DOC15/444781-09

Mr Chris Ritchie
Director, Industry Assessments
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

STANDARD POST AND EMAIL
22 December 2015

Dear Mr Ritchie

SITA Australia Pty Ltd - State Significant Development Application - SSD 14_6835
Lucas Heights Landfill and Resource Recovery Expansion
New Illawarra Road, Lucas Heights

I refer to the public exhibition of Sita Australia Pty Ltd's proposed landfill and resource recovery expansion at New Illawarra Road, Lucas Heights. Sita Australia Pty Ltd has submitted documents including the draft Operational Environmental Management Plans and the Environmental Impact Statement dated October 2015 ("the EIS") in support of the proposal.

The EPA has reviewed the EIS and found that in a number of instances the information provided is insufficient to allow an adequate assessment to be made of the potential environmental impacts of the proposal. As such, the EPA cannot support this proposal as submitted and therefore, has not provided recommended conditions of consent. The EPA requests that the proponent update the publicly exhibited EIS to address the following matters detailed below.

The Proposal

Sita Australia Pty Ltd ("the Proponent") proposes to change the existing landfill and construct additional processing facilities at Lucas Heights Resource Recovery Park located on New Illawarra Road, Lucas Heights, NSW (Lot 3 DP 1032102, Lot 101 DP 1009354, Lot 2 DP 605077) in the Sutherland Local Government Area. The proposal involves:

- **Re-profiling the existing landfill** to provide an additional 8.3 million cubic metres of landfill capacity and extend the life of the landfill from 2025 to 2037 (12 extra years);
- **Increase the approved quantity of waste landfilled** from 575,000 to 850,000 tonnes per year;
- **Relocate the existing garden organics facility** and increase capacity from 55,000 to 80,000 tonnes of garden waste per year;
- **Construct and operate a fully enclosed advanced resource recovery technology (ARRT)** facility to recover resources from up to 200,000 tonnes of general solid waste per year; and

PO Box A290 Sydney South NSW 1232
59-61 Goulburn St Sydney NSW 2000
Tel: (02) 9995 5000 Fax: (02) 9995 5999
TTY (02) 9211 4723
ABN 43 692 285 758
www.epa.nsw.gov.au

- **Rehabilitate the landfill post-closure** to create 124 hectares of parkland for future community uses.

Noise assessment

The EPA has reviewed the Noise Assessment dated August 2015 submitted as Appendix E of the EIS (the "Noise Assessment"). The EPA has no significant concerns in relation to noise associated with the construction or onsite operation of the proposal.

Attachment 1 sets out what additional information is required in more detail.

Air quality assessment

The EPA has reviewed the Air Quality Assessment dated August 2015 submitted as Appendix G of the EIS (the "Air Assessment"). The assessment does not adequately characterise the risk of odour impacts from the proposed development and requests that the Air Assessment be revised.

Furthermore, the EPA understands that the "*establishment of the ARRT facility would be dependent upon SITA securing a guaranteed, long term waste supply to ensure that the substantial upfront investment is able to be recouped*" (Section 6.1 of the EIS). As such the details of the ARRT, including biofilter specifications, have not been determined. Because of this the EPA is unable to adequately assess the likely odour impacts from the ARRT facility.

The EPA is available to discuss the comments provided should the proponent wish to do so.

Attachment 2 sets out monitoring comments (**Attachment 2A**), the additional information required (**Attachment 2B**) and the specific technical issues that would need to be addressed in the revised Air Assessment (**Attachment 2C**).

Surface water assessment

The EPA has reviewed the findings of the Surface Water Assessment dated August 2015 provided in Chapter 13 of the EIS. Additional information and clarification is required by the EPA to adequately assess surface water impacts and consider recommended conditions of consent.

Attachment 3 sets out the additional information and clarification required.

Leachate assessment

The EPA has reviewed the findings of the Leachate Assessment dated September 2015 provided in Chapter 15 of the EIS. Additional information and clarification is required by the EPA to adequately assess leachate impacts and consider recommended conditions of consent.

Attachment 4 sets out the additional information and clarification required.

The Proponent should be aware that any commitments made in the EIS may be formalised as approval conditions and may also be placed as formal licence conditions. Consequently, pollution control measures should not be proposed if they are impractical, unrealistic or beyond the financial viability of the development. It is important that all conclusions are supported by adequate data.

Based upon the information provided to the EPA, should approval be granted, the Proponent may need to make a separate licence application to the EPA. The Proponent should be made aware that, consistent with provisions under Part 9.4 of the *Protection of the Environment Operations Act* 1997

("the POEO Act"), the EPA may require the provision of a financial assurance for the site. The amount and form of the assurance would be determined by the EPA and required as a condition of the licence.

In addition, as a requirement of the licence, the EPA will require the Proponent to prepare, test and implement a Pollution Incident Response Management Plan in accordance with Section 153A of the POEO Act.

If you have any further queries regarding this matter, please contact Trevor Wilson on (02) 9995 5646.

Yours sincerely

Trevor Wilson
Unit Head - Waste Compliance
Environment Protection Authority

Attachment 1 *EPA request for additional information on the Noise Assessment*
Attachment 2 *EPA request for additional information on the Air Assessment*
Attachment 3 *EPA request for additional information on the Surface Water Assessment*
Attachment 4 *EPA request for additional information on the Leachate Assessment*

Attachment 1: Noise Assessment - EPA request for additional information on the Lucas Heights Landfill and Resource Recovery Expansion

Comment No. 1
Sleep disturbance criteria for the proposal have been derived in Table 3.5 of the Noise Assessment, however no assessment of potential sleep disturbance impacts has been carried out. The EPA propose to set night-time LA1,1minute noise limits conservatively at 45 dBA for all receivers, based on the predicted LAeq noise levels. Alternatively, the proponent should provide an assessment of the potential sleep disturbance impacts of the proposal in the Noise Assessment.

Request for additional information No. 1
Table 5.3 of the Noise Assessment assigns a sound power level of 110 dBA for a single 20 tonne Caterpillar excavator, and 107 dBA (3dB lower) for a larger Caterpillar 30 tonne excavator, of which there are two used in the modelling. The proponent must confirm that the sound power levels are assigned correctly in the Noise Assessment.

Attachment 2: Air Assessment - EPA request for additional information on the Lucas Heights Landfill and Resource Recovery Expansion

Attachment 2A – General Comments

Approach to Assessment

The Air Quality Assessment Report ("AQAR") outlines the following objectives in relation to assessing odour:

- No significant impacts on the community or environment; and
- Achieving the 2 OU odour performance criteria cumulatively at the nearest residential receptor;

The AQAR included an extensive odour sampling regime to quantify spatial emissions across the landfill and identified three large odour sources, which have been focused on for rectification. The predicted odour impacts, and meeting the assessment objectives rely heavily on these odour sources being rectified. The EIS outlines that "*through the proposal, estimated odour emissions would be reduced by more than 40% compared to current estimated levels through improved odour management*". "*These improvements would likely be achieved as early as 2015 with the predicted odour levels dropping considerably at nearby sensitive receptors*". **It is also noted that the AQAR recommends "*retesting of rectified localised emission points, the v section, the area south of the excavation stockpile and batter in 2015/16*".**

Based on this information there is additional information or data that could be supplied to demonstrate that existing odour emission sources have been rectified.

Attachment 2B – Request for Additional Information

Request for additional information No. 1
Odour modelling scenarios 2, 3 and 4 are based on a "stripped back area" of 2,500m^2. However significantly larger stripped backed areas are proposed in Chapter 12 the EIS. In Chapter 12 it states:

> *"The areas of the existing landfill (south of existing active landfill area) would be stripped back in segments, with approximately 1 ha stripped in advance of the active tipping area for currently covered areas and approximately 2 ha stripped in currently capped areas. Of this area approximately 2,500 m$_2$ would be less than one day old to minimise the emission of odour from the stripped surface."* And in Chapter 15 of the EIS it states *"The area of cover material removed will be limited to 20,000m^2 or at least 2 weeks in advance of the active tip face."*

a) The EPA requests further detail on why 2,500 m^2 was used to predict odour impacts from the "stripped back areas" in odour modelling scenarios 2, 3 and 4 but up to 2 hectares of stripped back area proposed in the EIS?

b) The EPA requests an additional odour modelling scenario be done using the stripped back areas proposed in this EIS.

The EPA notes that the Landfill Operational Environmental Management Plan ("OEMP") details a number of contingency actions designed to address odours from these activities should odours occur.

Ref: Table 12.7, Table 12.8, page 12-19 of the EIS and Table 15.2 of the EIS.

Request for additional information No. 2
The information provided in the EIS and Landfill OEMP states that intermediate capping will be scraped back to exposed waste prior to landfilling. The EPA notes that the EIS states that intermediate cover is constructed from 0.3m (min) compacted crushed sandstone, the depth required by the licence (Table 15.2 of the EIS) and the Landfill OEMP (page 7) states the intermediate cap will be stripped back 0.45m, exposing landfill waste.

a) The EPA requests that the proponent clarify what depth of intermediate capping will be left after being scraped back.

Request for additional information No. 3
The proponent notes that landfill gas capture will be used as an odour mitigation strategy during the reprofiling of the landfill. In the EPA's experience landfill gas wells in areas of shallow cover may need to be shut off to prevent sucking air through the cover.

a) The EPA requests further information regarding how fugitive landfill gas from "stripped back" areas will be managed without compromising the effectiveness of the entire landfill gas capture system?

Ref: Page 129 Part A&B

Request for additional information No. 4
The EPA was unable to locate a map in the EIS that shows the location of the large emission point 1 "v section" and large emission point 2 "rectangular area south of the excavation stockpile".

a) The EPA requests that a map identifying these areas be provided.

Request for additional information No. 5
The EIS states that the Voluntary Planning Agreement ("VPA") process is the governing mechanism to determine the strip back configuration and details.

a) The EPA requests clarification as to how the VPA governs strip back configuration and details.

Ref: Page 12-19 of the EIS

Request for additional information No. 6
The Proponent is currently permitted "Other activities" at any time at the landfill and wants this to continue.

a) The EPA requests further details on what activities are proposed to occur between 5pm and 10pm and between 10pm and 6am?

Ref: Table 6.2 (page 6-5) of the Environmental Impact Statement (EIS).

Request for additional information No. 7
SITA is currently permitted to operate the Garden Organics ("GO") Facility at any time and wants this to continue.

a) The EPA requests further details on what activities are proposed to occur between 5pm and 10pm and between 10pm and 6am?

Please note the EPA can limit identified odour producing activities including windrow turning and shredding through the environment protection licence.

Request for additional information No. 8
The EPA notes that EIS states compost at the GO facility is to be stored in 30 metre long bunkers for 4 weeks and turned after the first 2 weeks.

a) The EPA requests further information on how the compost stored in the bunkers will be turned?

Ref: Point 6.3.7 of the EIS

Request for additional information No. 9
The EPA requested that the EIS contain a map of all organic material stored outside, processed or unprocessed including *"the type, their respective volumes and locations on site map."* This has not been provided.

a) The EPA requests that this information be submitted.

Ref: EPA letter to the Department of Planning dated 18 Dec 2015

Request for additional information No. 10
The EIS provides details on the length and height of the proposed windrows located in the maturation area and compost storage area of the GO Facility.

a) The EPA requests the proposed width of the windrows located in the maturation area and compost storage area of the GO Facility.

Request for additional information No. 11
a) The EPA requests details of proposed contingencies should the volume of incoming waste exceed the storage/processing capacity of the Receival Area in the GO Facility?

Request for additional information No. 12
The EPA notes that there is a conveyor belt that travels between the ARRT Waste Receival and Processing Building to the ARRT Composting Hall.

a) The EPA requests clarification on whether the will be enclosed?

Ref: page 6-36 of the EIS

Request for additional information No. 13
The EPA notes that the EIS does not provide details of any pre-treatment of odorous air from the AART facility prior to being discharged to the biofilter. It is the EPA's experience that odours generated from the composting of municipal waste will generate strong odours that require pre-treatment, such as a wet scrubber, prior to being discharged to a biofilter. This pre-treatment of the odorous air is essential to maintaining the biofilters ability to treat odours.

a) The EPA requests information reading the pre-treatment of air discharged to the bio scrubber, and if there is none proposed, a detailed explanation as to why not.

Attachment 2C – Technical Comments

Odour Impact Assessment Criteria

Section 8.2 of the AQAR provides a discussion around nearest sensitive receptors, including identified future receptors, for the purposes of establishing the odour performance criteria for the assessment. Table 8-3 outlines varying odour criteria (from 2 to 4 OU) for identified receptor groups, however adopts a 2 OU criteria for assessment purposes. The EPA advises that for assessment of sites located in the greater Sydney metro area, a 2 OU criteria is typically adopted.

Odour Emission Rate Justification

Appendix C of the AQAR presents justification for the odour emission rates utilised for the odour assessment. However there are inconsistencies with data published in Appendix C as compared with the data adopted within the quantitative assessment. The inconsistencies add a degree of uncertainty to the predicted impacts. The EPA provide comments on the inconsistencies identified below, however only in relation to the odour emission data for the Future Scenario(s).

Landfill - Daily Covers

Appendix C outlines a Surface Odour Emission Rate (SOER) of 0.03 OU/m^2/s adopted for daily landfill covers. However the odour analytical report outlines two samples with an SOER of 0.03 and 0.05 OU/m^2/s. It is also noted that the AQAR states:

> "*Automatic tarp machines (ATM) (tarps as daily cover on the active tipping batter areas) have been extensively trialled over 2014. An application is before the EPA demonstrating their performance. It is expected that they would be approved by the EPA as an alternative to VENM daily cover and provided this approval is granted by the EPA the development application is seeking their continued use*"

Request for additional information No. 1

It is not clear if the adopted SOERs for the daily landfill covers represent potential emissions from the proposed alternative daily cover.

a) The EPA requests clarification on whether SOER are based on odour emission rates from waste covered with alternate daily cover, being Automatic Tarp Machines, or VENM.

Landfill - Intermediate covers and landfill batters

The odour sampling regime conducted across the site shows variation in SOERs for the intermediate cover. It is noted that 'hot spots' were identified and SOERS up to ~57 OU/m^2/s were measured. The AQAR adopts a median value for areas across the site, excluding the 'hot spot' areas, for consideration of future impacts. The assessment adopts this approach on the basis areas would be rectified, including the provision of additional gas extraction infrastructure. Appendix C states, for the series of elevated analytical results that "*these were not included in the other scenarios as SITA has rectified these emissions points*". No data or information has been included to support any odour reductions achieved at these areas.

Comment

The EPA notes that the proponent has undertaken remediation works to address odour from current "hot spots". Retesting of the remediated "hot spots" identified in the AQAR will be required in 2016, through the environment protection licence, to determine if remediation work has been effective in reducing odours.

Garden Organics ("GO") Facility

(a) Turkey manure

Section 7.5.2 of the AQAR outlines the use of pre-composted turkey manure, and Appendix C outlines an SOER of 867 for chicken manure, which has been adopted in the absence of data for turkey manure. However the modelling inventory doesn't appear to include any SOERs at this level. It is unclear if turkey manure has been adequately considered within the modelling assessment.

(b) Active composting

The assessment adopts SOERS based on measured data from another facility (the SITA Brooklyn Site). Appendix C outlines that the referenced SOERS were scaled, coupled with a reduction factor associated with the use of the Gore covers. It has not been outlined (including justification) what scaling has been conducted. Additionally no data supporting the 90 % control efficiency for the use of Gore covers has been included.

(c) Maturation

Table 7-11 of the Air Assessment outlines an SOER for product maturation of 0.7 OU/m^2/s. However Appendix C outlines a range of SOERs up to 6.1 OU/m^2/s. It is not clear the justification for adopting the lower SOER for maturation of compost.

(d) Finished Compost

Table 7-11 of the Air Assessment adopts an SOER for finished compost of 0.34 OU/m^2/s. However Appendix C outlines an SOER of 2.6 for matured product. It is not clear the justification for the lower SOER for finished product.

(e) Turning

Table 7-11 of the Air Assessment outlines an SOER of 1.18 for "turning". Presumably this is for turning events of compost, where spikes in odours can occur. However Appendix C outlines a range of SOERs for turning based on data presented in other assessments, and references SOERs up to 20.5 are referenced.

Request for additional information No. 2
The EPA advise that based on points (a) to (e) above there is uncertainty with the adopted emission rates, and the SOERs are unlikely to be conservative.

a) The EPA request a more detailed justification be submitted for the adopted SOER. Where there is uncertainty with the application of a specific SOER, a conservative approach including a sensitivity analysis of the range of referenced values on the predicted impacts should be presented.

Meteorological Data for Assessment

The methodology for assessing predicted impacts adopts a level 2 impact assessment which includes the use of site-specific input data. Meteorological data has been sourced from the on-site weather station. Data has been selected for a nominal period from October 2011 to September 2012. It is not clear why this period was selected for input into predicting odour impacts, or if the selected period represents longer term conditions and is representative of conditions at the site.

The assessment includes annual, and seasonal wind rose diagrams to describe the meteorological patterns at the site for the data selected. The windrose diagrams outline 0% calm conditions in all instances. Such a low portion of calm conditions is unusual. Calm conditions are known to relate to potential odour impacts. This is likely due to low wind speeds categorised within the windrose, however clarification on the quantity of low wind speed conditions should be sort.

Request for additional information No. 3

a) The EPA recommend that the meteorological data used for assessment purposes:

- Be demonstrated to adequately represent the longer-term meteorological conditions at the site; and
- Adequately represent an appropriate portion of conditions that effect poor dispersion (i.e. calm or low wind speed conditions).

Selection of Dispersion Model

The assessment adopts the AUSPLUME dispersion model to predict ground level odour concentrations. AUSPLUME is a steady state Gaussian dispersion model package. AUSPLUME is an approved dispersion model for use in most applications in NSW, however it is not approved in some applications where other more advanced dispersion models, such as CALPUFF, may be more appropriate. The *Approved Methods for Modelling* outlines two key factors that should be considered in evaluating whether to use a conventional plume model (i.e. AUSPLUME), those being:

1. Is the steady-state assumption in the plume model valid?
2. Do the technical parametrisations in the plume model adequately treat the situation to be modelled?

AUSPLUME has limited application with consideration to low wind speed or 'calm' conditions. These conditions can drive odour impacts.

Request for additional information No. 3

a) The EPA requests a detailed justification for the selection of AUSPLUME in the context of site specific sources, terrain and meteorology. Alternatively, if suitable justification cannot be presented, an impact assessment based on modelling that can be suitably justified for the proposal must be presented.

Inclusion of Terrain Effects

The assessment outlines that "*given that the planned odour sources are all at or near-ground, the effect of local terrain is not accounted for in AUSPLUME, and terrain was therefore not included*". The EPA note that terrain is a key input parameter that can affect dispersion and must be considered. Not including terrain effects because the modelling package that has been selected is unable to account for it is not considered suitable justification. The EPA advises there are modelling packages which can suitably handle dispersion in complex terrain.

Request for additional information No. 4

a) The EPA requires an odour assessment be undertaken that adequately considers terrain effects.

Mitigation Options and Control Efficiencies

The proposal includes the adoption of mitigation measures for additional proposed odour generating activities, those being the GO Facility and the Advanced Resource Recovery Treatment (ARRT) Facility. The proposed GO Facility activities include the use of concrete bunkers and breathable membrane covers (proposed for use during the first four weeks of the composting cycle).

A control efficiency of 90 % was adopted for assessing odour emissions from the first four weeks of the compositing cycle. It is noted that no detailed supporting information has been included to justify the adoption of a 90 % reduction for the proposed mitigation measures. Additionally the report states, "*GHD do not have access to New South Wales odour sampling data for composting windrows with Gore or similar covers but we are aware that such data exists and demonstrates that covers are very effective in reducing the emission of odour from compost."*

Request for additional information No. 5

a) The EPA requests documentation that supports the 90% reduction referred to in the EIS so an adequate assessment of its effectiveness can be made.

Averaging Period for Assessment Purposes

Section 8.2.2 of the outlines the parameters used for the dispersion modelling stage of the assessment and includes the adoption of a three minute averaging period for predicting odour impacts. The EPA advice that the assessment criteria for Odour is for a 1 hour average (peak-to-mean nose response).

Request for additional information No. 6

a) The EPA requires that the proponent clarify or revise the modelling to include assessment against 1 hour (peak-to-mean nose response) impacts.

Dust Impact Assessment

Chapter 9 of the AQAR includes an assessment of predicted particulate matter impacts at sensitive receptors. The assessment includes the preparation of an emissions inventory, dispersion modelling of PM_{10} emissions (24 hour average), and consideration of potential cumulative impacts with reference to annual average background data from the Liverpool monitoring station.

Request for additional information No. 7

a) The EPA requires that the dust impact assessment be revised and must:

- Include an assessment of all relevant particulate fractions and averaging periods;
- Adopt background concentrations representing the averaging period being assessed. The adopted annual average background concentration for assessing 24 hour average impacts is not considered suitable;
- Present predicted impacts, as incremental and cumulative (increment plus background) reported as the 100^{th} percentile. As per the *Approved Methods for Modelling and Assessment of Air Pollutants in NSW* (the Approved Methods) cumulative impacts maybe maximum impact plus maximum background, or a contemporaneous assessment.

Attachment 3: Surface Water Assessment - EPA request for additional information on the Lucas Heights Landfill and Resource Recovery Expansion

Request for additional information No. 1

a) The EPA requests how much freeboard (depth in cms) is required to hold a 5 day 90th percentile rainfall event in Sediment Dam 5?

Request for additional information No. 2

a) The EPA requests details of what sized rainfall event could the sediment dam hold if the freeboard level is maintained at the base of the 10ML settling zone in Sediment Dam 5?

Ref: Page 13-8 of the EIS

Request for additional information No. 3

The EPA seeks clarification on how the Proponent proposes to manage surface water in the GO Facility. The information provided in the EIS is not clear.

- Section 6.3.4 of the EIS states "*All clean water collected from the roof and breathable membrane covers via a separate collection system. Separation of clean water from garden organics leachate would prevent excessive volumes of contaminated water from being produced. The clean water would be conveyed direct to the natural environment (Mill Creek), or stored for later use on site."*

- The Water Balance results for the ARRT/GO facilities indicates that the only surface water being discharged to Mill Creek is from the ARRT Roof and Hardstand.
  Ref: Section 6.3.4 and Figure 13.11 of the EIS

a) The EPA requests clarification of which of the above proposed surface water management approaches is accurate and which approach was used to calculate storage requirements for the two leachate dams?

Please note, without further surface water quality information from the GO Facility bunker area the EPA would require that the rainwater falling onto the breathable membrane covers to be collected and treated as leachate.

Attachment 4: Leachate Assessment - EPA request for additional information on the Lucas Heights Landfill and Resource Recovery Expansion

Request for additional information No. 1
The EIS estimates that in a 50% AEP rainfall year the existing final cap (1800mm min. of compacted crushed sandstone) allows significantly more rainwater to infiltrate the cap than intermediate cover (300mm min compacted crushed sandstone) (17% compared to 7% on a platform, 12% compared to 5% on slopes).

a) The EPA asks the proponent to explain why thicker cover resulted in more rainfall infiltration.

Ref: Table 15.2 and Table 15.3 of the EIS.

Request for additional information No. 2
The EIS estimates that in a 50% AEP rainfall year the infiltration difference between intermediate cover (300mm min compacted crushed sandstone) and the proposed final cap (100mm topsoil, 250mm revegetation layer, 500mm subsoil layer, 600mm compacted clay barrier and 300mm seal bearing layer) is marginal.

That is, the proposed final cap was projected to reduce rainwater infiltration only 1% more than intermediate capping on platforms and 1% less than intermediate capping on slopes.

a) The EPA asks the proponent to explain why there was little difference between the infiltration rates of the intermediate cap and the proposed final cap.

Ref: Table 15.2 and Table 15.3 of the EIS.

Request for additional information No. 3
In 50% and 10% AEP rainfall years, the estimated leachate generation for existing operations compared to stage 1 is very similar. Leachate is then expected to reduce as areas are capped. So in effect, SITA is proposing to increase current leachate treatment capacity and trade waste limits to meet both current and projected leachate generation levels.

Ref: Table 15.5 of the EIS

The EPA notes that the proposal is planned to commence in June 2015.

a) The EPA requests details of proposed contingencies if increases to leachate processing or changes to the trade waste agreement are delayed?

Request for additional information No. 4
The EPA notes that the proposal is to place waste without a leachate barrier/liner on top of existing waste cells on the southern end of the Lucas Heights facility.

a) The EPA requests the Proponent justify the proposed leachate collection system on the reprofiled landfill areas. The justification must be detailed and consider alternative leachate barrier options (including a collection layer) on all surfaces on which waste will be placed under this proposal.

Request for additional information No. 5
Calculations by GHD on stages 5.2 and 5.3 (i.e. the north area) indicates that the leachate collection pipework for these cells can withstand a weight/cover height of 75m. The leachate collection pipework and its integrity is essential for the proper management of leachate in a landfill. It is not clear if the unit weight of waste used to calculate the weight/height cover of 75m and the depth of waste in cells 5.2 and Cell 5.3 has been provided in the EIS.

a) The EPA requests the Proponent provide the proposed height of Cell 5.2 and Cell 5.3 from the base of the cell to the proposed final landform?

b) What unit weight for waste was used by GHD to calculate the height of 75m?

c) The EPA requires the proponent assess the structural integrity and hydraulic performance of existing leachate collection infrastructure under the additional leachate and waste loads to be imposed by the proposed overtopping of waste and storage of leachate in Cell 5.2 and Cell 5.3.

Ref: Point 4.3 (page 18) of Appendix C