five community representatives selected from the wider NLG members, who report back to the wider NLG (my experience is that this has worked effectively);
  - (b) three HDC staff (myself, Warwick Meyer, and Paul Gaydon);
  - (c) a member of the Horizons consents and compliance team; and
  - (d) the independent facilitator (Ms Foster).
66. Since the establishment of the Whakawatea Forum it has had three meetings on 19<sup>th</sup>, 26<sup>th</sup> July, 2<sup>nd</sup> and 15<sup>th</sup> August at Ngatokowaru Marae. Discussion at those meetings has been constructive and has resulted in the following agreements:
- (a) the topics of concern to submitters are odour and water quality;
  - (b) independent technical experts advising the NLG, HDC and Horizons to conference be held prior to the upcoming hearing;
  - (c) independent technical experts are to answer questions produced by the Whakawatea Forum at the 26th July 2016 meeting;
  - (d) NLG members and HDC will accept and abide by any agreed conclusions or outcomes reached by those technical experts;
  - (e) HDC will invite the NLG to a site visit of the wastewater treatment plant and the 'Pot' irrigation area (discussed below);
  - (f) HDC and NLG agreed that the NLG should be retained and that the NLG should have a clear purpose, terms of reference and membership (HDC is yet to receive the NLG's proposed terms of reference);
  - (g) Horizons to make available to submitters all monitoring data and compliance records and to host a meeting with the NLG to discuss how the landfill is compliant with the consent conditions; and
  - (h) an examination of the conditions subject to the review should be conducted after the independent technical experts' caucusing (this examination was initiated but could not be concluded due to time restraints).
67. The community members of the NLG agreed to frame questions for the relevant technical experts (those advising HDC, Horizons, and the community members of the NLG). Those questions which, as set out above, were broader than the scope of this review, were provided at the 26 July meeting, and were considered by the experts at caucusing in advance of the hearing.
68. HDC staff also took community members of the NLG on a site visit to the Levin wastewater treatment plant and the 'Pot' irrigation area to demonstrate how Landfill leachate is collected, piped and treated. I understand that the community members were concerned about this process, and I was happy to provide them with more information on the site visit.

69. HDC also agreed to provide (and has provided) the community members with the monitoring data and records from Landfill monitoring, and to meet to discuss current compliance with resource consent conditions.
70. HDC's support of the Whakawatea Forum demonstrates its willingness to engage with the community in an open and transparent manner. My intention in encouraging the facilitation of the Whakawatea forum was to try and re-establish a positive and conciliatory working environment which would allow for robust discussion of issues.
71. As stated above, my experience is that the Whakawatea Forum has been a success in re-establishing dialogue with the community. It reinforces my view that the NLG conditions need to be amended to enable a positive and effective relationship to be built.

### **TATANA DRAIN AND LEACHATE CONDITIONS**

72. In this section of my evidence I set out the HDC's position (and my view) in respect of the changes to the conditions proposed by both Horizons and HDC that relate to the operation of Tatana Drain, and the control of leachate effects generally.

#### *Conditions 2 and 2A – DP 6010*

73. Horizons proposes to add Condition 2A to this consent, as follows:

*2A Within six months of the commencement date of the decision of the 2015 review of conditions, the consent holder shall cease the discharge of landfill leachate to the Tatana Drain.*

74. HDC does not accept the addition of proposed Condition 2A, and also seeks to delete Condition 2 in its entirety, as follows:

~~*Landfill leachate shall not contaminate adjoining land*~~

75. HDC has the following concerns with condition 2 and proposed condition 2A:
- (a) they fail to reflect the history of the application for, submissions on and grant of the consent and its conditions (as set out in the evidence of Mr Landmark);
  - (b) it was known and agreed at the time of the grant of consent (and during the 2010 Review), that leachate was present beyond the Landfill site;
  - (c) the conditions do not reflect the actual level of effects being caused by the leachate - the evidence of Mr Brown and Dr Ausseil is that there is presently no discernible difference within the Hokio Stream;
  - (d) HDC is not able to avoid these effects as required by proposed condition 2A and proposed condition 2 as interpreted by Mr Standen; and
  - (e) the potential costs of mitigating such effects is high and not in proportion to the level of effect.
76. I am unaware of any actions HDC could take to avoid absolutely any contaminants from the old unlined landfill escaping to neighbouring land. For that reason, I favour Mr Landmark's

interpretation that condition 2 in fact relates to overland flow of issue to Mr Jones at the time of the 1995 consent, and is not intended to require complete avoidance of all contamination escaping to neighbouring land. It is clear that, from the date of the 1995 consent application onwards, leachate has been in the groundwater beyond the Landfill site. On that basis there is no reason why the decision-makers would have granted consent but imposed a condition that was unachievable. The water quality experts in their conferencing statement agreed that total capture of leachate is not possible.<sup>2</sup>

77. In terms of condition 2A, I am unaware of any actions HDC could undertake, apart from infilling Tatana Drain so it does not exist (which in itself may require consent and would require landowner approval as HDC does not own the land on which the drain is situated) to "*cease the discharge of landfill leachate to the Tatana Drain*". This position is consistent with the agreed expert position that total capture of leachate is not possible.
78. The Tatana Drain was intended, as required by original consent condition 3 (which was later removed), to capture leachate. It makes no sense to now add a condition of consent that not only cannot be achieved but would prevent Tatana Drain from being used for the intended purpose.
79. HDC is not opposed to properly investigating potential options to mitigate leachate effects subject to:
  - (a) the degree of effect incurred;
  - (b) the effectiveness of the proposed mitigation; and
  - (c) the cost of the proposed mitigation.
80. Potential mitigation options HDC has considered during the review process (and most recently explored at a high level with Dr Ausseil and Mr Douglass) include:
  - (a) Filling in Tatana Drain (a suboption is to also install a sump in the position of the drain to capture some groundwater) – however this would require landowner approval. This option has not been costed.
  - (b) Fencing off and planting the existing Tatana Drain to try and improve water quality (assuming landowners consent is provided). The approximate cost of this option (excluding potential landowner compensation costs) is \$115,000 with annual maintenance costs of \$19,000. The water quality experts in their conferencing statement agreed that there is very little treatment benefit with such an option unless it captures all flows and has a long residence time.<sup>3</sup>
  - (c) Inserting a shallow cut-off drain on the landfill site up-gradient of the Tatana Drain and planting that out. The approximate cost of this option is \$86,000 with annual maintenance costs of \$19,000. The water quality experts in their conferencing statement agreed that there is very little treatment benefit with such an option unless it captures all flows and has a long residence time.<sup>4</sup>

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<sup>2</sup> Question 19.

<sup>3</sup> In response to Question 22.

<sup>4</sup> In response to Question 22.

- (d) As for option C but including passive filtering media options. The approximate cost of this option is \$180,000 with annual maintenance costs of \$26,000.
  - (e) As for option C but with a collection sump installed and serviced by a sucker truck. The approximate cost of this option is \$235,000 with annual maintenance costs of \$58,000.
  - (f) As for option E but using a pump to the leachate pond or land irrigation. The approximate cost of this option is \$280,000 with annual maintenance costs of \$26,000.
  - (g) As for option F but using a deep subsoil cut off drain. The approximate cost of this option is \$347,000 with annual maintenance costs of \$26,000.
81. It is important to understand that none of these options would completely avoid leachate / contamination escape to neighbouring land / the Tatana Drain. Again, the agreed expert position that total capture of leachate is not possible. Furthermore, implementation of any one of these options may require additional resource consents to be applied for, with no guarantee that consent would be granted. Finally, all of these options involve significant cost, but there is presently insufficient information to determine how effective any of them would be.
82. While other potential options - such as trying to neutralise the contaminants in groundwater with other chemicals - may be theoretically feasible, those type of options are likely to create a whole series of new issues (which have not been considered by Horizons or HDC) and may simply result in different contaminants in the groundwater. Again, they would not result in the complete avoidance of contamination to neighbouring land or the Tatana Drain.
83. I have read the evidence of Dr Ausseil, who agrees with Mr Brown that with presently available data there are no discernible effects of Landfill leachate in the Hokio Stream. I have also read the evidence of Mr Douglass, who states that there is insufficient information to ensure that any groundwater cut off option will be successful and provide a sustainable long-term outcome.
84. I am particularly mindful that the Tatana Drain was intended to resolve (and did so) one issue (ponding of leachate from overland flow). However, some 20 years later, Horizons is now claiming that the Tatana Drain is itself causing a series of new issues. Any options must therefore be fully considered.
85. The potential options for attempting to comply (none of them can comply) with proposed Condition 2A (and a strict interpretation of Condition 2) are all expensive and, based on the evidence of Dr Ausseil and Mr Douglass, would in fact:
- (a) address effects on Hokio Stream that are presently indiscernible; and
  - (b) might well be ineffective.
86. I support the proposals by Dr Ausseil and Mr Douglass for more detailed monitoring of the effects of Landfill leachate on the Hokio Stream, and Mr Edwards' proposal that a condition be added requiring monitoring to be undertaken, and HDC to subsequently prepare a report on the monitoring and potential cost effective options mitigation options. Such a condition would allow a considered, effective mitigation option to be implemented if it is shown to be necessary.



## **ODOUR EFFECTS**

87. Odour effects have been a significant issue during NLG meetings, the pre-hearing conference and the Whakawatea Forum meetings, in particular in relation to the Grange property.
88. Through the NLG process HDC engaged Dr Boddy to undertake a number of reports, at a cost of in excess of \$120,000.
89. The evidence of Dr Boddy, based on his detailed investigations and modelling, is that there is the potential for odour nuisance effects to have occurred beyond the boundary of the Landfill. Dr Boddy recommends the following mitigation and management measures:
- (a) Implementation of an Odour Management Plan. HDC is exploring this, with the intention that it form part of the LMP.
  - (b) Controlling odour at the working face. HDC has initiated cover processes in line with recommendations.
  - (c) Controlling of odour at the intermediate cover areas. Clay capping has commenced at a cost of \$70,000 to date.
  - (d) Expanding the existing GCS and where possible and practicable treat the LFG by combustion in a new flare onsite. As explained in Mr Landmark's evidence the tenders came back higher than anticipated (approximately \$500,000). Further negotiations are presently underway.
  - (e) Controlling odour at the leachate pond. The leachate pond was de-sludged last year at a cost of approximately \$40,000 and a weather station was installed for monitoring.
  - (f) Extracting odorous gases from the leachate collection manhole. HDC is currently constructing a biofilter to mitigate odours from this source. It is expected that this will be operational by the end of November 2016, at a cost of approximately \$50,000.
90. In his evidence Dr Boddy states that HDC has had reasonable time to implement these mitigation measures.
91. Dr Boddy's first report was received in February 2015 and his second in October 2015. At the same time Horizons commenced this review process. I have explained above the progress in respect of each step proposed by Dr Boddy, and the reasons for any delays. The costs involved are considerable (\$120,000 spent on investigations and \$170,000 on mitigation measures to date, with a significant tender process underway for the flare).
92. These sums of money are significant for a small council such as HDC. The resources involved to complete these recommendations (in addition to the review process) are also significant. HDC must be prudent in ensuring that it implements cost efficient and environmentally effective options. HDC is committed to working towards implementing the recommendations proposed by Dr Boddy.

**Gallo Saidy**

**2 September 2016**