

**Before a Board of Inquiry
Northern Corridor Improvements Project**

Under the Resource Management Act 1991 ('the Act')

In the matter of a Board of Inquiry appointed under section 149J of the Act to consider notices of requirement for designations and resource consent applications by the New Zealand Transport Agency for the Northern Corridor Improvements Project

Rebuttal evidence of Arthur Robert Amputch for the New Zealand Transport Agency (Landfill)

Dated 15 June 2017

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STATEMENT OF REBUTTAL EVIDENCE OF ARTHUR AMPUTCH FOR THE NEW ZEALAND TRANSPORT AGENCY

1 Qualifications and experience

- 1.1 My full name is Arthur Robert Amputch.
- 1.2 I am a Technical Director – Civil and Environmental at Riley Consultants Ltd.
- 1.3 My qualifications and experience are set out in my Evidence in Chief ('**EIC**') dated 20 April 2017.
- 1.4 I repeat the confirmation that I provided in the EIC that I have read, and agree to comply with the Code of Conduct for Expert Witnesses 2014.
- 1.5 My rebuttal evidence relates to the resource consent applications and notices of requirement lodged by the New Zealand Transport Agency ('**Transport Agency**') with the Environmental Protection Authority ('**EPA**') on 14 December 2016 for the Northern Corridor Improvements Project ('**Project**').

2 Scope of evidence

- 2.1 In this rebuttal evidence, I will address matters raised in the evidence of:
 - a Jack Turner, Planning (resource consent) witness for Auckland Council; and;
 - b Simonne Eldridge, Rosedale Closed Landfill witness for Auckland Council.
- 2.2 In this evidence, I will refer to the rebuttal evidence of:
 - a **Damien McGahan**, Planning (resource consent) witness for the Transport Agency.
- 2.3 I also update the Board and submitters on planned site investigations.
- 2.4 The fact that this rebuttal statement does not respond to every matter raised in the evidence of submitter witnesses within my area of expertise should not be taken as acceptance of the matters raised.

3 Update regarding site investigations

- 3.1 Specific site investigations¹ (geotechnical and environmental) at the landfill site planned for June/July 2017 have not commenced and will not be completed before the end of the hearing.
- 3.2 The purpose of the site investigations was to address information gaps and to inform the detailed design and construction phase of the Project.
- 3.3 I therefore recommend a further condition to ensure that the Consent Holder demonstrates how they have considered and incorporated the results and/or other output in the detailed design. Proposed condition LW7 (k) in **Mr McGahan's** evidence reflects this recommendation.

4 Landfill conditions

- 4.1 Mr Turner has recommended amendments to the landfill conditions as shown in Appendix 2 of his evidence, relying on the evidence of Ms Eldridge. Mr Turner is of the view the Project is consistent with the landfill framework in the Auckland Unitary Plan ('**AUP**'), subject to the implementation of the amended conditions of consent as proposed by him.²
- 4.2 Ms Eldridge supports the proposed amendments to the conditions of consent in Mr Turner's evidence.³
- 4.3 In general, I support the relief sought or conditions as suggested or similar, which would safeguard the Project's construction workers and landfill staff.⁴
- 4.4 Ms Eldridge's recommendations⁵ and my responses to each are as follows.

¹ Described in paragraph 6.5 of my EIC.

² Jack Turner EIC, para 11.13.

³ Simonne Eldridge EIC, para 3.3.

⁴ Arthur Amputch EIC, para 12.5

⁵ Simonne Eldridge EIC, para 3.2 and 8.1.

- 4.5 Ms Eldridge recommends the consent conditions should pay specific attention to the location of landfill infrastructure, and reduce the designation extent area required for the ongoing operation, once construction is complete.⁶ Proposed condition DC5 (Notice of Requirement conditions) in Ms Hart's evidence reflects this recommendation.⁷
- 4.6 I support proposed Condition DC5 or similar, noting that it is essential to be practical when revising the extent of the designation to ensure the long-term operation, maintenance, and mitigation of the effects of the Project.
- 4.7 Ms Eldridge recommends the consent conditions should require the Transport Agency to locate, protect and/or temporarily or permanently relocate affected landfill infrastructure, and such changes should be agreed with Council prior to commencement of construction.⁸
- 4.8 I support the above recommendation and proposed conditions LW1 and LW10 in **Mr McGahan's** evidence reflects this recommendation.
- 4.9 Ms Eldridge's evidence is that there is a need for geotechnical and environmental site investigations to address current information gaps. The results of these investigations may give rise to amendments to proposed conditions.⁹
- 4.10 Section 3 of this rebuttal evidence discusses the site investigations still required, and recommends a condition is imposed regarding these investigations.
- 4.11 Ms Eldridge recommends the consent conditions should reflect that the Transport Agency is responsible for all landfill consent monitoring that falls within the construction boundary, as well as non-compliance investigation and rectification that fall within the construction boundary, during construction of the Project.¹⁰
- 4.12 I support the above recommendation and proposed condition LW10 in **Mr McGahan's** evidence reflects this recommendation.

⁶ Simonne Eldridge EIC, para 3.2(a) and 8.1.

⁷ Joanna Hart EIC, annexure A.

⁸ Simonne Eldridge EIC, para 3.2(b), 8.2(f), (h) and (k).

⁹ Simonne Eldridge EIC, para, 3.2(c) and 8.2(i).

¹⁰ Simonne Eldridge EIC, para 3.2(d) and 8.3(c).

- 4.13 Ms Eldridge recommends the consent conditions should require measures to be undertaken to minimise the duration of disruption to the monitoring record.¹¹
- 4.14 I support this recommendation in so far as it is practicable to do so, and proposed condition LW10 (e) (ii) in **Mr McGahan's** evidence reflects this recommendation.
- 4.15 Ms Eldridge recommends the consent conditions should require the Transport Agency to undertake pre, during, and post-construction settlement monitoring of the western landfill slopes to assist in the understanding of the impact of the construction works on the landfill's stability.¹²
- 4.16 I support the above recommendation and proposed condition LW1A in **Mr McGahan's** evidence reflects this recommendation.
- 4.17 Ms Eldridge recommends the proposed replacement toe bund/retaining wall will need to tie into the existing liner system and have provision for leachate interception and gas monitoring.¹³
- 4.18 I support this recommendation and proposed conditions LW7 (d), (f) and (g) in **Mr McGahan's** evidence reflects this recommendation.
- 4.19 Ms Eldridge recommends consent conditions should require the Transport Agency to agree the design details with Council prior to construction commencing.¹⁴
- 4.20 I support this recommendation and proposed condition LW6 in **Mr McGahan's** evidence reflects this recommendation.

¹¹ Simonne Eldridge EIC, para 3.2 (e).

¹² Simonne Eldridge EIC, para 3.2(f) and 8.4(c).

¹³ Simonne Eldridge EIC, para 3.2(g).

¹⁴ Simonne Eldridge EIC, para 3.2(h) and 8.4(e).

- 4.21 Recent work Ms Eldridge has undertaken has identified that the existing landfill gas extraction network has limited locations where sections can be physically isolated from the extraction system. She suggests the Transport Agency should work closely with Council prior to construction commencing to ensure safe isolation of the landfill gas system can be achieved.¹⁵
- 4.22 I support the above recommendation and proposed condition LW5 (f) in **Mr McGahan's** evidence reflects this recommendation.
- 4.23 Ms Eldridge recommends the Contaminated Site Management Plan ('**CSMP**') should contain provisions that ensure the safety of workers, given there is a potential for an increase in uncontrolled gas discharges within the construction area.¹⁶
- 4.24 The CSMP is not intended to apply to the landfill, which has its own specific set of management plans. Nonetheless, I support Ms Eldridge's recommendation and consider proposed condition CL3 to recognise this. Where contaminated land works are undertaken in and around the landfill, the CSMP needs to take into account the specific health and safety requirements of the landfill Health and Safety Plan required under proposed condition LW5.
- 4.25 Ms Eldridge recommends any decision to move the existing gas main should only be made after a robust safety and design assessment.
- 4.26 In response to the above, I confirm my recommendation¹⁷ that any such consideration must be subject to a complete Safety in Design review by an appropriately qualified and experienced person and proposed condition LW7(l) in **Mr McGahan's** evidence reflects my recommendation.

¹⁵ Simonne Eldridge EIC, para 3.2(i) and 8.5(c)-(d).

¹⁶ Simonne Eldridge EIC, para 3.2(j) and 8.5(e).

¹⁷ Arthur Amputch EIC, para 12.8(d).

- 4.27 Ms Eldridge recommends consent conditions should require the Transport Agency to undertake modelling in consultation with the Closed Landfill and Contaminated Land Response Team) and agree appropriate measures to be taken should the modelling suggest the operation of the landfill gas flare will be affected.¹⁸
- 4.28 I consider this matter is better addressed in expert conferencing.
- 4.29 Some of the above recommendations are not reflected in the proposed consent conditions by Mr Turner. Mr Turner is of the view that some of these matters are better addressed in expert conferencing due to their technical nature.¹⁹
- 4.30 I agree with Mr Turner that some of the matters are better addressed in expert conferencing due to their technical nature.
- 4.31 I have proposed conditions on some matters where conditions have not been proffered by Mr Turner.

5 Conclusion

- 5.1 In my opinion, the effects of encroachment of the Project on the landfill are manageable.



Arthur Amputch

15 June 2017

¹⁸ Simone Eldridge EIC, para 3.2(l) and 8.5(g).

¹⁹ Jack Turner EIC, para 10.25.