

INTEGRATED ENVIRONMENTAL AUTHORISATION AND WATER USE LICENSE APPLICATION

**Proposed New 30yr Ash Disposal Facility for Kendal Power Station,
near Ogies, Mpumalanga Province**

DEA REF: 14/12/16/3/3/3/68 and NEAS REF: DEA/EIA/0001624/2013

Comments and Responses Report

Final Scoping Report

Version 1

The Comments and Responses Report (CRR) captures the comments and issues raised by stakeholders during the Scoping phase of the Environmental Impact Assessment (EIA) and Water Use License Application processes for the proposed Ash Disposal Facility at Kendal Power Station, Mpumalanga Province.

As part of the announcement, a Background Information Document (BID), with a comment and registration sheet was distributed to potentially interested and affected parties during November 2012. The BID was also handed out and site notices were put up during the second week of November 2012 at Kendal Power Station and major localised intersections.

This CRR is a record of all the comments and issues raised by Stakeholders ranging across all sectors of society during the Scoping Phase of the EIA including those raised at meetings held. A full record of issues raised is included in this Appendix of the Final Scoping Report.

For easy reference, comments / issues received have been categorised and have been captured according to the Stakeholders' surnames to assist Stakeholders in their verification process that their comment(s) / concern(s) / issues(s) have been properly addressed.

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	COMMENTS, QUESTIONS AND ISSUES	COMMENTATOR(S)	SOURCE(S)	RESPONSE(S)
1.	BIOPHYSICAL COMMENTS			
1.1	Water-related matters			
1.1.1	The concern was raised as to how this project might impact on their groundwater because they have a borehole near the proposed site D	TJALE, Alucia Shanduka Coal	FGM: Mining Houses 4 July 2013	Currently the project is in the Scoping Phase. A number of specialists have been identified and recommended for this project which amongst other includes Groundwater. Detailed information will be provided later during the EIA process. <i>Mathys Vosloo, Zitholele Consulting</i>
1.2	Air Quality/Pollution-related matters			
1.2.1	What impact this project will have on the air quality and whether it will add to the deteriorating state?	FENYAWE, Priscilla eMalahlaleni Local Municipality	FGM: District & Local Municipalities 20 June 2013	The impacts will be evaluated by the specialists who will conduct an air quality assessment. From this assessment Zitholele can determine the degree and significance of the impact and propose suitable mitigation measures. <i>Mathys Vosloo, Zitholele Consulting</i> In terms of the engineering design we have made provision for an irrigation system that will aid in dust suppression in the area. <i>Nevin Rajasakran, Zitholele Consulting</i> In terms of the output of the power station from the air quality point of view that is not going to increase. The power station will remain the way it is now. It's not a capacity increase in terms of the emissions. The

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				only thing we are taking care of is the space that takes the ash Christopher Nani, Eskom
1.3 Leachate-related matters				
1.3.1	It was asked how Eskom is managing the leachate that is being produced during the disposal of waste.	KHOZA, Hlahla eMalahlani Local Municipality	FGM: District & Local Municipalities 20 June 2013	The Power Station has a ground water monitoring system in place which is managed by external consultants and specialist. If there are any problems than measures are in place to rectify the matter. Monthly reports are being submitted to Eskom. This is in line with the EMS and ISO14:001 that the power station compiles to. Tobile Bokwe, Eskom On the proposed development a liner system will be put in place, which will have a leachate collection system. There will also be a ground water monitoring system in place. Nevin Rajasakran, Zitholele Consulting
2. SOCIAL COMMENTS				
2.1	It was asked if procurement / employment guidelines are given to contractors that have been awarded the contract.	MASHIYANE, C/r Harry eMalahlani Local Municipality	FGM: Stakeholders 20 June 2013	Guidelines are provided to the appointed contractor. Bongani Simelane, Eskom
2.2	It was asked whether there will be any job opportunities for the local people and will there be any opportunity for skills transfer to the young people in the area.			Eskom's existing work force will be used. Mathys Vosloo, Zitholele Consulting In addition to the above there is no job creation associated with this proposed

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				project. The lining work of the facility required skilled labour and will be done by specialists. The rest of the work will be done by Eskom's existing work force. Tobile Bokwe, Eskom
2.3	It was asked whether there are any farm dwellers on the Site Alternatives and if so, what will happen to them.			Should there be communities that need to be moved it will be done through Eskom who will go and negotiate with those that are affected. A social impact assessment will be undertaken to identify if there are any dwellers in the sites that are identified. Mathys Vosloo, Zitholele Consulting
3. CURRENT MINING AREAS				
3.1	It was enquired as to where Shanduka Coal is currently mining in relation to Kendal Power Station.	RAJASAKRAN, Nevin Zitholele Consulting	FGM: Mining Houses 4 July 2013	There is no mining taking place at Leeufontein site and neither one of the four sites affect Shanduka Coal unless for future mining. Granny Kgole, Shanduka Coal
4. CURRENT ASHNG FACILITY				
4.1	It was asked what is going to happen to the current facility that is being used? Will it be rehabilitated?	FENYAWE, Priscilla eMalahlaleni Local Municipality	FGM: District & Local Municipalities 20 June 2013	The current ash facility would be rehabilitated. Large portion of the ash dump has been rehabilitated already. Trees and vegetation has been planted. This will continue to be done on the new site Boipelo Molema, Eskom

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5. SITE ALTERNATIVE COMMENTS				
5.1 Site F				
5.1.1	<p>Anglo American has a problem with Site F for the following reasons:</p> <ul style="list-style-type: none"> • Anglo coal's conveyors are running through this site and no activity is allowed to take place next to these conveyors. • Anglo also plans to mine in this area. • There are three oil pipelines (20, 40 and 60 inches in size) at Bankfontein 216 IR. • There is Shanduka coal, West Coal and Homelands mining in the area • There is also underground mining, but couldn't be confirmed 	DUROW, Leanord Anglo American	FGM: Mining Houses 28 June 2013	<p>The conveyors and mining activities on site F are noted. Given the fact that the EIA is still in the Scoping Phase site F has not been excluded and in the event that site F emerges as the preferred alternative, Eskom will enter into negotiations with all affected Mining Houses on site F. Eskom and the EIA project team are cognisant of mineral and prospecting rights in the area and where possible will avoid sterilising these resources. The feasibility of site F will be investigated in light of this new information in the EIR phase of the project.</p> <p><i>Mathys Vosloo, Zitholele Consulting</i></p>
5.1.2	It was furthermore stated that if the area can be reduced then Anglo will be open for negotiations	DUROW, Leanord Anglo American	FGM: Mining Houses 28 June 2013	<p>The EIA project team and engineers undertaking the conceptual design do strive to minimise the ash disposal footprint and optimise the design to avoid sensitive environments and mining areas. Ways to minimise the ash disposal facility footprint and capacity will be investigated in the EIR phase.</p> <p><i>Mathys Vosloo, Zitholele Consulting</i></p>
5.1.3	It was indicated that Kusile mining would like to mine on Portion 20 and enquired how the conveyors will be placed.	PHELE, Mr Tlotlo Kusile Mining	FGM: Mining Houses 28 June 2013	<p>The Project Manager informed Kusile Mining where the likely potential conveyor alignments may be placed on a map of the proposed project alternatives. It was agreed between the parties that Eskom will</p>

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				<p>enter into negotiations at an early stage with Kusile Mining in it becomes evident that prospecting and mineral rights may be affected adversely. Kusile Mining, and all other Mining Houses for that matter, will be informed throughout the EIA process as per the regulations.</p> <p>Mathys Vosloo, Zitholele Consulting</p>
5.2 Site B				
5.2.1	It was pointed out that Anglo American has mining rights and prospective licensing for coal mining.	DUROW, Leanord Anglo American	FGM: Mining Houses 28 June 2013	<p>The prospective mining rights on Site B are noted. The feasibility of site B will be investigated further in the EIR phase and in the event that site B emerges as the preferred alternative negotiations between Anglo American and Eskom will commence. Eskom and the EIA project team are cognisant of mineral and prospecting rights in the area and where possible will avoid sterilising these resources.</p> <p>Mathys Vosloo, Zitholele Consulting</p>
5.2.2	Small piece need to be negotiated with Anglo for the reason that a small part on the North Eastern part of the site falls within their mining rights.			<p>The mining right is noted as per the FGM. See response above in 4.2.1.</p> <p>Mathys Vosloo, Zitholele Consulting</p>
5.2.3	Shanduka Coal was mining at this site.			<p>The presence of mining by Shanduka Coal was pointed out by representatives of Shanduka Coal and further consultation with Shanduka will be undertaken during the EIR phase.</p> <p>Mathys Vosloo, Zitholele Consulting</p>

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5.2.4	It was stated that Kusile Mining has prospecting rights and have applied for mining rights for Portion 38 and 88.	PHELE, Mr Tlotlo Kusile Mining	FGM: Mining Houses 28 June 2013	It was agreed between the parties that Eskom will enter into negotiations at an early stage with Kusile Mining in it becomes evident that prospecting and mineral rights may be affected adversely. Kusile Mining, and all other Mining Houses for that matter, will be informed throughout the EIA process as per the regulations. Mathys Vosloo, Zitholele Consulting
5.3 Site C				
5.3.1	Anglo Coal and Kusile Mining has no concern with Site C.	DUROW, Leanord Anglo American and PHELE, Mr Tlotlo Kusile Mining	FGM: Mining Houses 28 June 2013	No concern noted by the EIA Project Manager. Mathys Vosloo, Zitholele Consulting
5.4 Site D				
5.4.1	The project team was informed that Homelands' Company are possibly mining in the area and that Ingwe Mining was looking to mine on sections of the Site D. There is a possibility that Zibuluko Mine's conveyors traverses Site D.	DUROW, Leanord Anglo American	FGM: Mining Houses 28 June 2013	The project team has tried to elicit comments from Homelands and Ingwe Mining, but has received none. More intense consultation with these Mining Houses will be undertaken early in the EIR phase. The presence of a coal conveyor across site D along a north-south alignment has been confirmed, and this will be included in the feasibility assessment of site D in the EIR phase. Mathys Vosloo, Zitholele Consulting
5.5 General				
5.5.1	It was requested that shape files be	KGOLE, Ms Granny	FGM: Mining	Shanduka will look at all four identified

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	provided to enable Shanduka Coal to identify their Mining Right areas.	Shanduka Coal	Houses 4 July 2013	sites and provide feedback in terms of how Shanduka Coal will be impacted with the sites. He added that they should provide information such as which areas are undermined, which areas they have mining rights for and the areas they are prospecting to obtain mining rights. Nevin Rajasakran, Zitholele Consulting
5.5.2	Kusile Mining has prospecting rights in the area. Should site H be the chosen site what are the rules of engagement between Eskom and Kusile Mining since Kusile Mining has prospecting rights near Site H.	PHELE, Mr Tlotlo Kusile Mining	FGM: Stakeholders 20 June 2013	Question noted and a response will be provided in the CRR. Nevin Rajasakran, Zitholele Consulting Site H has been eliminated as a potentially feasible site due to the extent of services that will have to be relocated and the destruction of a seasonal pan where greater and lesser flamingo's have been recorded during some parts of the high flow period. The area encompassed by site H may be affected by potential conveyor alignment. Eskom will avoid sterilisation of mineral rights as far as possible, and will enter into negotiations with Kusile Mining at an early stage as a starting point to find a mutually beneficial arrangement. Mathys Vosloo, Zitholele Consulting
5.5.3	Kusile Mining does not have a problem with all four Site Alternatives presented.		FGM: Mining Houses 28 June 2013	Comment noted. Mathys Vosloo, Zitholele Consulting
5.5.4	It was asked whether there are any government owned property in the various Site Alternatives.	NOBELA, Mrridew Dept of Public Works, Roads & Transport	FGM: Stakeholders 20 June 2013	There are no government owned property. Mathys Vosloo, Zitholele Consulting

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6. CONVEYOR ALTERNATIVE COMMENTS				
6.1	Once the information regarding the conveyor alternatives are available, Kusile Mining would like to be involved on how the conveyors will be planned.	PHELE, Mr Tlotlo Kusile Mining	FGM: Mining Houses 28 June 2013	Further consultation with Kusile Mining will be undertaken as soon as feasible conveyor alignments have been identified during the draft concept design period.
7. DRAFT SCOPING REPORTY COMMENTS				
7.1 Authorities				
7.1.1	Emalahleni is being identified as a high priority area in terms of Air Pollution	FENYANE, Ms P Environmental Manager: eMmalahleni Local Municipality	Letter: 15 July 2013	This statement cannot be refuted and the EIA project team is very aware of the local air quality status in the region. The EIA team will ensure that local and cumulative impacts from the proposed development will be comprehensively investigated by the air quality specialist during the EIR phase and implementable and effective mitigation measures are recommended. Mathys Vosloo, Zitholele Consulting
7.1.2	This kind of a project might have an impact on the already affected air quality in the area. Another concern is the issue of leachate management and will systems be put in place for ground water monitoring			Impact on existing air quality is noted and the response in 4.1.1 is also applicable here. With regards to the leachate management and potential ground water pollution, a Department of Water Affairs approved liner system will be installed to prevent pollution due to leachate. Further a leachate monitoring system will be installed as part of the liner to monitor leachate production. A Ground water monitoring programme will also be investigated as part of the Environmental

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				Management Programme for the project. Mathys Vosloo, Zitholele Consulting
7.1.3	The question was raised regarding the possible plans for the rehabilitation of the current ash facility once it's no longer used.			The current ash facility will be rehabilitated in its entirety before the facility can be decommissioned. It is proposed with the new ash facility that rehabilitation will occur concurrently with ash deposition in order to reduce air quality and surface water impacts.
7.2 Stakeholders				
7.2.1	<p>The DSR notes that some of the aims are to:</p> <ul style="list-style-type: none"> • Provide information on the proposed project; • Provide I&APs with a description of the baseline environment; and • Define the ToRs for specialist studies <p>It is submitted that a baseline description has not been conducted and that the DSR, although a rather large document, fails to describe the potential hazards from the fly ash and coarse ash that would reasonably be expected to have been conducted from appropriate existing analytical methodology and a review of international literature.</p> <p>This information should be included in the source description but it is not. Furthermore, the pathways aspect that is described for many issues pertaining to site</p>	MEYER, Dr JA Appointed Consultant for TOPIGS SA (Pty) Ltd	Report: 18/07/2013	<p>A brief description of the potential hazards from fly ash and coarse ash has been included in the FSR. Further investigation of the potential impacts on human, plant and animal life will be undertaken during the EIR phase of the project.</p> <p>Mathys Vosloo, Zitholele Consulting</p> <p>It is important to note that the capacity of the Kendal Power Station will not increase, therefore neither will the deposition rate of ash. The possible impacts of the longer</p>

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	<p>selection, does not account for the baseline conditions of the receiving environment for the hazardous pollutants that are involved.</p> <p>Some noticeable omissions are apparent in both the descriptive detail, list of relevant GNs and ToRs which be detailed for adequate specialist studies to be conducted. These include the GN 704 (of 4 June 1999) and the GN 32816 (of 24 December 2009).</p> <p>It is argued that inclusion of the stipulations for the protection of wetlands in the DSR would have been appropriate in the proposed site selection methodology and may have altered the decisions relating to the “no-go” option. The detailed sources and receptor sampling and analytical methodology should be clearly stated in the ToRs in order to prevent their omission in the EIA.</p> <p>It is lastly noted that many of these issues have been raised with the proponent and the consultant in DSR and EIA processes conducted in the catchment for Kusile</p>			<p>conveyor route and different location of the ash facility will be investigated during the EIR phase.</p> <p>Mathys Vosloo, Zitholele Consulting</p> <p>Relevant GNs relating to the NWA and NEM:AQA have been included in the FSR. All specialists will be mandated to undertake their specialist studies as per best practice and regulatory procedures prescribe and will take into account all relevant legislation.</p> <p>The site selection methodology and identification of feasible areas is based on best available information such as the National Freshwater Ecosystem Priority Areas project information. Unfortunately confirmation of wetlands and water bodies that may contribute to the assessment of the ‘no-go’ option can only be undertaken during the detailed site assessment by the relevant specialists. The detailed sources and receptor sampling and analytical methodology for each specialists has been summarised in the ToR for each specialist to keep the FSR concise.</p> <p>Mathys Vosloo, Zitholele Consulting</p> <p>Information from similar ash disposal projects in the vicinity of the Kendal Power Station has been meaningfully incorporated.</p>

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	Power Station and New Largo Colliery. Whilst these are separate projects the cumulative impact and information shared should by now be meaningfully incorporated.			<i>Mathys Vosloo, Zitholele Consulting</i>
7.2.2	<p>Section 1.1 of DSR: Some of the stated aims listed are:</p> <ul style="list-style-type: none"> • “Provide information to the authorities as well as Interested and Affected Parties (I&APs) on the proposed project as well as a description of the baseline environment “; • Indicate how I&APs have been afforded the opportunity: to contribute to the project; to verify that their issues, raised to date, have been considered; and to comment on the findings of the impact assessments; • Define the Terms of Reference (ToR) for specialist studies to be undertaken in the EIA; and • Present the findings of the Scoping Phase in a manner that facilitates decision-making by the relevant authorities. <p>However, the DSR does not provide comprehensive analytical descriptions of the waste to be disposed of, nor does it provide literature on the composition thereof.</p>	MEYER, Dr JA Appointed Consultant for TOPIGS SA (Pty) Ltd	Report: 18/07/2013	<p>Aims listed are confirmed. <i>Mathys Vosloo, Zitholele Consulting</i></p> <p>A comprehensive description of the waste to be disposed of will be undertaken during the EIR phase of the project. <i>Mathys Vosloo, Zitholele Consulting</i></p>

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	<p>Whilst it is recognized in section 4.2 that the waste is to consist of fly ash and coarse ash from coal burning operations, reference is only made to the detection of Cr (IV). Consequently this raises concerns that the DSR not only fails to inform the I&APs of the hazardous pollutants relevant for the consideration of impacts and proposed site selection, but fails to conduct basic baseline description, which in turn raises doubts about the ability of the areas selected to absorb any additional burden.</p> <p>It is reasonable to expect that internationally published Hazardous Air Pollutants and environmental hazardous chemicals associated with fly ash and coarse ash to be included and described as part of the DSR.</p> <p>It should be noted that this has been indicated to the proponent (Eskom Holdings) and to the consultant tasked with undertaking the DSR (Zitholele Consulting) and air quality specialists at the Kusile Power Station EMC meetings and public stakeholder meetings already attended, in which the contact details for the Senior Scientist at Pelindaba Analytical Laboratories was provided for the methodology for sample collection and analytical determination.</p>			<p>A summary of the composition of ash is provided in the FSR. A detailed assessment of the impacts and constituents will be undertaken in the EIR phase of the project. Statements regarding the additional burden on the environment will only be investigated in the EIR phase.</p> <p>Mathys Vosloo, Zitholele Consulting</p> <p>Response above refers.</p> <p>Mathys Vosloo, Zitholele Consulting</p> <p>Noted.</p> <p>Mathys Vosloo, Zitholele Consulting</p>

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	<p>Reference made to the cumulative nature of the planned operations is acknowledged in the DSR and should thus take cognizance of the I&APs inputs to the catchment and general receiving environment already made.</p> <p>Despite the input already provided no such appropriate baseline determination has been conducted, an omission which not only fails to address the stated aims (see above) but also precludes an assessment of the public health and environmental impacts that may apply.</p>			<p>Cognisance will be taken of comments already made during assessment of the cumulative impacts during the EIR phase of the project.</p> <p>Mathys Vosloo, Zitholele Consulting</p> <p>The EAP believes that a description of the baseline environment has been undertaken to satisfy the stated objectives of the DSR. Detailed assessment to the nature eluded to shall be included in the DEIR once specialist studies specifically undertaken for the identified sites has become available, and thus a detailed assessment of potential impacts and mitigations can be considered by authorities and I&APs in context of these detailed studies.</p> <p>Mathys Vosloo, Zitholele Consulting</p>
7.2.3	<p>Wetlands</p> <p>Sections 3.2.2; 3.3 and 3.5 refer: In these sections references are provided for the relevant Acts and GNs that may be applicable, including GN R 544, GN 718, Section 21 of the NWA and Act 45 of 1964 and Act 43 of 1983 (Table 3.4), but the omission of the GN 704 (4 June 1999) is critical.</p> <p>Section 3.5 notes that:</p>	MEYER, Dr JA Appointed Consultant for TOPIGS SA (Pty) Ltd	Report: 18/07/2013	<p>GN 704 (4 June 1999) has been included in the FSR and will be considered.</p> <p>Mathys Vosloo, Zitholele Consulting</p>

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	<p>The identified study area contains a large number of rivers and streams (including the Wilge River), wetlands and pans. Some of these water resources is likely to be affected by the development of the ash disposal facility. As a consequence, this project is likely to require a water use license in terms of Section 21 of the NWA.</p> <p>Despite this recognition of the presence of surface water and wetlands, the GN 704 (of 4 June 1999) is not mentioned.</p> <p>According to the National Water Act (Act No 36 of 1998) the Regulation on the use of water for mining and related activities aimed at the protection of water resources, GNR No 704, section 4(b) of the schedule states that:</p> <p><i>4. Restrictions on Locality</i> <i>No person in control of a mine or activity may-</i> <i>(b) ...carry on any underground or open cast mining, prospecting or any other operation or activity under or within the 1:50 year flood-line or within a horizontal distance of 100m from any watercourse or estuary, whichever is the greatest.</i></p> <p>Whilst section 5.4.1. notes that a 500 m buffer was considered as a “no-go area” during the consideration of a feasible location, the proposed areas appear to</p>			<p>Response above refers. Mathys Vosloo, Zitholele Consulting</p> <p>The buffer of 500 m was only applied to the Wilge River as a “no-go” area when water resources were considered due to the importance of the Wilge River in the</p>

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	<p>potentially contravene the 100m buffer from the edge of the temporary zone of wetlands as detailed in GN 704.</p> <p>Without the stipulated 1: 50 year flood line or the delineation studies to determine the appropriate buffer zones of the potentially impacted upon wetlands and rivers, it is not possible to determine the extent of the impact or to arguably determine the feasibility of the proposed site sufficiently.</p> <p>Whilst it is noted in Section 10 that the wetland delineation will be performed during the EIA process, the inclusion of buffer zones from a desktop study using the existing images would have conceivably been a crucial consideration that would have guided the process of site selection and thus consideration.</p> <p>Similarly, as relevant to activities contemplated under Section 21 (e) of the NWA, the appropriate buffer zones from groundwater and surface water should also be included. It is not clear if this was done for the DSR as not all the groundwater points are indicated, although the proposed sites do appear to be within the 200m zones recommended by the reference documentation the GNs provide (Water Research Commission Technical Reports).</p>			<p>Olifants River WMA. Further tributaries and streams were assigned a minimum buffer of 100 m, which cumulatively with the rest of the criteria used during the site identification process, provided an indication of the developable areas. The areas identified at the conclusion of this process only reflect the maximum area that may potentially be available for an ash facility. As you will notice the disposal site footprint is smaller, and in some of the areas considerably smaller than the delineated areas. This specifically allows optimal placement of an ash facility within the identified area. This implicitly includes maximum avoidance of water sources where possible.</p> <p>Mathys Vosloo, Zitholele Consulting</p> <p>Noted and agreed. This is exactly the reason these aspects will be investigated in the EIR phase of the project. The site identification process is an indicative process aimed at identifying areas of low environmental, social and technical sensitivities, which is then further investigated with detailed specialist studies. The required buffers for groundwater and surface water resources will no doubt be included in such studies and will contribute to the detailed comparative assessment that will be</p>

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	<p>Whilst it is noted in the DSR that the 500m buffer zone from wetlands as required by the NWA resulted in Iteration 1: No feasible areas identified, this apparently led to continual reductions in the buffer zone in an attempt to arrive at a feasible site.</p>			<p>undertaken between the identified feasible sites during the EIR. Mathys Vosloo, Zitholele Consulting</p> <p>Agreed.</p>
<p>7.2.4</p>	<p>Impact Assessments: Air and Water Quality: <u>Sections 3.2.2; 3.3 and 3.5 refer again:</u> In these sections references are provided for the relevant Acts and GNs that may be applicable, including GN R 544, GN 718, Section 21 of the NWA and Act 45 of 1964 and Act 43 of 1983 (Table 3.4), but the omission of the GN 32816 (24 December 2009) is critical.</p> <p>It is unclear why in Table 9.1 “no mention is made under the section on “Air Quality” regarding the actual composition of the hazardous waste in question, with only references to dust being made. This would apparently support the concerns noted regarding the lack of baseline data gathered during the DSR regarding hazardous air pollutants that are recognized in the scientific literature and environmental agencies.</p>	<p>MEYER, Dr JA Appointed Consultant for TOPIGS SA (Pty) Ltd</p>	<p>Report: 18/07/2013</p>	<p>GN 32816 (24 December 2009) has been included in the FSR and will be considered in the EIA process. Mathys Vosloo, Zitholele Consulting</p> <p>Your concerns regarding the composition hazardous nature of the ash has been noted in the FSR. This will be assessed in the EIR phase. Mathys Vosloo, Zitholele Consulting</p>

	COMMENTS, QUESTIONS AND ISSUES	COMMENTATOR(S)	SOURCE(S)	RESPONSE(S)
	<p>Although the term “ash” does appear under the “Surface and Ground water” section, the same concerns regarding the lack of baseline data remain.</p> <p>These analytical description issues relating to the hazardous substances relevant, current baseline values and appropriate sources, pathways and receptor topics should be clearly defined and described in the DSR in order to ensure that they are actually conducted during the following phases.</p> <p>As these are not clearly detailed under the ToR in Section 10 of the DSR, further omissions of appropriate sampling and analytical methodology remains a concern.</p> <p>Some omissions appear for no reason, for example, groundwater quality does not appear in the listed activities yet is relevant given the presence of water users reliant on this resource and possible impacts by leachate (which is noted in Table 9.1). Again during section 10.2.7 no clear indication of monitoring the relevant pollutants in groundwater quality is provided.</p> <p>Section 10.2.5 refers to the Water Research</p>			<p>Response above refers. Mathys Vosloo, Zitholele Consulting</p> <p>Analytical description relating to the hazardous substances relevant, current baseline values and appropriate sources, pathways and receptors relating to the dispersal of fly ash and air quality at large will be measured and analysed during the air quality specialist investigation as per the ToR. Mathys Vosloo, Zitholele Consulting</p> <p>Impacts on groundwater have not been omitted. It is included in the Geohydrology assessment. Further, monitoring of pollutants as an activity that will be incorporated into the Environmental Management Programme that will specify stringent monitoring procedures. Mathys Vosloo, Zitholele Consulting</p> <p>Water Research Commission was</p>

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	<p>Council. It is not clear who this represents or why they have the appropriate database. Does the consultant actually intend to refer to the Water Research <i>Commission</i>?</p> <p><u>Air Quality:</u> In the Schedule of Government Notice No. 32816 (24 Dec 2009) the National Ambient Air Quality Standards are established (NEM: Act 34 of 2004), with section 2.3 on Ambient air quality measurement requirements stating that the assessment of all ambient pollutant concentrations shall be conducted in terms of the relevant sections of the National Framework for Air Quality Management. Section 3 on National Ambient Air Quality Standards addresses SO₂, NO₂, Particulate matter, ozone, benzene, lead and carbon monoxide.</p> <p>It is also widely reported in the literature that trace elements may be captured by fly ash and coarse ash with consequent significant environmental concerns as many are reported to be carcinogenic, toxic and potential endocrine disruptors.</p> <p>It is thus proposed that this aspect needs to be addressed more fully and comprehensively and clearly noted in the ToRs where these issues and the issues noted below are dealt with:</p>			<p>intended and corrected. Mathys Vosloo, Zitholele Consulting</p> <p>Agreed. Mathys Vosloo, Zitholele Consulting</p> <p>Noted. Mathys Vosloo, Zitholele Consulting</p> <p>This issue will be comprehensive assessment in the EIR phase. Mathys Vosloo, Zitholele Consulting</p>

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	<ul style="list-style-type: none"> • National Ambient Air Quality Standards are established (NEM: Act 34 of 2004), with Ambient air quality measurement requirements stating that the assessment of all ambient pollutant concentrations shall be conducted in terms of the relevant sections of the National Framework for Air Quality Management. Section 3 on National Ambient Air Quality Standards addresses SO₂, NO₂, Particulate matter, ozone, benzene, lead and carbon monoxide but monitoring needs to include a comprehensive list of potentially hazardous constituents related to coal, combustion thereof, storage of combustion products and related activities, including transport of both coal and combustion products. Additional key elements include: <ul style="list-style-type: none"> • trace elements captured by fly ash and coarse ash with consequent significant environmental concerns as many are reported to be carcinogenic, toxic and potential endocrine disruptors. <ul style="list-style-type: none"> ▪ The key carcinogenic elements most frequently cited include arsenic, cadmium, nickel and zinc, whilst toxicity concerns are 			<p>Comments are noted. All these concerns will be investigated during the EIR phase of the project. Mathys Vosloo, Zitholele Consulting</p> <p>Noted. Mathys Vosloo, Zitholele Consulting</p> <p>Noted. Mathys Vosloo, Zitholele Consulting</p>

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	<p>most often reported for selenium and mercury.</p> <ul style="list-style-type: none"> ▪ Potentially hazardous trace elements associated with fly ash include: <ul style="list-style-type: none"> • Arsenic; Aluminium; Antimony; Barium; Beryllium; Bromide; Cobalt; Chromium; Copper; Iron; Lanthanum; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Silicon; Strontium; Tungsten; Uranium; Vanadium. ▪ Macro elements include Fluoride, Sulphur and Nitrogen. Other potential hazards include PAHs and VOCs. <ul style="list-style-type: none"> • According to studies published regarding health impacts associated with coal-fired power plants and disposal of coal combustion products concern exists for both air quality and water quality impacts. Numerous environmental studies also observe hazardous substances in a variety of exposure media, from soil to aquatic organisms utilized for human consumption. Public health studies cite 84 separate hazardous air pollutants to be associated with coal-fired power 			<p>Noted. See FSR for constituents of Kendal Ash. Mathys Vosloo, Zitholele Consulting</p> <p>Noted. Mathys Vosloo, Zitholele Consulting</p> <p>Noted. Sampling will include the analysis of all constituents of fly ash, including hazardous constituents, and will comply with the relevant water and air quality legislation and regulations. Mathys Vosloo, Zitholele Consulting</p>

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	<p>plants. Given the sensitivity of the catchment involved for all the sites in terms of wetlands and surface water, and the reliance on groundwater by many of the affected landowners, water quality impacts need to be monitored for the same constituents noted above for air quality.</p> <ul style="list-style-type: none"> In addition, as noted in the previous comments submitted, concerns regarding Turbidity, Suspended Solids, COD, Ammonia and microbiological indicator organisms are also valid due to the impacts for construction activities and stormwater runoff. These should thus also be monitored to assess environmental impact on a continuous basis as it is understood that the construction of the ash disposal facility or facilities will not be a single event but rather an ongoing process as storage requirements increase over time. <p><u>Sections 5.2.2 & 10</u> It is noted in section 5.2.2. that choices between further operational alternatives still require inputs from the air quality specialists. Accordingly, it is emphasized that the appropriate analytical hazardous pollutants be included in the assessment process.</p>			<p>Noted. Sampling will include the analysis of bio-chemical and microbial determinants, and will comply with the relevant water legislation and regulations. Mathys Vosloo, Zitholele Consulting</p> <p>This section has been amended in the FSR. Mathys Vosloo, Zitholele Consulting</p>

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	<p>This is again emphasized as in section 10.2.10 no specific mention is made of Hazardous Air Pollutants. It is reasonable to expect that given the recognition thereof related to coal combustion and ash disposal sites that this should be detailed as a priority with a clear list of elements and methodology included.</p> <p>Section 10.2.16 describes the ash classification, but still does not list as one of the objectives the appropriate recognition of hazardous air pollutants and ash pollutants noted in the scientific literature. This should again be clearly defined, listed and stated upfront in the DSR that such analytical and literature consideration will be conducted and included in the EIA.</p>			<p>The assessment of Hazardous Air Pollutants is inherently implied by “Identification and quantification of all sources of atmospheric emissions associated with the new ash disposal facility.”</p> <p>Mathys Vosloo, Zitholele Consulting</p> <p>Ash classification inherently suggests the identification of <u>ALL</u> constituents, whether hazardous or non-hazardous.</p> <p>Mathys Vosloo, Zitholele Consulting</p>
7.2.5	<p><u>Hazard and Risk Assessment</u></p> <p>Whilst section 10.3 does describe some general concepts of hazards and risks, the fundamental basis of source description is not clearly noted, with the source in this instance being internationally recognized as hazardous to both public and environmental health. It is argued that during the DSR these issues should be defined and clearly listed.</p> <p>This is furthermore relevant to the development of monitoring programmes required for compliance with the relevant</p>	MEYER, Dr JA Appointed Consultant for TOPIGS SA (Pty) Ltd	Report: 18/07/2013	<p>This will be addressed in the EIR phase, as will the development of monitoring programmes required for compliance with NWA.</p> <p>Mathys Vosloo, Zitholele Consulting</p>

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	sections of the NWA.			
7.2.6	<p><u>Mining Activities</u></p> <p>It is noted in section 8.6.3 regarding “Sensitivities” that existing mineral rights exist on numerous properties in the study area. More detail would be beneficial regarding proposed prospecting rights, planned mining permits etc., in the area as this will conceivably influence aspects relating to the impact assessment process as sources and pathways may be altered.</p>	MEYER, Dr JA Appointed Consultant for TOPIGS SA (Pty) Ltd	Report: 18/07/2013	<p>Information on mineral and prospecting rights has been requested through official channels from the DMR more than 3 months ago already. Information has also been obtained from mining houses that may be affected. Confirmation of all land parcels will be completed early in the EIR phase and will factor into the assessment of the identified sites.</p> <p>Mathys Vosloo, Zitholele Consulting</p>
7.2.7	<p><u>Construction:</u></p> <p>No mention is made of handling the waste stream from human effluent and other hazardous wastes associated with the construction phase, both of the ash dump and conveyor systems.</p> <p>No indication is given of the number of people involved and assurances to prevent contamination of the environment (including wetlands, surface and groundwater) by their waste and construction-related hazards.</p> <p>It is argued that this should form part of the DSR process as construction can be assumed to be a process requiring a significant amount of time and people.</p>	MEYER, Dr JA Appointed Consultant for TOPIGS SA (Pty) Ltd	Report: 18/07/2013	<p>It is argued that this information will be assessed in the EIR phase.</p> <p>Mathys Vosloo, Zitholele Consulting</p>
7.2.8	<p>General</p> <p>The sources, pathway and receptor approach is fundamental to the assessment of hazards and risks and accepted world-</p>	MEYER, Dr JA Appointed Consultant for TOPIGS SA (Pty) Ltd	Report: 18/07/2013	<p>Noted.</p> <p>Mathys Vosloo, Zitholele Consulting</p>

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	<p>wide, and implied in the relevant NEMA and NWA Acts.</p> <p>Observation in terms of sampling, analytical determination and transparent reporting, of the relevant potentially hazardous constituents should be included for all these aspects noted in the points above (waste stream and other possible sources; pathways as relevant, e.g. air, soil, water, plant; for relevant receptor types).</p> <p>This should not only be presented as background and baseline information in the DSR but clearly defined in the ToRs for the further specialist studies.</p>			
7.2.9	<p>In response to the DSR Comment Form question as to whether stakeholders' questions, concerns, issues and suggestions have been capture the response was:</p> <p><i>Yes, but there has been no feedback</i></p>	PHELE, Mr Tlotlo Kusile Mining (Pty) Ltd	DSR Comment Form: 24 June 2013	<p>The comments previously received from Kusile Mining (Pty) Ltd were on the Kendal Continuous Ashing Project and not the proposed 30yr Ash Facility at Kendal Power Station project. This comment has been forwarded to the project team dealing with the Kendal Continuous Ashing Project at Kendal Power Station.</p> <p>Nicolene Venter, Zitholele Consulting</p>
7.2.10	Get the electronic map of the four proposed sites and overlay them on the Kusile Mining portions.			<p>This request was executed and the maps presented at the meeting held on Thursday 4 July 2013.</p> <p>Nicolene Venter, Zitholele Consulting</p>
7.2.11	Propose a meeting between Kusile Mining, Eskom and Zitholele			

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8. TECHNICAL COMMENTS				
8.1	It was asked what will the lining cost.	RIGGS, Ivan Dept of Agriculture, Forestry & Fisheries	FGM: Stakeholders 20 June 2013	Zitholele estimate it to be approximately R450/m ² . The reason for this is that the authorities want a H:H lagoon barrier system. <i>Nevin Rajasakran, Zitholele Consulting</i>
8.2	It was ask where the clay will be sourced.			The composite system is made up of 900ml of clay and leachate collection system. It's not easy to get institute clay, therefore we can use geosynthnectic clay liners. However when we look at the design we must look at the reaction to leachate that it does not seep through. Alternatively HDP liners or higher can be used. <i>Nevin Rajasakran, Zitholele Consulting</i>
8.3	It was asked how the drain slope will affect the site preparation.			The flatter the terrain the better but for now one has to work with what is available. <i>Nevin Rajasakran, Zitholele Consulting</i>
9. COMMUNICATION & GENERAL COMMENTS				
9.1	An electronic copy (shape file) of the Site Alternatives as well as a meeting with Zitholele Consulting was requested.	PHELE, Mr Tlotlo Kusile Mining (Pty) Ltd	FGM: Stakeholders 20 June 2013	The shape files were e-mail on 27 June 2013. <i>Mathys Vosloo, Zitholele Consulting</i> All mining houses in the study area were invited to attend the FGM. However, a meeting as requested will be arranged. <i>Nicolene Venter, Zitholele Consulting</i> <u>Post-meeting note:</u>

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				A FGM with Mining Houses was conducted on 28 June 2013 at Kendal Power Station.
9.2	An electronic copy (shape file) of the Site Alternatives was requested.	RIGGS, Ivan Dept of Agriculture, Forestry & Fisheries	FGM: Stakeholders 20 June 2013	The shape files were e-mailed. <i>Mathys Vosloo, Zitholele Consulting</i>