

INTEGRATED BASIC ASSESSMENT AND WASTE MANAGEMENT LICENCE APPLICATION PROCESS FOR THE DECOMMISSIONING AND REHABILITATION OF THE STELLENBOSCH LANDFILL SITE IN STELLENBOSCH, WESTERN CAPE

Comments and Response Report No.2

Date: 30 May 2017

This Comments and Response Report reflects the comments submitted on the Draft Basic Assessment Report public comment period (6 November 2014 to 9 January 2015). Note that comments and requests for registration on the project database have been included below.

Table 1: List of Interested and Affected Parties (I&AP) Submissions

No	Name	Organisation	Date	Method
1.	Frederik Stapelberg	Council for Geoscience	7 November 2014	Letter submitted via email
2.	Karin Neethling	Withers Environmental Consulting	7 November 2014	Email
3.	Dr Charlie Boucher	Nearby resident and botanist	11 November 2014	Email
4.	G.J. Olivier	Western Cape Government Health: Public Health Programmes, Environmental and Port Health	17 November 2014	Letter
5.	Rochelle McPherson on behalf of Shaun Swanepoel	Eskom	26 November 2014	Letter received via email
6.	Rhett Smart	CapeNature	15 January 2015	Letter received via email
7.	Arabel McClelland	Department of Environmental Affairs and Development Planning (DEA&DP), Land Management Directorate	23 December 2014	Letter received via email
8.	Alfonso van Vuuren	City of Cape Town	29 January 2015	Letter
9.	Vhengani Lingudu	Department of Water and Sanitation	18 February 2015	Letter
10.	Cor van der Walt	Western Cape Department of Agriculture	15 December 2014	Letter
11.	AB Hall	Heritage Western Cape	12 December 2014	Letter
12.	Zayed Brown	DEA&DP, Directorate: Pollution and Chemicals Management	25 June 2015	Letter received via email
13.	Rod Boyes on behalf of Grace Swanepoel	Western Cape Department of Transport and Public Works	29 January 2015	Email

No	Name	Organisation	Date	Method
14.	Jahne de Wet	DEADP, Directorate: Pollution and Chemicals Management, Sub-Directorate: Remediation and Emergency Incident Management	6 August 2015	Letter received via email
15.	Joy Leaner	DEA&DP, Directorate: Air Quality Management	5 June 2015	Email
16.	Simon Botha	DEA&DP: Remediation and Emergency Incident Management	6 August 2015	Letter

Table 2: Comments and Responses

No.	Comments received	By	Method of Submission	Response/Comment
1.	<p>1. The final side slopes of 1V:3H are quite steep, and even though the slopes may appear stable under normal weather conditions (as indicated by the geotechnical assessment) this may reduce significantly during periods of high rainfall and inundation. In view of this, and additionally in the light of the finding in the floodline assessment that parts of the site occur below the 1:50 year floodline (particularly the area around the bridge at the entrance from Devon Valley Road), I fully support the floodline management mitigation measures as stipulated on pages 173 and 174 of the draft BAR.</p> <p>2. Please note that the full geotechnical report (by Fouche and Pape) has been omitted from the list of specialist reports in Appendix G of the draft BAR (refer <i>inter alia</i> to discussion under chapter 3. on page 139.</p>	<p>Frederik Stapelberg Council for Geoscience</p>	<p>Letter submitted via email dated 7 November 2014</p>	<p><u>EAP Response:</u> Thank you for your call earlier and your comment on the Draft Basic Assessment Report (BAR). I will forward your email to the Geotechnical Specialist and the design engineers for a response.</p> <p>Please find attached, the geotechnical report for your perusal. Your comment will be recorded in the Comments and Response Report which will be included in the Final BAR that will also be made available for comment.</p> <p><u>Design Engineer's response:</u> The design makes provision for the following stability calculations:</p> <ul style="list-style-type: none"> - Stability of the waste body taking into account the cohesion, angle of shearing resistance and unit weight of the waste;

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				<ul style="list-style-type: none"> - Interface friction between all the different layers in the capping design; - Internal friction as well as internal shear strength of all the materials used in the capping layers; - Efficient surface run-off drainage by means of contour berms and also the effective drainage of the growth medium (topsoil) to prevent pore-pressure build-up due to saturation of the layer in the event of rain; - Gas drainage under the capping layers to prevent gas build-up / pressure from below the capping system. <p>All these calculations were done and all resulted in a Factor of Safety of more than 1.5 (the minimum design FoS = 1.5). Shear box testing with site specific materials are also underway to confirm assumptions made during our design calculations.</p>
2.	Could you please register Withers Environmental Consultants as an I&AP for the Stellenbosch landfill decommissioning and closure project.	Karin Neethling from Withers Environmental Consulting	Email dated 7 November 2014	<p>Thank you for your correspondence. Your request for registration as I&AP for this project is noted and recorded.</p> <p>You are also invited to the public open meeting scheduled for 11 November 2014 from 18:00 until 19:30 at the SylvanVale Conference Room, Devon Valley Hotel, Stellenbosch.</p>

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3.	<p>Issues I raised at the end of your meeting:</p> <ol style="list-style-type: none"> 1. Is there communication between the landfill closure plans and the municipal planners in respect of potential routing of the Stellenbosch western bypass as this could influence your process? 2. Are the monitoring sites adequate to measure groundwater pollution (particularly from Cell 1) and are there limits placed on the acceptability levels prior to alleviation measures being introduced and what would these be? 3. Is the long-term accumulation of heavy metal pollution in biota being monitored and have limits been put in place to trigger alleviation measures? <p>Thank you for arranging and leading the process this evening at Devon Valley.</p>	Dr Charlie Boucher	Email dated 11 November 2014	<p>Thank you for your correspondence.</p> <ol style="list-style-type: none"> 1. The Town Planning Department was present during the inter-departmental meeting held in Stellenbosch and they are aware of the closure plans. 2. <p><u>Engineers response to No. 2:</u></p> <p>The licence process from our side and the EAP's side is not prescriptive with regards to the monitoring requirements. DEADP will go through the specialist studies and will address all necessary monitoring requirements and these requirements will then form part of the licence. A monitoring protocol is normally written into the licence.</p> <p><u>Groundwater Specialist's response to No. 2:</u></p> <p>No – the existing monitoring boreholes are in a dismal state. There are no guidelines on levels of acceptability. Levels of acceptability will be based on ambient groundwater conditions and then limits can be set (using a statistical approach) which will probably be as part of the groundwater monitoring protocol once the site has been upgraded.</p> <ol style="list-style-type: none"> 3. Heavy metal pollution is normally not of a concern at general landfills (as is the case with Stellenbosch Landfill), but basically the

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				<p>same applies as described above in point 2. DEA&DP will address the issue in the licence if there are reasons of concerns based on the specialist studies.</p>
4.	<p>Your letter with reference: 19/2/5/1/B4/46/WL0118/14, dated 6 November 2014, refers.</p> <p>From an Environmental Health point of view there is no objection against the proposed decommissioning and rehabilitation of the Stellenbosch landfill facility on condition that:</p> <ol style="list-style-type: none"> 1. The approved Environmental management Programme (EMP) for the closure of the facility is strictly adhered to; and 2. All further requirements of the applicable Municipal Health Services authority (Cape Winelands District Municipality: Environmental Health Component) are adhered to. 	<p>G.J. Olivier Western Cape Government Health: Public Health Programmes, Environmental and Port Health</p>	<p>Letter dated 17 November 2014</p>	<p>Thank you for your comments.</p> <p>The EMP was amended to include the requirement to comply with the Cape Winelands District Municipality: Environmental Health Component. The adherence to the EMP will be a condition of the Environmental Authorisation, should this project receive a positive decision by the DEA&DP.</p>
5.	<p>This application affects Eskom power lines:</p> <ul style="list-style-type: none"> - DEZALZE / STELLENBOSCH 66kV - STELLENBOSCH / FIRGROVE 132kV <p>A survey to determine the height of the 132kV conductors above ground level, within the area of interest, was conducted on 16 April 2014.</p> <p>Eskom does not oppose the proposed work subject to the following:</p>	<p>Rochelle McPherson on behalf of Shaun Swanepoel Eskom</p>	<p>Letter submitted via email dated 26 November 2014</p>	<p>Thank you for your correspondence and providing the conditions on which your support for this project is based.</p> <p>Noted. The restrictions will be maintained throughout the project life-cycle. The EMP was updated to reflect these requirements.</p>

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	<ul style="list-style-type: none"> a. That a minimum ground and area clearance of 7.0 metre from the conductors of the 132kV overhead power line must be maintained. b. If a road is to be built underneath the 132kV overhead power line, a clearance of 8.0 metre from the conductors must be maintained. c. There is an 11 metre building and tree restriction on either side of the centre line of the 66kV power line which must be observed in all future developments. d. There is an 15.5 metre building and tree restriction on either side of the centre line of the 132kV power line e. There is a 5.7 metre clearance above ground level for 66kV overhead power line. f. No work and no machinery nearer than 3.2 meters from the conductors of the 66kV overhead power line. g. No work and no machinery nearer than 3.8 meters to any conductor of a 132kV overhead power line. h. No construction work may be executed closer than 6 (six) metres from any Eskom structure or structure-supporting mechanism. i. That existing Eskom power lines and infrastructure are acknowledged as established infrastructure on the properties and any rerouting or relocation would be for the cost of the applicant/developer. j. That Eskom rights or servitudes, including agreements with any of the landowners, obtained for the operation and maintenance of these existing power lines and 			

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	<p>infrastructure be acknowledged and honoured throughout its lifecycle which include, but are not limited to:</p> <ul style="list-style-type: none"> i. Having 24 hour access to its infrastructure according to the rights mentioned in (a) above, ii. To perform maintenance (structural as well as servitude – vegetation management) on its infrastructure according to its maintenance programmes and schedules, iii. To upgrade or refurbish its existing power lines and infrastructure as determined by Eskom, iv. To perform any other activity not listed above to ensure the safe operation and maintenance of the Eskom power lines or infrastructure. <p>k. Natural ground level must be maintained within Eskom reserve areas and servitudes.</p> <p>l. Eskom must have at least a 10m obstruction free zone around all pylons (not just a 10m radius from the centre).</p> <p>m. Eskom shall not be liable for the death or injury of any person, or for loss of or damage to any property, whether as a result of the encroachment or use of the area where Eskom has its services, by the applicant, his/her agent, contractors, employees, successors in title and assignee.</p> <p>n. The applicant indemnifies Eskom against loss, claims or damages, including claims pertaining to interference with Eskom services, apparatus or otherwise.</p> <p>o. Eskom shall at all times have unobstructed access to and egress from its services.</p>			

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	<p>p. Any development which necessitates the relocation of Eskom's services will be to the account of the developer.</p> <p>q. Pietie Mostert, Kraaifontein TSC, must be contacted on 021 988 7477 before working in close proximity to the overhead power lines.</p>			
6.	<p>CapeNature would like to thank you for the opportunity to comment on the proposed development and would like to make the following comments. Please note that our comments only pertain to the biodiversity related impacts and not to the overall desirability of the proposed development.</p> <p>The project proposal is for the decommissioning of Cell 1 and Cell 2 of the Stellenbosch Landfill and subsequent rehabilitation in accordance with the proposed end-use. The landfill site is surrounded by agricultural, municipal and industrial land uses. There is minimal natural vegetation in the immediate surroundings and correspondingly there are no Critical Biodiversity Areas either. The natural vegetation that does remain would be associated with the Veldwachters River which passes along the eastern boundary of the landfill.</p>	Rhett Smart from CapeNature	Letter submitted via email on 15 January 2015	Thank you for taking the time to provide us with your comments.

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	<p>A freshwater specialist study was undertaken for the project. The study confirmed that the Veldwachters River is in a poor condition by the stage that it reaches the site, due to upstream land-use activities (mainly agriculture), and it worsens after it passes through the site as a result of the wastewater treatment works (WWTW) and the landfill site.</p> <p>CapeNature has commented on the proposed upgrade of the WWTW where the issue of the water quality of the Veldwachters River was raised, in particular as a tributary of the Eerste River which it flows into nearby. The outcomes are still of relevance for this application.</p> <p>CapeNature supports the findings and recommendations of the freshwater specialist report. Should all the measures be implemented it is likely to have a net positive impact from the current status. One aspect that CapeNature requires clarity on from the freshwater specialist project team is whether it may be preferable from a water quality perspective if the stormwater run-off was directed into an off-stream dam (there are several artificial dams on site) prior to entering the watercourse, taking into consideration feasibility and context of the surroundings.</p> <p>The proposed alien clearing programme and riparian rehabilitation would be important mitigation measures for improving the ecological condition of the river and riparian habitat.</p>			<p><u>JPCE (Project Engineers):</u></p> <p>The purpose of a rehabilitation design is to ensure that the waste body does not impact on the environment in future and the storm water design is part of that. Once the site is capped all stormwater run-off would be collected in the stormwater channel and would be considered uncontaminated unless otherwise proven by the water monitoring results. In the event that contamination does occur the point of contamination must be determined and addressed.</p> <p><u>Toni Belcher (Aquatic Ecology and Wetland Specialist) on Cape Nature's comment relating to the water quality mitigation for the stormwater runoff:</u></p> <p>I was under the impression that the stormwater that would be captured within the stormwater canal would be diverted around and away from the landfill site and thus would not be contaminated by the landfill site. There would therefore not be a significant water quality issue and the need to mitigate this. This aspect would need to be confirmed by Jan Palm's team.</p> <p>If there is potential for contamination of the storm water from the landfill site then the proposed attenuation dam would certainly be supported. The mitigation of such a dam would perhaps be of more value in mitigating the flow aspect of the</p>

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	<p>Various alternatives were proposed for the end-use at the initiation of the project, which has been narrowed down to three alternatives in the Draft BAR (it is noted that the end-use alternative analysis was much more thorough than most other</p>			<p>stormwater. I would like to see the project engineer's response on this aspect.</p> <p><u>JPCE (Project Engineers):</u> Toni's assumption in the first paragraph is correct. Once the site is capped all stormwater run-off collected in the s/w channels is considered to be un-contaminated unless otherwise proven by the water monitoring results. In the event that contamination does occur the point of contamination must be determined and addressed. The purpose of a rehabilitation design is to ensure that the waste body does not impact on the environment in future and the storm water design is part of that.</p> <p><u>Toni Belcher (Aquatic Ecology and Wetland Specialist):</u> It is thus my feeling that the suggested stormwater detention pond would not be required, only energy dissipaters at the stormwater discharge point to address the potential erosion of the stream bank at the discharge point.</p> <p>We note your support for alternative 1 or 2 or a combination thereof and your objection to alternative 3.</p>

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	<p>cases). CapeNature does not support Alternative 3, which is the no-go option with no rehabilitation.</p> <p>CapeNature would support either Alternative 1 or 2 or a combination thereof, as it will result in an improvement of the ecological condition of the site and/or efficient use of waste resources that will minimise demand for energy generation elsewhere. The project proposal should however be narrowed down and refined for the Final BAR. Also, the potential lifespan and integration of Cell 3 of the landfill should be included into the end-use proposal.</p> <p>More detail is required on the proposed actions related to the informal settlement on site and potential growth thereof, as this could result in significant impacts on biodiversity.</p> <p>One aspect that needs to be mentioned and has not been included in the Draft BAR, is that CapeNature is aware that there are two highly threatened (one Critically Endangered) primitive plant species (<i>Riccia alatospora</i> and <i>Isoetes stephanseniae</i>) that occur on the municipal property which includes the landfill and the WWTW. The two species are restricted to the granite rock sheets and whalebacks, which reduces the threat from development. However, it is recommended that the long term conservation and persistence of these species needs to be integrated into the management of the site (related to the proposed end-use of the landfill), and more detail is required in this regard for the Final BAR.</p>			<p>Additional information on the preferred end-use alternative has been included in the Final BAR in order to refine the project description.</p> <p>Noted. One of the main end-uses for the Landfill is for open space green landscaping making use of indigenous vegetation. Given the two species restricted habitat range and specific requirements mitigation has been incorporated to protect/conservate these species if encountered. However no identified granite rock sheets or whalebacks have been identified where the specific rehabilitation works and gas to power infrastructure will be located.</p>

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7.	<p>1. The above mentioned document dated 6 November 2014, as received by this Department on 5 November 2014, refers.</p> <p>2. This letter serves as an acknowledgement of receipt of the aforementioned document by the Department.</p> <p>3. In addition, this letter serves as an acknowledgement of receipt and acceptance of the revised Application Form by this Department.</p> <p>4. The following is the Department's provisional comment on the draft Basic Assessment Report ("BAR") and must be addressed in the final BAR:</p> <p>4.1. It is apparent that application will be made to the Department of Water and Sanitation in terms of section 21 of the National Water Act, 1998 (Act 36 of 1998) for a Water Use License ("WULA"). Please be advised that proof of submission so such an application to the Department of Water and Sanitation along with the WULA assessment information must be provided to this Department with the final BAR submitted for decision-making.</p> <p>4.2. Comments from, but not limited to, the following relevant authorities must be obtained during the Public Participation Phase ("PPP") and including in the final BAR submitted for decision-making:</p> <p>4.2.1. Cape Winelands District Municipality</p> <p>4.2.2. CapeNature</p> <p>4.2.3. Department of Water and Sanitation; and</p>	Arabel McClelland of DEA&DP: Land Management Directorate	Letter dated 23/12/2014	<p><u>EAP's response:</u></p> <p>4.1. Application for WUL was made to the DWS in 2015. Refer to Appendix E of the FBAR for the application.</p> <p>4.2. The EAP has requested comments from:</p> <p>4.2.1. Cape Winelands District Municipality (although the EAP followed up for comment, no comment was received).</p>

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	<p>4.2.4. Heritage Western Cape.</p> <p>4.3. Further to the above, comment from, but not limited to this Department's Pollution Management Directorate must be obtained during the PPP and included in the final BAR submitted for decision-making. This is with particular respect to landfill gas monitoring requirements and the considerations relating to Alternative 2's impact on air quality.</p> <p>4.4. The Department notes that two Eskom servitudes cross the existing landfill site. It is therefore requested that comment is obtained from Eskom with respect to the potential impact of the proposal on these servitudes.</p> <p>4.5. Please be advised that where the preferred end-use for the site will require services, you are requested to provide written confirmation of service capacity from the municipality that is to be included in the final BAR for decision-making. This is with respect to water supply for both Alternatives 1 and 2 and</p>			<p>4.2.2. CapeNature (comment was received and is included in Section 6 of this document).</p> <p>4.2.3. Department of Water and Sanitation (comment was received and is included in Section 9 of this document).</p> <p>4.2.4. Heritage Western Cape (comment was received and is included in Section 11 of this document).</p> <p>4.3 DEA&DP's Pollution Management Directorate provide comment dated 25 June 2015. However no comment was received regarding the air quality, only water management.</p> <p>4.4. Comment was received from Eskom and is included in Section 5 of this document).</p> <p>4.5. Stellenbosch Municipality will provide written confirmation in respect of service capacity for Preferred Alternatives once the community garden feasibility study results on water quantity and source are finalised if determined viable.</p>

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	<p>potentially waste management and effluent and sewage disposal for Alternative 2.</p> <p>4.6. Please provide clarification or additional information of the following in the final BAR, where relevant:</p> <p>4.6.1. Pages 4 and 38 make reference to the need for a regional waste disposal facility and that currently the municipality is investigating options for managing waste locally, including the potential disposal to a regional site once Cell 3 reaches maximum capacity. On this basis, please clarify the following:</p> <p>4.6.1.1. What is the projected lifespan of Cell 3 and when is it anticipated that this final cell of the landfill site will be closed?</p> <p>4.6.1.2. Can decommissioning, and more specifically, rehabilitation work commence on Cells 1 and 2 without interfering with the operation of Cell 3 or will rehabilitation work only commence upon closure of Cell 3?</p> <p>4.6.1.3. In the event of concurrent operation of the landfill site, namely Cell 3, along with the proposal, what impact wills ongoing operations have on the</p>			<p>4.6.1.1– 4.6.1.4: These have been addressed in the Final BAR in Section A (Page 2).</p> <p>4.6.1.2. Cells 1 and 2 have already been decommissioned and have been subsequently reshaped and waiting for rehabilitation without impacting on the active Cell 3.</p> <p>4.6.1.3. Little significant impact on the operations of Cell 3 will be felt during the rehabilitation work.</p>

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	<p>decommissioning and rehabilitation work? In other words, what limitations and constraints will apply?</p> <p>4.6.1.4. Please elaborate on the alternatives available to the municipality for general waste disposal once the Stellenbosch Landfill site is closed.</p> <p>4.6.2. Will a phased approach be used when undertaking the decommissioning and rehabilitation or will work commence across the entire site simultaneously?</p> <p>4.6.3. It is understood that currently additional testing has been conducted to establish the potential quality and quantity of landfill gas present and whether the proposed gas extraction option (Alternative 2) is feasible. In the event that this Alternative is deemed not to be feasible, is there a secondary option from the scoped alternatives presented in Section E of the BAR that would be considered in its place?</p> <p>4.6.4. If Alternatives 2 is feasible, please provide an indication of the likely lifespan of the gas extraction operations.</p>			<p>4.6.1.4 A detailed list has been included in the FBAR including waste beneficiation schemes.</p> <p>4.6.2. This has been addressed in the FBAR. A phased approach will ensure operations of the active Cell 3 are not affected.</p> <p>4.6.3 Gas testing on site was conducted by TerrAdvies and the results of the tests indicates that the landfill gas is of good quality and has sufficient quantity for gas extraction for a Landfill Gas (LFG) power facility to be feasible. Subsequent to these initial investigations, Royal HaskonigHDV was appointed to compile a feasibility report and gas potential. Their studies confirm there is a viable supply of landfill gas. The final Gas Recovery and feasibility report and designs has been included in the FBAR in Appendix G1.</p> <p>4.6.4 The proposed gas to power facility will be operational for an estimated 8-10 years.</p>

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	<p>4.6.5. Further to the above, as it is assumed the gas extraction operations will have a finite operational lifespan, please indicate the likely way forward for the site once the gas has been depleted. Alternatively, please clarify if the intention is to implement Alternative 1 subsequent to completion of Alternative 2 in this case.</p> <p>4.7. Please be advised that an original signed and dated applicant declaration is required to be submitted with the final BAR to this Department for decision-making. It is important to note that by signing this declaration, the applicant is confirming that they are aware and have taken cognisance of the contents of the report submitted for decision-making. Furthermore, through signing this declaration, the applicant is making a commitment that they are both willing and able to implement the necessary mitigation, management and monitoring measures recommended within the report with respect to this application.</p> <p>4.8. The Department notes the inclusion of signed and dated Environmental Assessment Practitioner (“EAP”) and specialist declarations with the draft BAR but reminds the EAP that these declarations are also to be submitted with the final BAR for decision – making.</p> <p>4.9. On 4 December 2014 the Minister of Environmental Affairs promulgated regulations in terms of Chapter 5 of the National Environmental Management Act,</p>			<p>4.6.5. Alternative 1 and 2 would be developed in combination. The gas to power is estimated to operate for 10 years. On decommissioning the facility, infrastructure which is containerised will be assessed and either refurbished and reused for the same application elsewhere or would be recycled as necessary.</p> <p>Noted. Original signed and dated applicant, EAP and specialist declarations has been submitted with the Final BAR.</p> <p>Noted.</p> <p>Potential listed activities that may be triggered in terms of the EIA Regulations 2014, i.e. GN R. 983, GN R. 984 and GN. R 985 have been</p>

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	<p>1998 (Act No. 107 of 1998) (“NEMA”), viz, the Environmental Impact Assessment (“EIA”) Regulations 2014 (Government Notice (“GN”) NO. R. 982, R. 983, R. 984 and R. 985 in Government Gazette No. 38282 of 4 December 2014). These regulations came into effect on 8 December 2014. Your attention is therefore drawn to the following:</p> <p>4.9.1. In terms of the transitional arrangements specified in Regulation 53 of GN No. R. 982 of 4 December, 2014, a pending application submitted in terms of the previous NEMA regulations, must be dispensed with in terms of those regulations as if they were not repealed. However, the regulations further state that should your pending application comprise any activities that were not listed under the previous NEMA notices, but are now listed in terms of the NEMA EIA Regulations 2014, the competent authority may dispense with such an application in terms of the newly identified listed activities (in terms of the EIA Regulations 2014) have been considered and adequately assessed by the applicant and/or their Environmental Assessment Practitioner (“EAP”)</p> <p>4.9.2 Applicants and/or EAPs are therefore required to reassess all pending applications to include both activities listed in terms of the EIA Amended Regulations 2010 and the EIA</p>			<p>considered in the Final BAR. The impacts thereof have been assessed by the specialists and the EAP and is also addressed in the Final BAR.</p> <p>The application form has been amended and will be submitted to the Department of Environmental Affairs and Development Planning for consideration.</p>

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	<p>Regulations 2014. It remains the responsibility of the applicant and/or the EAP to identify all listed activities applicable to the application. The Department therefore expects applicants (together with their EAPs) to apply their own minds to the transitional arrangements, as well as the new listed activities that may be relevant to your application with respect to GN No R. 983, R. 984 and R. 985 of 4 December 2014.</p> <p>4.9.3. As such, should you wish to proceed with your application in terms of the EIA Amendment Regulations 2010, you will be required to amend your EIA Report in order to include all applicable activities in terms of both the EIA Amendment Regulations 2010 and the EIA Regulations 2014. You will be required to show in your revised report how impacts of activities listed in terms of both EIA Amendment Regulations 2010 also the EIA Regulations 2014 have been adequately assessed. You will also be required to inform all (registered) Interested and Affected Parties of any new listed activities that may be triggered in terms of the EIA Regulation 2014, as well as the Potential impacts thereof.</p>			<p>Interested and Affected Parties (I&APs) have also been notified of the any new listed activities that may be triggered in terms of the EIA Regulation 2014.</p>

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	<p>5. Kindly quote the above mentioned reference number in any future correspondence in respect of the application.</p> <p>6. Please note that the activity may not commence prior to an environmental authorisation being granted by the Department.</p> <p>7. The Department reserves the right to revise initial comments and request further information based on the information received.</p>			<p>Noted.</p> <p>Noted.</p> <p>Noted.</p>
8.	<p>The integrated Basic Assessment and Waste Management Licence application process for the decommissioning and rehabilitation of the Stellenbosch landfill site, distributed for public comment, refers.</p> <p>Solid Waste Department, City of Cape Town, has perused the draft document. At this stage, we have no comments. It is however the intention of the City to reserve further comment as an when additional information or the final documentation becomes available.</p>	<p>Alfonso van Vuuren, City of Cape Town, Utility Services: Solid waste Management</p>	<p>Letter submitted via email on 29 January 2015</p>	<p>Noted.</p>
9	<p>This letter has reference to Draft Basic Assessment Report (DBAR) dated 6 November 2014 with DEA&DP reference number 16/3/1/1B4/45/1081/14 and 19/2/5/1/B4/46/WL0118/14 submitter to this office for comments on the above activity (ies). The Department perused the submitted application and agrees that the proposed development may go ahead, provided the following conditions are adhered to:</p>	<p>Ms Vhengani Lingudu Department of Water and Sanitation</p>	<p>Letter via email 18 Feb 2015</p>	<p>The Departments conditions have been incorporated into the EMP (Appendix H).</p>

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	<ol style="list-style-type: none"> 1. A groundwater monitoring programme must be in place and should include the following: <ol style="list-style-type: none"> 1.1. At least 3 monitoring boreholes, with one up-gradient of the landfill and two down-gradient of the site to measure the influence of the landfill on the groundwater quality in the area 1.2. Monitoring of the water levels at least monthly, with the readings recorded against date and time. 1.3. Water quality monitoring every 6 months, the samples must be analysed at an accredited laboratory for the following parameters: Alkalinity (mg/l), Ammonium (mg/l), Bicarbonate(mg/l), Calcium (mg/l), Chloride (mg/l), Electrical Conductivity (mS/m) Iron, Magnesium (mg/l), Nitrate (mg/l), pH, Potassium (mg/l), Phosphate (mg/l), Sodium (mg/l) Sulphate (mg/l), and Total dissolved solids (mg/l) 1.4. Monitoring of the leachate draining systems must be done to ensure functionality 2. A monitoring report must be submitted to the Department every two years after the license is issued 3. If Groundwater pollution is detected during the course of the monitoring of the site, the Department must be notified immediately. 4. The department reserves the right to revise our comments based on the findings of the monitoring reports 			

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	<p>5. All the relevant requirements of the National Water Act 1998 (Act No. 36 of 1998) and other relevant legislation must be adhered to at all times.</p>			
10.	<p>Your email of 06 November 2014 has reference.</p> <p>The Western Cape Department of Agriculture has no comment on the proposed decommissioning and rehabilitation.</p> <p>Please note:</p> <p>Kindly quote the above-mentioned reference number in any future correspondence in respect of the application.</p> <p>The Department reserves the right to revise initial comments and request further information based on the information received.</p>	<p>Cor van der Walt Western Cape Government: LandUse Management</p>	<p>Letter dated 15 December 2014</p>	<p>The EAP acknowledges that the Department has no comment at this time.</p>
11.	<p>Kindly note that your application in terms of Section 38(8) of the National Heritage Resources Act (Act 25 of 1999) for the proposed rehabilitation of the above mentioned property was tabled at the meeting of the Impact Assessment Committee (IACom) of 12 November 2014.</p> <p>FINAL COMMENT:</p> <ul style="list-style-type: none"> - The Committee supported the recommendations of the consultant, although alternative 1 is preferred. 	<p>AB Hall Heritage Western Cape</p>	<p>Letter dated 12 December 2014</p>	<p>Final comment noted.</p>

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	Should you have any further queries, please contact the official above and quote the case number.			
12.	<p>The above-mentioned documentation was not delivered to the Directorate: Pollution and Chemicals Management as requested (D: PCM) and a hardcopy was sourced for another unit. It is important to impress that the D: PCM must be included in all EIA applications. After review of the application, the following needs to be addressed.</p> <p>a. The waste facility depicted as Cell 1 is listed as being unlined but with a seven metre HDPE forming a barrier between the site and Veldwagters River. Please explain if the depth of the HDPE curtain is seven metres for the surface level and please provide width of the impermeable barrier;</p>	<p>Zayed Brown DEA&DP Directorate: Pollution and Chemicals Management</p>	<p>Letter via email dated 25 June 2015</p>	<p>Noted. A copy of the Final BAR will be submitted to the Directorate of Pollution and Chemicals Management.</p> <p>a: The vertical cut-off curtain is a 1,5mm HDPE geomembrane and it is approximately 7m deep. The important part is not really the depth of the curtain, but the fact that it was installed 0,5m into the underlying clay layer. The solid clay is approximately 7m deep from the surface. In other words the curtain was installed by digging a trench through the sandy sub-soil (more permeable) all the way into the solid clay approximately 7m deep. Reason for this was that any seepage would rather migrate through the more permeable sandy layer on top of the far less permeable clay and would then be intercepted by the vertical curtain. Installed on the inside (landfill side) of the curtain is a flownet which drains the liquid to the bottom of the trench into a perforated pipe from where it</p>

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	<p>b. It is your conclusion (page 18) that, even though there is an impermeable vertical barrier between Cell 1 and that Cell 2 is underlined by an impermeable clay foundation, these two cells are contributing to the contamination of the underlying aquifer. Please explain what additional steps are to be taken to mitigate further contribution of pollutant (leachate) to the ground water resource (after decommissioning);</p>			<p>then gravitates into the pump sump and then pumped to the WWTW.</p> <p>b: The capping design made provision for the fact that Cell 1 does not have an engineered liner and Cell 2 only a compacted clay layer with some stone filled trenches as leachate management. In our design report to be presented to DWS this coming 10 July we have made it clear that one cannot be certain which way leachate would migrate horizontally and that Cell 1's footprint is the largest of the two cells. As a result it would not make sense to design a different capping liner for the two cells based on their base liner situation (or lack thereof). As a result the minimum capping requirements indicated in the Minimum Requirements, 2nd Ed. 1998, could not be used since they are more applicable to landfills that does have a base liner with leachate management. Currently our design makes provision for an impermeable capping (or as close as possible) design. The proposed capping design consists of the following (from top to bottom):</p> <ul style="list-style-type: none"> • 400mm thick vegetated growth medium • HDPE cusped sheets to drain the above vegetation layer • 70mm Trisoplast layer. This is a sand / bentonite / polymer mix which is far

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	<p>c. The design of the storm water facility is not clear. Please explain drainage system to divert 'clean' storm water, stratified from 'contaminated' i.e. storm water emanating from the land-fill proper and directed to the</p>			<p>more impermeable than compacted clay layers</p> <ul style="list-style-type: none"> • 150mm stone gas drainage layer. • Waste body <p>The primary barrier for this design would be the Trisoplast in conjunction with the cusped sheets. This and the fact that the whole site is dome shaped with 1:3 slopes makes it highly unlikely that liquids would enter the landfill through the cap and contribute to leachate generation. Water would rather run down the side slopes or drain within the cusped sheets and into storm water management structures. In addition any horizontal leachate migration within the waste body will be intercepted by the 150mm gas drainage layer which will then drain to toe drain around the toe of the landfill. This toe drain will be linked to the leachate pump sump. The objective of the design was, due to the fact that Cells 1 & 2 have no liner, to prevent any ingress of clean water from the outside and intercept as much as possible contaminated water from the waste body.</p> <p>c: The storm water structures are clearly indicated on the drawings. All storm water channels are clean storm water run-off channels that intercepts the clean run-off from the west of the site and diverts it around the site into the river. All surface run-off from on the</p>

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	<p>Veldwagters River and WWTW respectively? This is especially relevant in view of the shallow groundwater (interflow) levels which could/will exacerbate the already compromised river;</p> <p>d. The Directorate agrees that the boreholes (active and undamaged) and the Veldwagter River must be sampled twice a year. The SANAS accredited laboratory results must be made available to the D:PCM on request.</p>			<p>site itself is considered clean (on top of the capping layers) and drains into contour berms on the slopes and into chutes from where it drains into the perimeter channels around the site and discharges into the river. The site is capped and all water is considered clean until otherwise determined through monitoring. There will be collection basins at all discharge points to collect water for sampling and testing purposes; it would however be the licence holder's responsibility to ensure sampling takes place regularly. With regard to contaminated water, this was explained in 1a where subsurface water from underneath Cells 1 & 2 is intercepted by the curtain and diverted to the WWTW.</p> <p>D: Noted. Results will be made available to the D:PCM on request.</p>
13	<ol style="list-style-type: none"> Your email of 6 November 2014, refers. Please register this Branch as an IAP for the above EIA project with D:EA&DP Ref 16/3/1/1/B4/45/1081/14. All future documentation should be submitted directly to Ms Grace Swanepoel of this Branch as detailed hereunder. 	<p>Rod Boyes on behalf of Ms Grace Swanepoel Western Cape Government:</p>	<p>Email dated 29 January 2015</p>	

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	<p>3. As a result of this comment being submitted after the closing date for submissions please consider the following as comment for further EIA processes for the development.</p> <p>4. Comment is required on the EIA process for the closure and rehabilitation of portions of the existing solid waste landfill site on inter alia Farms 183, 203/2, 279 AND 280, division Stellenbosch.</p> <p>5. This Branch, the Road Authority of Main Road 177 and Divisional Road 1069 in the vicinity of the development, has the following initial comments :-</p> <p>5.1. In terms of Roads Ordinance 19 of 1976 no new accesses may be built or existing access layouts or access uses changed without the approval of this Branch,</p> <p>5.2. Dependant on the quantity and type of traffic generated by activities on the rehabilitated site a Traffic Study by a competent traffic engineer may be required,</p> <p>5.3. Building restriction lines and building lines in terms of Section 9 of Act 21 of 1940 (Ribbon Development Act) and in terms of Section 17 of Roads Ordinance 19 of 1976 respectively are applicable along Main Road 177 and Divisional Road 1069 and</p> <p>5.4. Dependant on the type of lighting to be provided on the site and its possible effect on the road network</p>	Transport and Public Works		5.1 No new accesses are planned as part of this project. Should the above change, prior approval will be requested by your department.

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	<p>this Branch may also need to approve the lighting on portions of the site.</p> <p>6. As this Branch is not opposed to the proposed closure and rehabilitation of the landfill site, it will provide further basic comment during further EIA processes and provide comment in detail during the Land Use Ordinance application stage as well as when access is required from the proclaimed road network.</p> <p>7. Attached please find a conglomerate of Aurecon plans with proclaimed provincial roads shown thereon.</p>			
14	<p>E. The site is classified as a General: Medium: leachate positive (G:M:B+) waste disposal site. A significant amount of leachate is produced since the amount of rainfall received exceeds the evaporation rate. This factor contributes to the landfill being a contamination risk to surface and groundwater sources as well as surrounding residents.</p> <p>F. Confirmation of the projected timeframe for Cell 3 to reach its maximum capacity must be provided.</p> <p>G. The municipality must provide confirmation on which of the two proposed end uses will be implemented.</p> <p>H. The SM committed in the DBAR to establish a post closure monitoring programme, particularly groundwater monitoring and post-closure gas monitoring, as part of the closure and</p>	Simon Botha DEA&DP: Remediation and Emergency Incident Management	Letter	<p>E. Noted.</p> <p>F. Cell 3 has a capacity of 600 000 cubic meters (m³) with approximately 410 000 m³ already used. At the current disposal it is estimated to reach capacity by the end of 2018.</p> <p>G. A combination of both i.e open space green landscaping and gas to power.</p> <p>H. Noted, monitoring reports will be provided.</p>

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	<p>rehabilitation of the site. It must be ensured that the monitoring reports are submitted to the D: PCM.</p> <p>I. Informal dwellings (shacks) are located along the western edge of Cell 2 and along the site fence line of Erf 2/203. The informal settlement named Slab Town/Swaarkry is also located in close proximity to the site and the fact that they reside within the landfill buffer zone must be taken into account in future planning. In the event that proposed future land use increases the risk of exposure of the community to potential contaminants, alternative land uses/relocation of the community must be considered.</p> <p>J. The DBAR indicates that the landfill (particularly Cells 1 and 2) and waste water treatment works are negatively impacting on the groundwater quality (based on groundwater monitoring results of the two remaining monitoring boreholes on site). Your attention is drawn to the following requirements of Part 8 (sections 35 to 41) of Chapter 4 of the NEMWA in relation to the land contamination matters of the site:</p> <ol style="list-style-type: none"> 1. In terms of section 36 (5) of the NEMWA, the Department (D: PCM) must be notified of contamination as soon as the applicant becomes aware of significant land contamination on site. The "Notification of contaminated land" form has been attached to this letter; 2. Should the site be declared an investigation area in terms of section 36(6) of the NEMWA by the Department, based on the afore-mentioned notification submitted to the Department, a Site Assessment may be required to be 			<p>I: The slabtown community was relocated to Vlottenburg as a result of a court order.</p> <p>J: Part 8 (sections 35 to 41) of Chapter 4 of the NEM:WA is noted.</p>

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	<p>conducted that must comply with sub-sections 37(2) and (3) of the NEMWA; and</p> <p>3. Following the consideration of the afore-mentioned Site Assessment by the Department, the site may be declared a remediation site and a remediation order issued for the site in terms of section 38(3) of the NEMWA; or</p> <p>4. If the site is not declared a remediation site, but still considered to be contaminated, and does not present an immediate risk, an order may be issued in terms of section 38(3) of the NEMWA to address the monitoring and management of the risk posed by the site; or</p> <p>5. The Department may decide that the site is not contaminated based on the outcome of the Site Assessment.</p> <p>K. The groundwater level at the site is shallow (0.15 and 0.82 metres below ground level). The D: PCM notes Aurecon's concern about the potential of contamination of the nearby Veldwagters River in the event that the site is not rehabilitated. This is further compounded by the fact that groundwater contamination is evident at the two monitoring well points on site. Failure to rehabilitate the site would result in the continued contamination of a water resource and presents a risk to neighbouring communities.</p> <p>L. Classification of the water quality and ecology indicate that the river has been modified to such an extent that there is extensive loss of natural habitat and biota. Restoration of the</p>			<p>K: The proposed end use includes rehabilitation measures.</p> <p>L. These mitigation measures have been included in the EMP.</p>

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	<p>riverine area (30 m riparian buffer of the Veldwagters River) and the removal of alien invasive vegetation is required for effective remediation and to restore the ecology of the area.</p> <p>M. Please note that D: PM's comments do not exempt applicants from compliance with any other applicable legislation.</p> <p>N. The Department reserves the right to revise its initial inputs and request further information from you based on any new or revised information received.</p>			<p>M. Noted.</p> <p>N. Noted.</p>