

Level 2, Wynn Williams Building
47 Hereford Street
Christchurch Central 8013
PO Box 1147
Christchurch 8140
New Zealand
T +64 3 940 4900

Subject	AB Lime Limited Response to Peer Review s 92 Response	Project Name	AB Lime Limited Landfill Resource Consent Application
Attention	Bruce Halligan – Environment Southland	Project No.	IZ000400
From	Ryan McCone		
Date	18 November 2020		
Copies to	Steve Smith, Fiona Smith, Bridget Irving, Andrew Henderson, Charlie Watts		

1. Introduction

The purpose of this memorandum is to provide a formal response on behalf of the Applicant (AB Lime Limited) to the further technical review of Section 92(1) of the Resource Management Act request for further information received on 17 November 2020.

This formal response is broken up into two distinct sections:

- The peer review response provided by RILEY Consultants; and
- The peer review response provided by EHS Support.

The peer reviews are considered in turn below.

2. RILEY Consultants Peer Review

RILEY Consultants have conducted a peer review in regard to a majority of the answers the Applicant has provided as part of the s 92 notice. A large proportion of the peer review comments indicate that no further information is required. Each of the questions, which require further consideration are answered in turn below:

Q2.65 Response partially accepted – corrections requested to Landfill Leachate Technical Memo.

The landfill leachate memorandum has been amended and a new version has been provided¹.

Q2.66 Response not accepted – new consent condition proposed

The proposed consent condition by the Peer Reviewer states:

“The Applicant shall implement the measures identified in the Landfill Operations Management Plan (LOMP) and related technical reports in an effort to mitigate against water infiltration into the landfill and will continue to monitor annual leachate quantities produced. If leachate quantities have shown a continued upward trend over the next three years, the Applicant will carry out a review of the LOMP at

¹ The updated AB Lime Landfill Leachate Technical Memorandum is provided separately.

that point to identify practices requiring change or addition, then provide these to Environment Southland for review and approval prior to updating the LOMP accordingly."

The Applicant agrees in principle to the imposition of this consent condition. However, as the consent condition is currently worded there is inherent uncertainty. The Applicant proposes that the wording of this condition is refined between Environment Southland and the Applicant to provide ongoing certainty for both parties.

Q2.67 Response partially accepted – further information requested

Q2.67a For further clarification relating to the original question, please confirm what design elements have been incorporated or will be incorporated to enable cleaning (rodding, jetting, CCTV access points) of the leachate pipelines.

The leachate clean-out pipes have been designed so that they are located on (and terminating above) the eastern side slopes. By having the leachate cleanout pipes located above the eastern side slopes, they are easily accessible for future cleaning. The leachate pipes are 150 mm in diameter and are therefore considered large enough to be able to clean.

The photo below should assist in closing out this query:



Figure 21 Leachate clean-out pipes extended up the eastern side wall of the landfill (dated 01 August 2019).

It is considered that any further issues relating to this query can be finalised in a discussion between the Peer Reviewer, the Applicant and Environment Southland.

Q2.74 Response partially accepted – amended consent conditions proposed

In principle the Applicant accepts the response provided by the Peer Reviewer. The Applicant is currently looking at options to utilise landfill gas monitoring bores for dual purposes and expects progress to be made on this prior to giving effect to any new consent. The Applicant believes the appropriateness of the number and location of monitoring wells can be discussed and closed out between the Peer Reviewer, the Applicant and Environment Southland without the need for varying the condition of consent.

Q2.90 Response accepted – no further information requested, proposed condition amendment.

The proposed consent condition by the Peer Reviewer states that the following may be incorporated into proposed condition 10:

"During trial of the final cap layer the need for drainage layer shall be considered. Evidence with regard its necessity and design should be supplied to Environment Southland and the Independent Peer Reviewer."

Once again, the Applicant agrees in principle to the imposition of this consent condition. However, as the consent condition is currently worded there is inherent uncertainty. The Applicant proposes that the wording of this addition to condition 10 is refined between Environment Southland and the Applicant to a higher level that provides ongoing certainty for all parties:

"Following the construction trial a Final Capping Specification and Quality Control Standard will be produced and provided to the Independent Peer Reviewer for certification and Environment Southland for approval"

It is hoped that any construction trial will predate giving effect to any new consent. The Applicant proposes that the necessity of this condition (if the trial is conducted prior to giving effect of this consent) and/or the wording of this condition is refined between Environment Southland and the Applicant to provide ongoing certainty for both parties.

2.1 Conclusion

The Applicant considers that the requests provided by the Peer Reviewer are entirely reasonable and intend all requests to be acted on, as identified in the responses above. It is the view of the Applicant that there are no technical matters outstanding in relation to this peer review that are substantial in nature. Subsequently, the remainder of the issues can be addressed between the parties by appropriately worded conditions of consent and/or updates to the relevant management plans.

3. EHS Peer Review

EHS Support has undertaken a technical peer review of the Section 92(1) responses for items 2.16 to 2.26 inclusive, as well as items 2.36 to 2.58 inclusive.

3.1 Items 2.16-2.20

3.1.1 AB Lime Landfill Operations Management Plan

The Peer Reviewer has stated the following:

"EHS Support notes that none of the management plans supplied outlined staff responsibilities and training. The LOMP, as well as all subsequent plans (i.e Health and Safety Plan [HASP], Emergency Response Plan, Landfill Gas Management Plan, Landfill Leachate Management Plan and the Site Stormwater Management Plan), should be updated to include a section on staff responsibilities, minimum training requirements and management structure."

The Peer Reviewer has clearly misunderstood the management plan structure provided by the Applicant as part of the application. The Environmental Management Plan is the overarching document, which all other management plans (including the Landfill Operations Management Plan) sit under (refer to Section 1.2 of the original application). The Draft Environmental Management Plan is provided as Appendix P to the original application.

In regard to the Peer Reviewer's comment, we note that the Draft Environmental Management Plan as the overarching management plan document includes the matters that the Peer Reviewer identified as absent, being:

- Roles and responsibilities – these are addressed in Section 1.3 of the Plan;
- Management structure – this is addressed in Section 1.4; and
- Training – this is addressed under Section 3.4.

Furthermore, we note that these matters are included within two of the Objectives of the Management Plan and are in turn codified into proposed condition 21. These Objectives are as follows:

- *Objective v – To identify operational responsibilities, the management structure and staffing*
- *Objective vi - To facilitate the effective training of staff*

Given that these matters are already included in the Draft Environmental Management Plan provided with the application, potentially EHS support has not considered the whole context of the management plan structure or reviewed them as part of the Peer Review.

3.1.2 Recommended consent condition associated with Waste Acceptance Criteria and Prohibited Material

a) Waste Acceptance Criteria

EHS Support recommends that Section 5 of the LOMP should be revised to reflect the following recommendations:

It is recommended that the elutriation criteria are set to be the lower of:

- *100 times NZ Drinking water criteria, as this would take into carcinogenicity or development/reproductive toxicity of compounds to humans, or*
- *Criteria specified within the most recent Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants) Notice*

The Applicant agrees to updating Section 5.3 to acknowledge these additional standards. The Applicant would like to reiterate however, that control for such waste acceptance, despite any stringent criteria for waste acceptance, is imperfect. The acceptance of such waste is incidental and, as identified in the previous s 92 response, AB Lime will not be able to exert full control with certainty until such measures are legislated to create standards for people, businesses and communities to adhere to before creating contaminants associated with specific waste.

The following conditions of consent are proposed by EHS Support:

- *The Landfill Operations Management Plan shall be updated in accordance with Schedule X and submitted to Environment Southland for approval by 30 June 2021;*
- *Any updated or changes to the Landfill Operations Management Plan shall be submitted to Environment Southland for written approval before they become operational.*

These conditions are viewed as problematic by the Applicant. A robust certification process is already provided for in considerable detail under conditions 5-20 of the proposed Schedule of Conditions provided in the original application. Once again, it is clear that EHS Support has not considered the whole context of the proposed resource consent conditions, and in this instance is providing piecemeal

certification and review conditions for management plans that overlap what is already thoroughly provided for.

The Applicant wishes to work with Environment Southland to ensure this certification and review process is as clear and certain as possible.

As noted above, the Applicant has no objections to updating Section 5 of the LOMP. The Applicant will update the Waste Acceptance criteria sections of the management plan prior to certification, in line with the certification process that is finalised in conjunction with Environment Southland.

Furthermore, EHS Support proposes the following consent conditions:

- *An annual review of the waste acceptance criteria and prohibited items shall be undertaken and the findings of the review shall be submitted to Environment Southland by June 30 each year.*
- *All new waste acceptance criteria must be submitted to Environment Southland for written approval before the waste is accepted.*

The Applicant in principle agrees to the implementation of these consent conditions. However, the Applicant contends that the process for acceptance needs refinement with Environment Southland to align with the certification process outlined in proposed conditions 5-20 in the schedule of conditions.

3.1.3 Gas Collection System

EHS has provided the following comments on the gas collection system:

EHS Support has reviewed the most recent information (2018 to 2020) on the performance of the gas collection system, landfill cap and the landfill flare. It is clear from reviewing the annual monitoring reports 4 and 5 from 2020 as well as the AB Lime Landfill Gas Flare Monitoring Report that the current operation of landfill gas collection and flaring does not comply with the National Environmental Standards (NES) for Air Quality Regulations 26 and 27. In particular:

- *No back up flare has been installed.*
- *The temperature of the flare does periodically drop below 750 degrees Celcius (and 600 degrees Celcius for short periods of time).*
- *ISM data provided within the AB Lime Landfill Annual Monitoring Report 5-2020 indicates that surface emissions from part of the landfill exceed 5,000 ppmv.*

The Applicant has clearly stated that the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 do not apply to current operations, in line with S43B(6) and S43B(6A) of the Resource Management Act 1991, which clearly state the relationship between National Environmental Standards and resource consents. The Applicant has also clearly identified they intend to (and indeed understand that they must) comply with the NES regulations with respect to the new air discharge permit applied for (refer to answer provided to 2.37 in section 92 Response to Environment Southland 2.0).

A legal opinion confirming the law on this matter is appended as Appendix A. The Applicant's legal opinion contends that any reference to current non-compliance with NES regulations is ultra vires.

EHS Support also assert:

The applicant's consultant has indicated that the NES (Air Quality) requirement does not apply to the application, because:

- a) *The National Environmental Standards for Air Quality Regulation 2004 was gazetted after the consent 201351 was granted, and*
- b) *The applicant's consultant is not applying for a new air discharge consent*

The assessment by the Peer Reviewer in (a) is correct. The current air discharge consent was granted in June 2003. The assessment in (b) is incorrect. The applicant is applying for a new air discharge consent to replace the current AUTH-201351. This is made clear in the application as lodged. The applicant has continued to assert from the outset that the consent holder will not surrender existing consents associated with landfill operations until the new consents are given effect to (refer to Appendix A).

EHS Support continues:

The applicant's consultant is incorrect on two counts:

- 1) *The original resource consent condition for consent 201351 required the flare to operate at a minimum temperature above 750°C (i.e. the original consent condition was compliant with regulation 27(2f) of the NES (Air Quality) 2004).*

The memorandum was issued by Environment Southland on 16 December 2010 (after the NES (Air Quality) 2004 was gazetted. The memorandum does not appear to revoke or change consent condition 18(e) but appears to state no enforcement action would take place. In 2010 Environment Southland would not have been able to legally alter a consent to allow an activity prohibited by the NES (Air Quality).

- 2) *In Section 12.1 (page 9 of the Resource Consent Application) the applicant has applied for a new air discharge permit to replace air discharge permit AUTH-201351.*

The only part of resource consent 201351 which would overrule the NES (Air Quality) is the fact that condition 20(b) allows that the maximum emission at the surface of the landfill areas with intermediate or final cover shall not exceed 5.0% percent by volume. The applicant has in fact applied to change that condition to bring it in line with Regulation 26 (2a).

The Applicant has consistently contended they are applying for a new air discharge consent and in this regard directs the Council's attention to section B(v) of Form 9 which is located at the beginning of the Application documents. This clearly identifies that the following consent is sought from Environment Southland:

Discharge Permit for:

The discharge of contaminants into air from combustion processes where combustible refuse matter is flared as a discretionary activity under Rule 5.5.2(2)(c) of the Regional Air Plan, pursuant to section 15(1)(c) of the Resource Management Act 1991. Consent is required as a discretionary activity.

The Peer Reviewer has obviously confused current operations (existing resource consent) with future operations (this application). Under current operations of the landfill as stated consistently by the Applicant, the resource consent predates the NES, and therefore **the NES does not apply**, because of the reasons aforementioned and provided for in the legal opinion provided in Appendix A. It is clear that the current consent conditions operate independently of any NES requirements.

The memorandum referred to by the Peer Reviewer records an agreement reached between Environment Southland and the Applicant regarding the operation of the temperature of the flare. As stated in the legal opinion in Appendix A, 'any failure to comply with this is a compliance matter pursuant to the existing consent. It does not go to the appropriateness of the conditions being proposed under the new consent.'

In regard to this application, the Applicant has consistently and clearly stated they understand that they will need to comply with NES standards when the new consent is given effect to..

3.1.4 Recommended consent conditions associated with gas collection system and gas management plan

EHS Support has recommended the following conditions of consent. They are considered in further detail below:

- *The radius of influence investigation to determine optimal location of gas extraction wells is undertaken within 12 months of granting this consent*

The Applicant contends that this condition of consent is not related to any offsite effects. Waste is too heterogeneous to narrow down to an 'optimal location'. The Applicant contends that the necessity of this consent condition can be discussed between the Peer Reviewer, the Applicant and Environment Southland.

- *The detail design review is undertaken on the gas collection system and blower sizing to verify that there is sufficient capacity in the gas collection system. This information should be reviewed and approved by a suitably qualified/chartered professional engineer with experience in landfill gas collection system design appointed by Environment Southland.*

As identified, the current design is consented with no identifiable compliance issues having been raised by the council. The Applicant contends that for the purposes of this application, this matter is appropriately managed through compliance with NES, as this sets the applicable performance standards. As stated, the new consent must comply with s 26(2)(a) of the NES, which states that any discharge of gas from the surface of the landfill does not exceed 5000 parts per million parts of air. This is considered to be conclusive of the matter.

- *Conduct an inspection of the gas collection system and well heads using infra-red thermography to identify any leakage from the gas extraction wellheads or above ground landfill gas header pipework by 30 June 2021.*

See answer provided directly above.

- *Ensure that a backup flare design in accordance with the NES (Air Quality) regulation 27 (3) is installed at the site before 30 June 2021.*
- *The principal flare must be operated at all times, unless it has malfunctioned or is shut down for maintenance.*
- *The backup flare must be operated if, and only if, the principal flare is not operating.*

The Applicant understands that this new application must comply with the regulations provided in the NES when it is given effect to. The Applicant understands that all NES standards will automatically apply to the new consent. It is considered that these proposed conditions of consent are unnecessary duplication and could cause inconsistencies, particularly if the legislation is amended or updated.

- *An updated Landfill Gas Management Plan must be submitted and approved in writing by Environment Southland before 30 June 2021.*

The Applicant has already outlined a robust approval and certification process for all management plans under the schedule of conditions (5-20). It is considered these proposed conditions appropriately address the condition provided by the Peer Reviewer.

Proposed resource consent conditions for the Land Discharge Consent:

- *The filling rate of solid waste onto or into land shall be limited to 100,000 tonnes of solid waste per annum until an independent, suitably qualified and experienced/chartered engineer has certified that AB Lime has demonstrated that for a period of at least one year they are able to operate the gas collection system in full compliance with the NES (Air Quality) Regulations 26 and 27 and the Landfill Gas Management Plan. The LGMP must be submitted by the reviewer and approved by Environment Southland before the cap of waste accepted is removed.*

The Applicant understands that that this new application must comply with the regulations provided in the NES when it is given effect to. The Applicant understands that all NES standards will automatically apply to the new consent. It is considered that this condition of consent is unnecessary duplication and could cause inconsistencies, particularly if the legislation is amended or updated.

The Applicant has already outlined a robust approval and certification process for all management plans under the schedule of conditions (5-20). It is considered these proposed conditions appropriately address the process for reviewing and certifying any version of the Landfill Gas Management Plan, including those provided after the inception of any new consent.

3.1.5 Landfill Capping and Surface Emissions

Again, EHS Support raise several concerns about current operations not complying with NES regulations:

Surface ISM results presented within the Annual 2020 Monitoring Report 5 indicates that surface emissions from the landfill are consistently higher than the 5,000 ppm v/v limit within the NES (Air Quality) Regulation 26 (2a). However, as the information within the annual report lacks vital details (such as a plan showing the location of exceedances, where temporary and final cover are located, meteorological conditions at the time of monitoring and the estimated total area where surface emissions are likely to exceed 5,000 ppm (v/v) it is impossible to determine if the landfill is designed and operated in such a way that it could comply with the NES (Air Quality) Regulations 26 (2a).

The level of information provided within the Annual Monitoring Report is insufficient in many cases to determine compliance or non-compliance with the NES (Air Quality) Regulations 26 and 27. The protocols and recommendations within the SKM landfill gas monitoring plan of the Jacobs Gas Monitoring plan do not contain suitable recommendations on what information should be required to be reported to Environment Southland. The Landfill Gas Monitoring Plan should be updated to require the minimum level of information that should be reported in the gas monitoring reports; minimum information should include:

- *Site plan where monitoring was undertaken;*
- *Time and date of monitoring;*
- *Meteorological conditions when monitoring was undertaken (including weather conditions and barometric pressure);*
- *Copy of raw data;*
- *Calibration certificates for instruments used and details of gas bump tests undertaken on the day of monitoring to verify instrument was functioning correctly; and*
- *Report of visual inspection of the cap, gas extraction or monitoring well (as applicable).*

The Applicant does agree that the Landfill Gas Management Plan should be updated to include the minimum level of information that should be reported. The Applicant will update the information in the Landfill Gas Management Plan to include this information prior to certification.

For the reasons outlined above, which do not need to be repeated ad nauseum, the Applicant contends NES issues raised by the Peer Reviewer are not relevant considerations (refer to Appendix A). The Applicant has repeatedly acknowledged that this application and any future consents granted as part of it must comply with NES regulations.

Any reservations the Peer Reviewer has over existing operations and compliance with standards that do not currently need to be met, are *ultra vires* (refer to Appendix A).

3.1.6 Landfill Gas Migration/Boundary Gas Monitoring

3.1.7 Recommended consent conditions associated with landfill gas migration and boundary monitoring

EHS support has recommended the following conditions of consent. They are considered in further detail below:

The following resource consent conditions should be included in the air discharge consent:

- *The spacing and number of landfill gas monitoring bores shall be reviewed annually by an independent reviewer. The design and location of the landfill gas monitoring probes shall be approved in writing by Environment Southland prior to the probes being installed.*

The Applicant contends that the proposed condition of consent is of relevance only if landfill gas migration is considered to be a risk to off-site sensitive receptors. The Applicant contends that the risk is low. However, should this remain a concern to the Council, as an alternative solution the Applicant proposes a landfill gas offsite migration risk assessment to determine whether the risk of landfill gas migration is tangible:

'(a) Within 12 months after giving effect to this consent, the consent holder will undertake a landfill gas offsite migration risk assessment to determine the risk of landfill gas migration to offsite sensitive receptors. As part of this assessment the consent holder shall provide a recommendation on the necessity of the requirement for additional landfill gas monitoring probes and, if necessary, the location and spacing of such probes, and the appropriate timing of future reviews should they be considered necessary.

(b) The conclusions of the assessment provided in (a) shall be provided to the Independent Peer Reviewer(s) for certification and Environment Southland for approval.

The following resource consent condition should be included in the discharge to land consent

- *A Construction Quality Assurance Plan prepared by a suitably qualified and experienced engineer which meets the requirements of Victoria EPA (2015) Best practice environmental Management for siting, design, operation, and rehabilitation of landfills shall be submitted and approved in writing by Environment Southland before any increase in filling rate occurs.*

The Applicant considers that the current process identified for Construction Quality Assurance is appropriate. As identified, AB Lime currently produce a Technical Specification, Quality Assurance and Quality Control (QA/QC) Standard prior to the construction of each area, and a Completion Report post the construction of each area. These three documents are reviewed by the Independent Peer

Reviewer and issued for approval to Environment Southland. The Applicant contends that it is not the responsibility of the landfill to comply with guidelines from another jurisdiction when there is a process in place that already appropriately manages these issues, and does not understand why the Victoria EPA guidelines are promoted in this instance.

It is considered that this is a procedural matter that can be concluded through discussions between Environment Southland, the Peer Reviewer and the Applicant.

3.2 Conclusion

Overall, having considered the EHS Support Peer Reviewer's commentary in regard to current and future operations and the applicability of the NESAQ, the Applicant reiterates its earlier view that the Peer Reviewer entirely misses the mark and incorrectly asserts that the NESAQ applies to the existing resource consent. Quite clearly it cannot. The air discharge consent predates the NES, and the RMA clearly bars the applicability of the NES to consents granted prior to it coming into force. We have appended an opinion from the Applicant's legal counsel confirming this view.

As previously stated, the Applicant does not need to comply with NES requirements for current operations. The granted consent prevails. Therefore, it is the view of the Applicant that any reservations and/or comments the Peer Reviewer has over current operations and their compliance with standards that do not currently need to be met, are *ultra vires*. This matter becomes solely a compliance issue for the Applicant for any new consent. The Applicant has consistently understood that there must be demonstration of compliance with NES regulations when exercising any new consent. It is the view of the Applicant that any technical concerns raised by the Peer Reviewer regarding current operations and the NES standards need to be set to one side by the regulatory authority. Quite clearly, the applicant is applying for a new air discharge permit. The applicant understands the implications of the NES applying to this new air discharge permit. It is the view of the Applicant that any technical concerns raised by the Peer Reviewer regarding current operations and the NES standards need to be set to one side by the regulatory authority. Quite clearly, the applicant is applying for a new air discharge permit. The applicant understands the implications of the NES applying to this new air discharge permit.

It is also concerning that in some instances, it appears the Peer Reviewer has missed integral parts of the application, including the proposed management plan structure and the contents of the Environmental Management Plan. Also, it appears the Peer Reviewer has either overlooked or misunderstood the robust process put forward by the Applicant in regard to certification and the submission of all management plans under the proposed schedule of conditions.

In regard to other matters raised by the Peer Reviewer, the Applicant considers that the requests provided by the Peer Reviewer are generally reasonable and intend all requests to be acted on, as identified in the responses above.

The Applicant concludes that there are no technical matters outstanding in relation to this peer review that are substantial in nature. Subsequently, the remainder of the issues can be addressed between the parties by appropriately worded conditions of consent and/or updates to the relevant management plans. The Applicant therefore believes that Environment Southland can make a determination on notification with certainty knowing that all relevant technical issues have been closed out or can be conditioned appropriately.

Ryan McCone

LLB(Hons)/BCom, Environmental Planner



Appendix A: Gallaway Cook Allan Legal Advice – NES Air Quality