

**PROPOSED HYDROPOWER STATION ON THE ORANGE RIVER IN THE VICINITY OF AUGRABIES FALLS NATIONAL PARK, NORTHERN CAPE:  
COMMENTS AND RESPONSES REPORT 2**

This Comments and Responses Report reflects the comments submitted in writing from **19 July 2013 until 28 August 2013** on the Draft Scoping Report (DSR). Note that all specialist reports referred in the responses to were conducted as part of the BA process. As the process has been upgraded from a Basic Assessment process to an Environmental Impact Assessment (EIA) process these studies will be revised for the EIA. The Interested and Affected Parties(I&APs) raising each comment are listed next to the particular comment.

**LIST OF I&AP SUBMISSIONS:**

<b>Ref.</b>	<b>Name</b>	<b>Organisation</b>	<b>Date Received</b>	<b>Method</b>	<b>Comments not addressed to Aurecon<sup>1</sup> (Person/ Organization addressed to; Date)</b>
1.	Kobus van Copenhagen		29 July 2013 30 July 2013 15 August 2013 27 August 2013	E-mail E-mail E-mail E-mail	A. B. Abrahams (DWA); 27 July 2013
2.	Hannecke van Copenhagen		30 July 2013	E-mail	
3.	Eugene Visser		24 August 2013	E-mail	
4.	Nardus du Plessis	South African National Parks (SANParks): Augrabies Falls National Park (Section Ranger)	26 August 2013	E-mail	
5.	Dr Howard Hendricks	SANParks	28 August 2013	E-mail	
6.	Kathryn Smuts	South African Heritage Resources Agency (SAHRA)	28 August 2013	E-mail	
7.	Graham Page	Tourism Business Consultant	3 September 2013	E-mail	

**ANNEXURES:**

Annexure 1 – Comments Received

**LIST OF ACRONYMS**

<b>CRR</b>	Comments and Responses Report
<b>DEA</b>	Department of Environmental Affairs
<b>DSR</b>	Draft Scoping Report
<b>DEA&amp;DP</b>	Department of Environmental Affairs and Development Planning
<b>DWA</b>	Department of Environmental Affairs
<b>EAP</b>	Environmental Assessment Practitioner
<b>EFR</b>	Environmental Flow Reserve

<sup>1</sup> These comments were addressed to other individuals/ organisations to which Aurecon was cc'd. These comments are therefore noted and included in Annexure 1, but not responded to in this CRR.

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<b>EIA</b>	Environmental Impact Assessment
<b>EMP</b>	Environmental Management Programme
<b>I&amp;APs</b>	Interested and Affected Parties
<b>IRP</b>	Integrated Resource Plan
<b>IWULA</b>	Integrated Water Use Licence Application
<b>NEM:PAA</b>	National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003)
<b>NEMA</b>	National Environmental Management Act, 1998 (Act no. 107 of 1998)
<b>NWA</b>	National Water Act, 1998 (Act no. 36 of 1998)
<b>PPP</b>	Public Participation Process
<b>REIPPP</b>	Renewable Energy Independent Power Producer Procurement Program

**ISSUES HAVE BEEN GROUPED UNDER THE FOLLOWING THEMES:**

<b>1. Legal</b>
<b>2. General</b>
<b>3. Tourism</b>
<b>4. Biodiversity</b>
<b>5. Heritage</b>

**Comments and Responses-** Note that the figure under the Column titled “IAP Ref. No.” refers to the reference number in the list of submissions above.

<b>LEGAL</b>				
IAP Ref. No.	Comment No.	Name	Issue	Response
1.	1.1.	Kobus van Coppenhagen (I&AP)	The Department of Environmental Affairs (DEA) must please confirm whether the DEA ref no will change, since the applicant has not yet complied with their request for the re-submission of the application and by implication they	Often during an Environmental Impact Assessment (EIA) process it becomes necessary to alter either the project itself or the relevant assessment process.  On this basis, an amended application form (containing the updated project description or any other changes) may be

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			could not yet have accepted it? See DEA letter of 18/06/2013 attached below.	<p>submitted to the DEA during the EIA process.</p> <p>While the scope of the proposed project has not changed, the project has been upgraded from a basic assessment process to a full EIA process. We will therefore be updating the application form during the EIA Phase (i.e. the phase that will follow this scoping phase).</p> <p>For purposes of completeness, we confirm that two of the original three applications (in respect of which basic assessment was undertaken) have been withdrawn. The original three applications are included in <b>Annexure A</b> of the Draft Scoping report (DSR). The application which describes the applicant as RVM1 Hydro Electric Power (Pty) Limited is the application which has not been withdrawn and to which the DSR relates.</p> <p>Please note that the reference number issued for the proposed project by the DEA has not changed since the undertaking of the Basic Assessment (BA) process. Accordingly, the reference number assigned to the initial application submitted by RVM1 Hydro Electric Power (Pty) Limited (i.e. 14/12/16/3/3/1/681) remains relevant to the current application.</p>
	1.2.		This project requires a new water use license application which is in conflict with an existing and legal water use and we want to submit that this process should be subject to a full Integrated Water Use Licence (IWUL) procedure which should also include a public participation process. The flow regime of the water fall was already established prior to the	<p>As far as we are able to ascertain, there are no existing water use rights in place within the Park.</p> <p>A Water Use Licence is required for the project with respect to the undertaking of certain water uses specified in section 21 of the National Water Act 36 of 1998 (the NWA). Application will therefore be made to the Department of Water Affairs (the</p>

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			<p>new National Water Act of 1998 and therefor its continued requirements must be met. However due to increases in upstream use and increased irrigation quotas the water fall does not have a sufficient provision of water during certain times of the year, to which it is legally entitled and this proposed power station would drastically reduce the quantity of water available to the water fall and for the sustenance of biological processes and its visual impression on visitors.</p>	<p>DWA) in respect of all water uses (specified in section 21 of the NWA) which will be triggered by the proposed project. The applicant is currently in the process of consulting with the DWA to ensure that such application addresses all relevant activities.</p> <p>With regard to public participation requirements relating to the WUL application process, it should be noted that while the NWA does not specify public participation requirements, DWA may nonetheless require that public participation is undertaken. The applicant will consult with DWA in this regard as and when it is necessary.</p> <p>Notwithstanding any historical assessment undertaken in respect of the flow requirements for the waterfall, an assessment has been undertaken (in the context of the Aquatic Ecology study conducted as part of the BA process) in order to identify the Environmental Flow Requirement (i.e. the volume of water required to maintain biota and ecological processes within the river). This study will be revisited and will included in the EIA Report.</p> <p>As the competent authority, DWA will be required to take account any water use rights already in place (or for which application has been made) in the context of its decision to grant or refuse a WUL application submitted in respect of the project.</p>
	1.3.		<p>This procedure should also include complete verification by DWA or an independent consultant of the quantity and quality of water available to this power plant, without</p>	<p>The EAP is (as is required by the NEMA read with the EIA Regulations) an independent consultant.</p>

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			<p>impacting on this site, and to ensure that the existing and future needs of the Augrabies Falls National Park as a declared conservation area of national importance is met, in the full sense.</p> <p>For the sake of brevity we do not want to expand further, at this stage.”</p> <p>Our telecon of today 29/07/2013 with Mr N Bezuidenhout refers.</p>	<p>We also note that the proposed project will be financed by a Bank via non-recourse project finance. This means that the Bank cannot require the loan to be repaid if something goes wrong. The Bank must therefore satisfy itself that any risks associated with the project (including potential environmental risks) are sufficiently minimised. In order to do so, the Bank will appoint its own independent consultants and engineers (the Lenders Technical Advisors) to verify the findings of the developer's consultants and engineers and ensure that the project is bankable. In addition all projects of this nature are required to have adequate insurance, which will be will also be interrogated by the bank prior to finance approval.</p>
	1.4		Mr Abrahams is the director for Lower Vaal DWA and not Mr Snyders, as you have been previously informed.	Noted. This has already been updated on the project database.
	1.5.		<p>We have become frustrated with the inability of Aurecon to provide the correct documentation for the proposed project timeously and realise that they might not be able to present a properly structured application for comment by the public and consideration by the relevant authorities. We have requested a copy of the current "valid" application on more than one occasion, but have received none so far. We believe that currently, there is no valid application, lodged with DEA, except for informal discussions which were followed up by a letter from DEA, dated 18/6/2013, which</p>	<p>The applicant is RVM 1 Hydro Electric Power (Pty) Ltd. This is the entity that may be referred to when any objection is lodged. The application number remains 14/12/16/3/3/1/681.</p> <p>Refer to comment 1.1 above and response thereto. Comments and concerns or objections can be raised throughout the EIA process. DEA will consider these at the end of the process in their decision-making. Once a decision has been made by DEA there will be a legislated opportunity to appeal the decision.</p> <p>An application has not yet been submitted to the Department of</p>

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			<p>suggest that the applicant resubmit a revised application. The Aurecon letter of 3/6/2013 and DSR page 13 refers to three applications which were lodged by RVM 1, which is incorrect, since the applications were lodged by RVM1Hydro Electric (Pty) Ltd, RVM 2 Hydro Electric (Pty) Ltd and RVM 3 Hydro Electric (Pty) Ltd, respectively. We do not doubt the technical ability of Aurecon, but the document trail is becoming very difficult to follow, especially if you lodge an objection and want to refer to the correct entity. We are challenging the perception that the process is beyond the application phase as proposed in page 16, because the other 2 applications were made in the names of other legal entities. We are thus objecting to the continuation of this process on the grounds that currently there isn't a valid application with either DEA or DWA.</p>	<p>Water Affairs (DWA) with respect to the Water Use Licence (WUL) but will be submitted in due course. It should be noted that a decision can only be made on the WUL once a decision has been made on the EIA application. The WUL process can however run in parallel with the EIA process.</p>
5.	2.1.	Dr Howard Hendricks (SANParks)	<p>While not explicitly forbidden in the National Environmental Management: Protected Areas Act 57 of 2003 (NEM:PAA), the provision of land for infrastructure linked to the commercial generation of power is not listed as one of the functions of SANParks and it is therefore questioned if SANParks is in a position to lease or otherwise provide rights for power generation infrastructure such as those contained in the proposed development.</p>	<p>Section 55 of the NEM:PAA sets out the functions of SANParks. These functions include the management of national parks. SANParks must ensure that a Park is managed in accordance with the purpose for which it was declared a protected area.</p> <p>Section 56 of the Act, sets out the "general powers" afforded to SANParks in the performance of its functions. These powers include <i>inter alia</i> the power to "acquire or dispose of any right in or to movable or immovable property, or hire or let any property". It follows that SANParks is empowered to make land available for purposes of undertaking the proposed project (subject to the restriction referred to in the paragraph directly</p>

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				<p>above).</p> <p>Should the construction of the proposed project (and particularly the portion which is intended to be located within the boundary of the Augrabies Falls National Park (AFNP)) not detract from the purpose for which the area was declared as a national park (as outlined in section 17 of the NEM:PAA and which will be confirmed in the EIA Phase), SANParks will be empowered to make land available to the applicant for purposes of undertaking the project.</p> <p>SANParks itself will play a substantive role (as decision-maker) in the context of the applicant's obligations in terms of the NEM:PAA and the regulations thereto (including the regulations made in terms of section 86 of NEM:PAA).</p>
	2.2.		<p>The difference of opinion between DEA and Aurecon regarding Listing Notice 2 (GN No. R545) of the National Environmental Management Act (NEMA) EIA Regulations must be resolved with immediate effect, rather than just prior to the submission of the final EIA Report for decision-making.</p>	<p>As noted in section 2.1 of the Final Scoping Report (FSR) a meeting with DEA, it was indicated that DEA is of the view that Activity 10 ("The construction of facilities or infrastructure for the transfer of 50 000 cubic metres or more water per day, from and to or between any combination of the following: (i) water catchments, (ii) water treatment works; or (iii) impoundments, excluding treatment works where water is to be treated for drinking purposes) of Listing Notice 2 (GN No. R545) of the NEMA EIA regulations was applicable to the project. Although Aurecon believes this activity is not applicable to the proposed project, it will be included in the amended application form which would be submitted to DEA during the EIA phase.</p>

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	2.3.		The revision of an approved Park Management Plan is the prerogative of the Minister in accordance to NEM:PAA Section 40 (2), whereas the change of a particular zone within a National Park is subject to Section 41 (g) of the same Act compelling SANParks to change such zones with predetermined conservation objectives and activities for all the national parks in the country to allow for the proposed project – the conservation objective is to maintain remote and primitive zones in as near to a natural state as possible with no impact on biodiversity pattern or processes, essentially these areas retaining an intrinsically wild appearance and character, or capable of being restored to such and which is undeveloped, there are no permanent improvements or any form of human habitation, and provides outstanding opportunities for solitude with awe inspiring natural characteristics.	Insofar as the project is inconsistent with the Park Management Plan, the necessary steps will be undertaken by the applicant to amend the plan and/or facilitate compliance therewith. In the event that such amendment is required, this will be addressed during the EIA process.
	2.4.		SANParks notes that the proposed development is not in accordance with the spirit of the National Strategy on Buffer Zones around National Parks.	The National Strategy on Buffer Zones notes that “The viability of protected areas is dependent upon the extent to which such areas are socially, economically, and ecologically integrated into the surrounding region. These issues are especially pertinent to protected areas in South Africa, several of which fall within some of the most populous and poverty-stricken parts of the country. As protected areas are often centres of economic activity, social and economic conditions within and outside of these areas contrast starkly. These discrepancies are aggravated by the fact that in the past some protected areas



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				<p>were established at severe cost to communities. In the creation of protected areas, many communities were forcibly removed without adequate compensation.”</p> <p>The proposed Riemvasmaak hydropower station is a fairly unique development in that it is proposed to build a large part of the infrastructure on private land owned by a community trust (but within the management area of the Park)- a site where the project can make an enormous difference to people who are living in marginal circumstances. As such the proposed project is in line with the spirit of the National Strategy on Buffer Zones around National Parks.</p> <p>In section 4.1 of the FSR the following is noted:</p> <p><i>“The National Strategy on Buffer Zones notes that “The viability of protected areas is dependent upon the extent to which such areas are socially, economically, and ecologically integrated into the surrounding region. These issues are especially pertinent to protected areas in South Africa, several of which fall within some of the most populous and poverty-stricken parts of the country. As protected areas are often centres of economic activity, social and economic conditions within and outside of these areas contrast starkly. These discrepancies are aggravated by the fact that in the past some protected areas were established at severe cost to communities. In the creation of protected areas, many communities were forcibly removed without adequate compensation.”</i></p> <p><i>The proposed Riemvasmaak hydropower station is a fairly</i></p>

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				<p><i>unique development in that it is proposed to build a large part of the infrastructure on private land owned by a community trust (but within the management area of the Park) - a site where the project can make an enormous difference to people who are living in marginal circumstances. As such the proposed project is in line with the spirit of the National Strategy on Buffer Zones around National Parks.</i></p> <p><i>It should be noted that the transmission lines would be within the buffer zone of the National Park.</i></p> <p><i>Most of the project infrastructure, including the powerhouse, transmission line and pipeline, would be buried to mitigate the visual aspect of the proposed project. The visual impact will be assessed further during the EIA process”</i></p>

<b>GENERAL</b>				
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1.	3.1.	Kobus van Coppenhagen (I&AP)	<p>Your response to our comment in the CRR regarding the shareholding of Hydro Tasmania, through their SA subsidiary, refers:</p> <p>Attached is a presentation which was given to the various</p>	<p>The comment (comment 21.22 in CRR1) read as follows:</p> <p><i>“This application is indicative of an absolute lack of sensitivity and respect for the sense of place of the National Parks of South Africa and makes one wonder whether the Tasman Government, as owner of Hydro-Tasmania and partner in</i></p>

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			<p>stakeholders and which was forwarded to us as part of the suite of documents. On pages 32 and 33 the company ownership is laid out and the Hydro Tasmania SA shareholding is discussed. On page 28 the remote control of this activity from Hydro Tasmania's control room is discussed in relative detail. Hopefully this places some of our concerns in context, bearing in mind that Hydro Tasmania was responsible for the Lake Pedder National Park debacle/disaster.</p>	<p><i>Hydro-SA, is aware that they might be party to potential destruction inside a South African National Park. Perhaps we should contact the Tasman/Australian government, to confirm their appetite for this activity inside a high priority conservation area in one of our National Parks, if you would be kind enough to provide the contact details."</i></p> <p>From the abovementioned comment it was understood that Mr Van Copenhagen was under the impression that Hydro-Tasmania is a shareholder in Hydro-SA. This is however not the case. Hydro-Tasmania South Africa (Pty) Ltd and Hydro-SA are separate entities. For the proposed project a separate business entity, RVM1 Hydro Electric Power (Pty) Ltd, has been registered. It is proposed that both HydroSA and Hydro-Tasmania SA would together hold a 50% share in RVM1 Hydro Electric (Pty) Ltd and the remaining shares would be held by other shareholders such as the requisite Broad Based Black Economic Empowerment and the Riemvasmaak Community Trust.</p> <p>The proposed project would be operated remotely from Hydro Tasmania's 24/7 operations room. However, there would also be a local office with people who can respond immediately to any emergencies. As the presentation notes, it is likely there would be different alarm levels. A level 1 alarm would mean that the problem can be dealt with remotely. Level 2, 3 and 4 would require a local operator to attend to the problem. In time a control room may be established in South Africa. Alarms would</p>

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				<p>be sent directly to the control room and a simultaneous alarm notification would be sent to the local operator. The control room operators would ensure the alarm is addressed within the specified time.</p> <p>Lake Pedder was a discrete project wholly unconnected from the one being considered herein. This project is subject to the relevant South African laws and, as is evident thus far, the applicant intends to comply with same and to ensure that the requisite approvals are granted and the project is lawfully and responsibly implemented.</p> <p>With respect to Lake Pedder, the Tasmanian State Government approved the Gordon River Power Development in 1967. The project involved the construction of a large rock fill dam on the upper reaches of the Huon River at Scotts Peak and another on the Serpentine River. This, in combination with the construction of a small dam across a low marshy area at Lake Edgar, flooded the existing Lake Pedder to create a much larger lake, still known as Lake Pedder. Much controversy surrounded this project as many members of the public were in opposition to it. The South-West Tasmania area, including the Lake Pedder area, was declared a World Heritage site on 14 December 1982 (Lake Pedder Restoration Committee: 2000)<sup>2</sup>.</p> <p>Some of the impacts as a result of the “enlargement” of Lake</p>

<sup>2</sup> <http://www.lakepedder.org/> [accessed:10 September 2013]

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				<p>Pedder included the overall loss of vegetation and biodiversity, and erosion caused by wave action (Lake: 2001)<sup>3</sup>. Probably the largest impact was the decrease in the ecological value of the original Lake Pedder (according to Lake (2001) the lake was an ecologically valuable if not unique ecosystem) and the monetary benefit to tourism. There were however also certain limited benefits. According to Hydro Tasmania the variation of Lake Pedder is 1.5 m which enhances its popularity for fisherman and tourists. This low variation maintains the aquatic vegetation thereby protecting fish habitats. Although the ecological value of the initial Lake Pedder is unknown, the existing Lake still attracts tourists and has roads leading into the area with various view points and tourist facilities. Many of these roads are a result of the construction of the dams and without these roads access to the lake would be limited.</p> <p>The Lake Pedder project and the outcry it created is credited with establishing the green movement in Australia in 1972, at a time when world consciousness was turning towards green matters. The Gordon River Power Development was proposed and constructed at a time when few environment laws existed and hence is not indicative of the current outlook of Hydro Tasmania, which has adopted an environmentally conscious outlook as can be evidenced by their environmental policy. Read more about Hydro Tasmania and their environmental</p>

<sup>3</sup> Lake, P.S., 2001. The fauna of Lake Pedder – Changes after the flooding and thoughts on restoration. Lake Pedder: Values and Restoration, Occasional Paper No. 27. University of Tasmania: Tasmania. P. 87 – 98.

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				policy here <a href="http://www.hydro.com.au/environment">http://www.hydro.com.au/environment</a> .
	3.2.		We have asked for a copy of the relevant application to DEA, as requested by them in a letter of 18 June 2013, which you have failed to provide so far. This application had to be submitted again because the projects have changed completely in scope and format. The three projects which have been applied for separately on a previous occasion were going to be consolidated into one application which you had to submit on a date soon after 18 June 2013. This is an administrative procedure which is an important milestone in any application and surely you must know that you can't proceed without finalizing the application, with DEA.	Refer to comment 1.1 and response thereto.
	3.3.		<p>Site visit:</p> <p>We have requested months ago that a meeting be held inside the National Park and that was also requested by the SANParks representative during the public meeting of 5/8/2013. Unfortunately it could not be accommodated and no date has been put forward yet, but a meeting with another party in the area was scheduled by AURECON for 22/8/2013.</p> <p>We did request SANParks to allow us to visit the proposed site. This was arranged for 20/8/2013 and on arrival at the entrance to the land and also at the "Rhino" gate, only the original RVM1, 2 &amp; 3 applications were found to be on display.</p>	<p>During the public meeting of 05/08/13 it was confirmed that a site visit would be undertaken to which all attendees of the public meeting would be invited to. It was agreed that a date early in October 2013 would suffice. It has been confirmed that a site visit will be undertaken on 9 October 2013. Attendees of the public meeting were invited to this site visit on 16 September 2013.</p> <p>The applications at the "Rhino" gate as referred to by Mr van Copenhagen are the notice boards erected to satisfy the requirement of Section 54 (2) (a) of the EIA Regulations GN No. 543 of 2010 of the NEMA which requires that a notice board is fixed at the boundary or on the fence of the site where the activity applied for would take place. As the reference number for RVM1 remains the same, with RVM2 and RVM3 being</p>

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				withdrawn, it is not required that new notices be erected.
	3.4.		<p>Waste, dust and noise:</p> <p>The activity would generate at least 160 000 cubic meters of solid waste, which cannot be stored on site and surely the stockpiling of this waste must get due consideration, since there is no recognised dumping site currently available. Where would the aggregate batching plants be located and how will air quality and spillages be managed in that area. According to Mr N Theron (5/8/2014) only 3 truckloads of waste would leave the site per day, which would leave more than 100 000 cubic meters still on site after 3 years. The notion of bringing a crusher onto the site (p31) is an indication of a very short memory.</p>	<p>The DSR, on p. 31, notes the following regarding spoil:</p> <p><i>“An approximate total of 160 000 m3 spoil material would be excavated from the weir, conduit, powerhouse, and tailrace. The largest amount of spoil would be generated by the construction of the pipeline. Several options will be assessed for the removal and disposal and/or re-use of spoil material. Removal options include:</i></p> <ul style="list-style-type: none"> <li>• <i>Construct road access and allow truck removal of the tailrace tunnel and powerhouse spoil;</i></li> <li>• <i>Construct a tunnel to the powerhouse to allow truck removal of spoil through the tunnel. This would then remain as a permanent powerhouse access.</i></li> </ul> <p><i>Options for disposal and/ or re-use include:</i></p> <ul style="list-style-type: none"> <li>• <i>Identifying possible sites for disposal or stockpiling for future use as infill material near the construction site – one possible site for disposal is a plunge pool area located immediately to the south of the powerhouse (this option might require the need for a crusher on site);</i></li> <li>• <i>Hauling of the spoil material off-site to private land where it can be stockpiled for future use as road building material by the Department of Transport in the Northern Cape and/or farmers in the area; and</i></li> <li>• <i>Hauling of the spoil off-site for use as rehabilitation</i></li> </ul>

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				<p><i>material in existing quarries and/or borrow pits.</i></p> <p><i>A combination of the above options may be required to ensure the proper management of spoil during the construction phase. These options will be assessed in more detail during the EIA phase.”</i></p> <p>The above mentioned are all options being investigated. More detail will be provided on these options in the EIA phase.</p> <p>Insofar as the investigations reveal that activities listed in terms of the National Environmental Management Waste Act and/or the National Environmental Management Air Quality Act are triggered, the necessary applications will be made.</p> <p>The comment from Mr Niel Theron during the public meeting of 8 August 2013 that only three truckloads of waste would leave the site per day was based on a quick mental calculation. More detailed investigation has shown that approximately nine truckloads would be required per day.</p>
	3.5.		<p>Ownership and water.</p> <p>Restoration of the site would be impossible by any means and how would disputes regarding ownership be resolved in the case of default by the developer, i.e. if the price of renewable energy falls drastically and less power is generated due to a lack of water, which we have predicted already, because no water balance determination was done for this application, which requires 3, 2 million cubic meters of</p>	<p>Should the Applicant receive a positive EA and become the preferred bidder, Eskom would sign a contract with the Applicant for a minimum of 20 years. The price at which electricity would be sold would be fixed in the contract. The price would be escalated through the Consumer Price Index. In other words, the price would at least stay constant for the duration of the 20 years. The feasibility of the project is based on the aforementioned price as well as historical flow data (refer to comment 1.3 and response thereto). Note that more detail</p>



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			water/day. Our contention is still that the project would not be sustainable in the long term because the quantity of water constantly available is the paramount requirement for this project to succeed.	will be provided on the hydrology in support of the feasibility of the project in the EIA phase.
	3.6.		The EAP has noted in the CRR regarding our concern about water availability; that any new use in future other than the current would have to take the "requirements" of the hydro power station into consideration, but the applicant does not want to apply for a certain quantity. What other rights are assumed to be conferred to the applicant which could supercede owner's rights or which could transfer responsibility to land owners in the case of neglect by the applicant or the remote operator Hydro Tasmania?	Refer to comment 1.2 above and response thereto. The EAP noted the following in CRR1: <i>"Any future projects which would abstract water upstream of the Augrabies Falls would need to apply for a Water Use Licence and should assess the impact of abstraction on downstream users, including the proposed hydropower station."</i> In other words, any new proposed project has to take into account any existing lawful water users when applying for a WUL. The WUL application would be for the diversion of 37 m <sup>3</sup> /s. If the applicant fails to comply with any conditions of a WUL or EA the relevant authority may take the appropriate enforcement action against the applicant (i.e. the holder of the WUL/EA).
	3.7.		Alternative site: The applicant did also apply for the Neusberg and Boegoeberg shemes, which are the logical alternatives for the Augrabies area. These 2 schemes would give the applicant approximately 30% of the initially allocated quota of 75MW for small hydro, without proven capability or previous track record in this business. Is Hydro Tasmania aware that it will be held responsible for any damage caused by remote plant operation and safety aspects and that RVM 1	The DSR, on p. 33, discusses location alternatives and why the proposed site is being applied for. The applicant did apply for the Neusberg scheme, which is currently being constructed, and the Boegoeberg scheme which is currently undergoing an EIA process. Initially only 75 MW was allocated for hydropower in the Integrated Resource Plan (IRP). This was however increased to a 135 MW and has been awarded as follows: <ul style="list-style-type: none"> <li>• 5 MW on the Ash River (bidding round 2);</li> </ul>

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			<p>cannot/shouldn't be able to indemnify them?</p> <p>We do not object to the other projects in Neusberg or Boegoeberg in principle, because they are outside a National Park.</p>	<ul style="list-style-type: none"> <li>• 10 MW for the Neus project (bidding round 2); and</li> <li>• 5 MW on the Ash River (bidding round 3).</li> </ul> <p>Therefore, of the 135 MW available to hydropower at the moment, 115 MW remains. Of this 115 MW the applicant has only been awarded 10 MW (i.e. 8.7%). As mentioned, the Boegoeberg project is still undergoing an EIA process. Also, should the applicant receive an EA for the Boegoeberg project, it does not necessarily mean that they would become a preferred bidder in terms of the Department of Energy's (DoEs) IPP process.</p> <p>As rivers present themselves with their own particular hydrology and difference in elevation, which are fixed, each river will generate its own particular ability to generate power. As such, South Africa has very few river resources that lend itself to Run of River Hydro, and accordingly these opportunities require that they be optimised individually to ensure the feasibility of the limited opportunities available. It is RVM1's opinion that only the Orange River present hydrology that would be bankable in terms of the Renewable Energy Independent Power Producer Procurement Program (REIPPP) requirement for "green field" projects</p> <p>The rights and responsibilities of Hydro-Tasmania SA (Pty) Ltd flow <i>qua</i> the applicant. Your concern while noted, is thus not directly relevant to this application.</p> <p>Also refer to comment 3.1 above and response thereto.</p>

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	3.8.		<p>Alternative technology:</p> <p>Mr F. Oosthuizen did mention in the meeting of 5 August 2013, that there is a large "brown field site" available, in the form of roofs of existing structures in Augrabies, (or for that matter Riemvasmaak), onto which PV panels could be installed. Alternatively the use of solar trough technology, PV panels or Stirling engines in a dedicated area of Riemvasmaak would be a better solution in most aspects, but as Mr. N Theron has stated in a meeting: he is only interested in developing hydro generation facilities; thus, those alternatives are not even an option to be considered. Any of the above would also be more enabling to the Riemvasmaak community and will give them a sense of ownership.</p>	<p>As noted in Section 1.1.7 of Annexure D the IRP is a National Electricity Plan, which is a subset of the Integrated Energy Plan. The IRP is also not a short or medium-term operational plan but a plan that directs the expansion of the electricity supply over the given period. Developed for the period of 2010 to 2030, the primary objective of the IRP2010 is to determine the long-term electricity demand and detail how this demand should be met in terms of generating capacity, type, timing, and cost. The IRP sets a target of 2 609 MW of new hydropower projects by 2030, hence the 135 MW of hydropower allowed for in the REIPP falls well short of this figure. As such, it is likely that all feasible sites for hydropower are required to meet the IRP target. HydroSA develops hydropower hence it is fitting that they look for feasible sites for hydropower in order to meet the IRP targets.</p> <p>There are indeed many renewable energy options of which PV panels on roofs are one such option. However, there are well-accepted limitations to PV including the intermittency of their performance (i.e. lower outputs on cloudy days and no output during night hours) resulting in low capacity factors (20-30%) compared to hydropower (60% - 80%). This means that for roof mounted PV large areas are required for battery storage. Seasonal variation in output means that PV should be used in combination with other forms of generation which operate efficiently at the times of year when sunshine is weakest.</p> <p>The proposed project, if approved, would include the RVM Community as shareholders in the project, making them co-</p>

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				owners of the project. Other benefits that may potentially accrue to the RVM Community are described in Section 5.4.5.2 of the FSR and will be assessed in detail in the EIA Phase.
	3.9.		<p>Declaration of interest:</p> <p>Is Aurecon responsible for the engineering design of the proposed scheme and what is the value of that service in the event that the project doesn't proceed?</p> <p>DSR page 21 refers to the assumption that all information from the client is correct and unbiased. The EAP must assess this information and comment as they do on all other comments. The client is not an expert in hydro technology and is using the technology base of Hydro Tasmania, which is probably the Project Sponsor as envisaged in the Equator Principles documents.</p>	<p>Aurecon is appointed for the EIA process only and Aurecon's fees are not based on the outcome of the EIA. The engineering design is undertaken by Entura. Entura (Hydro Tasmania's consulting business) undertakes consulting activities on behalf of clients throughout the world.</p> <p>Aurecon does interrogate all information received from the client however, it is acknowledged that the EAPs are not hydropower specialists.</p> <p>Specialists are appointed in the EIA process and their reports will be attached to the EIA report where necessary.</p> <p>As noted in response to 1.3 above the Lender (i.e. the Bank) appoints its own Technical Advisors to verify the findings of the developer's engineers hence any inaccuracies or errors detected after submission in the REIPPP could be very costly or even fatally flaw the proposed project. As such it is in the client's interest to appoint engineers with a proven track record in hydropower technology, and such is the case with Entura. It is a requirement of the REIPPP for any bidder to show proven technology and track record for projects of a similar size and scope. This is done via a full technical specification submission which includes the CVs of the engineering and design staff.</p>
	3.10.		We want to recommend that the following documentation	

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			also inform the applicant over and above those mentioned in page 6 of the DSR:	
			National Environmental Management: Protected Areas Act no 57 of 2003 and Regulation 1061 as published in the Regulation Gazette no. 28181 of 28 October 2005; With specific reference to; Interference with soil or substrate as defined in article 39, Removal and dumping in water area as defined in article 41, Restriction or prohibition of the use of biological resources as defined in article 45, Restriction or prohibition in land use as defined in article 46, As well as any other applicable regulation in this publication or the Park Rules and Management Plan It is a matter of convenience to ignore this legislation and management rules and regulations which are specifically applicable and binding for the management and continued existence of our National Parks. SANParks also have a large number of specialists in their employment and their inputs should be decisive in the final outcome.	The National Environmental Management: Protected Areas Act has been added to the list of key legislation relevant to the project under Section 1.2 of the FSR.
			SANParks publications: A Framework For Developing And Implementing Management Plans For South African National Parks (April 2008). Stakeholder Participation In Support Of Developing And Implementing Management Plans For South African National Parks (December 2009).	These publications will be considered during the compilation of an application to amend the Park Management Plan, once the process of amendment has been established.

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			<p>South African National Parks Week (information booklet) states on page 6; Augrabies Falls National Park "The park was initially proclaimed to conserve a small area of geological interest around the Augrabies Falls"</p> <p>Our note: The Augrabies Falls should be considered as a singular geological entity, worthy of protection for posterity. Very little of the riverine habitat which is unmodified and functions naturally, does remain.</p> <p>IUCN publication: Guidelines For Applying Protected Area Management Categories, edited by Nigel Dudley; discuss on p66 the preservation of Geodiversity as a separate category for National Parks but also states on p67 that geodiversity can be protected under all categories.</p> <p>S A Council for Geoscience publication : GEOclips vol 20 June 2007: back page; "We are currently witnessing a worldwide awareness of the importance of conserving and promoting sites and regions of geological and mining interest for the tourism business,"</p>	<p>The geology around the falls would not be affected. While some rock would be affected along the proposed route of the canal and at the power house location this is likely to be of interests to geologist who would be able to see inside the rock as it were. The geology of the park would be for the most part unaffected.</p>
			<p>Department of Environmental Affairs website: Environmental Indicators: "Grassland, Thicket and NAMA-KAROO biomes have the highest proportion of under-protected ecosystems."</p> <p>Department: Government Communications and Information System Pocket Guide to South Africa 2010/2011 Page 208:</p>	<p>The potential impacts on botany, ecology and tourists will be assessed in the EIA Report and where necessary mitigation measures will be put forward to reduce negative impacts.</p>

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			<p>Environment, Conservation Areas : reporting on governments strategy to expand conservation areas from 6% to 10 % and that management categories for protected areas in SA conform to accepted categories of IUCN.</p> <p>Page 229; Tourism, Northern Cape: (the introduction to this section is recited) "The Augrabies Falls National Park, with its magnificent falls pressing through a narrow rock ravine, remains the main attraction of the Northern Cape."</p>	
	3.11.		<p>The following concepts of the Equator Principles and IFC Performance Standards refer;</p> <p>This is definitely a category A project.</p> <p>Project Sponsor ... Hydro Tasmania?</p> <p>Is "Effective Control", which is required for "unlisted countries", demonstrated by remote operation of the facility, which in this case would be an operational control room of the Tasmanian government agency, Hydro Tasmania.</p>	<p>The Project Sponsor is RVM1 Hydro Electric (Pty) Ltd and its shareholders and hence effective control resides within that company. Hydro Tasmania will offer services from their control room but the Operations and Maintenance company which is a South African company will have operations offices close to site.</p>
	3.12.		<p>Indigenous people: project info and approval. It is quite interesting that the equity providers put great emphasis on this aspect, but the applicant only introduced the project to the trust decision makers and only started to inform the community at a very late stage.</p>	<p>We assume Mr Van Coppenhagen is referring to the RVM Community Trust. Based on this assumption please note the following:</p> <p>The RVM Community Trust has a Constitution with specific requirements for community engagement and in order to ensure these guidelines are followed the Trustees of the RVM Community Trust were first approached in 2009. The proposed project was first presented to the people of the trust on</p>

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				November 2012 and again in August 2013. This was in order to avoid creating expectations when due process still needs to be followed. It should be noted that although the RVM community is supportive of the proposed project they will only decide on leasing the land to the project once the EIA process has been completed and all the impacts are presented to them. The minutes of the August meetings are included in Annexure B.
	3.13.		Finally, the method of integrating Carbon Pricing/Credits in the financial model of the business should be published. It is a matter of public knowledge that businesses like Hydro Tasmania depends heavily on Carbon Price subsidies to make it profitable. 70% of the Hydro Tasmania profit of approximately AU\$ 100 million/pa in the last 2 years (CRR comment 10.3) was contributed by carbon pricing on the National Energy Market in Australia. The carbon footprint of large hydro dams can be very substantial due to methane release and it does not merit carbon crediting. The Carbon Price/Credit system should also be viewed as a short term initiative to promote "renewable energy" but that funding will ultimately be spent on carbon capture and storage or conversion projects.	<p>Although the project may be eligible for registration for carbon credits and similar environmental products (for example, other small hydro run-of-river projects in South Africa have been registered under the Clean Development Mechanism existing under the United Nations Framework Convention on Climate Change), given the current market volatility in pricing of carbon credits it is unlikely that any revenue from carbon credits will be sufficiently certain to underpin financing of the project. The reality is therefore that carbon pricing / credits are unlikely to form part of the revenue stream in the financial model necessary to underpin the project.</p> <p>The proposed project is a run-of-river project and would not result in the construction of a large dam. The RVM Hydro Electric Project would require the construction of a low weir with a maximum height of 2.5m. Under low flow conditions (flows less than about 100m<sup>3</sup>) the weir would raise water levels in the Orange River for a distance of about 1500m upstream of the weir by a maximum of about 1.0m. For higher flows, the relative increase in water levels would be less. Under low flow</p>



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				conditions, water would stay within the banks of the Orange River. Studies are underway that will provide an understanding of the impact of the weir on the aquatic environment and the riparian vegetation.
	3.14.		The consultant deliberately ignored our objection regarding public notices which does not indicate the location of the project within a National Park and that is unacceptable and our objection in that regard remains.	<p>The public notices indicates the registered properties on which the project is proposed as follows: <i>“RVM 1 Hydro Electric Power (Pty) Ltd wishes to construct a 40 Megawatt (MW) hydropower station on the Orange River, on the farm Riemvasmaak (Remainder of Farm no. 497 and Portion 1 of Farm no. 498), north of the Augrabies Falls...”</i></p> <p>The purpose of the last set of public notices was to notify the public of the availability of the DSR for comment and the public meeting. The DSR which is available in the Kakamas Library, the Augrabies Falls reception and on Aurecon’s website provides all the details of the project. It must however be noted that the proposed project falls within the management area of the AFNP, but on land owned by the RVM Community Trust. The FSR has been updated to reflect this more clearly.</p>
2.	4.	Hannecke van Copenhagen	Please can you send me the notifications regarding the upgraded application as well as the notification regarding the public meeting that was sent to Kobus van Copenhagen.	<i>The request was responded and the relevant information provided in email dated 4 August 2013.</i>
3.	5.	Eugene Visser	With this I want to raise objection to the proposed project. My farm (portion 5 of Narries Nr. 7) has long been earmarked for a 99-year lease agreement to include it in the Augrabies Falls Park. I will therefore be part of the park and thus also	Noted. Your details have been added to the project database and you will be kept informed of the progress of the EIA process, including future opportunities to raise your concerns.

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			an affected party.	
4.	6.1.	Nardus Du Plessis (SANParks)	That as far as I can see it will not be possible for the water pipeline and cable to be laid without changing the natural way the numerous drainage lines from the north passes the proposed position of the pipeline / cable before joining the larger drainage lines towards the river. The argument that erosion will be addressed by the proposed structures does not hold water since all "erosion" in that area is of a natural origin and does not need to be addressed.	The pipeline will be buried to a depth below the level of the drainage lines. The trench in which the pipeline is constructed would be back filled to the existing natural surface level. This would allow drainage lines to pass over the pipeline unhindered. It would be necessary to address erosion during the construction phase but once the natural equilibrium has re-established erosion control measures are unlikely to be required.
	6.2.		After a site visit with the consultant and members of the Melkbosrand community on 22 August 2013 I am more concerned than ever that irreparable damage to the environment will be the result of the proposed activity. Rehabilitation will not be possible to an acceptable state.	One of the purposes of the EIA process is to identify and assess any and all potential impacts (positive and negative) that a project may pose to the surrounding environment (bio-physical and socio-economic) and to determine if a project should be allowed to go ahead. The process is also aimed at informing the design of the proposed project in order to first try and avoid any identified negative impacts and, if unavoidable, propose mitigation measures to reduce the potential impact(s) to acceptable levels. The potential impacts on the environment, including botany, will be assessed in the EIA Phase and where relevant mitigation measures will be put forward to address negative impacts and improve positive impacts.
5.	7.1.	Dr Howard Hendricks (SANParks)	South African National Parks (SANParks) acknowledge the opportunity to comment on the Draft Scoping Report for the Proposed Hydropower Station on the farm Riemvasmaak (Remainder of Farm no.497 and Portion of Farm no. 498) on	Noted. The willingness of SANParks to seek an alignment between the proposed hydropower station development and NEMPAA is appreciated. The FSR has been updated to include, <i>inter alia</i> , NEM:PAA to the list of legislation that will be

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			<p>the Orange River, in the vicinity of Augrabies, Northern Cape Province.</p> <p>SANParks submits that South Africa's economy is energy intensive, mainly from mining, pulp and paper, and smelting. To date, almost 90% of South Africa's current Electricity Generation Capacity is provided by coal. There is almost no renewable energy generation. It is for this reason that South Africa explores and invests in generating alternative electricity from renewable resources. SANParks therefore supports renewable energy generation traditionally provided by technologies such as hydro, wind, solar and biogas.</p> <p>To this effect, SANParks seeks an alignment between the proposed hydropower station development and the National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003), (NEM:PAA) being the primary Act for managing protected areas in the country for the following reasons;</p> <p>Discrepancies between the proposed development and SANParks mandate must be regarded within all the applicable environmental legislation both nationally and internationally, not just NEM:BA as the draft scoping report alludes.</p>	considered in the EIA phase.
	7.2.		The draft scoping report provides no procedural explanation for the valid application upgrade from approximately two 10 x 10 MW substations to one 40 MW substation, including the regulatory framework that provided for three applications	The DSR, on p. 13, explains why the application has been upgraded from a BA process to an EIA process and what procedure was followed in terms of the upgrade.

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			which were lodged by RVM1Hydro Electric (Pty) Ltd, RVM 2 Hydro Electric (Pty) Ltd and RVM 3 Hydro Electric (Pty) Ltd, respectively in comparison with Department of Energy lifting the cap of ≤10 MW.	
	7.3.		Whilst the draft scoping report provides the fundamental arguments for “Riemvasmaak land, owned by the Riemvasmaak Community Trust, located within the borders of the Augrabies Falls National Park” followed their forced removal in 1973/1974 during Apartheid, the report uses such notion of land ownership interchangeable to avoid referencing the cabinet decision of parliament that such land must be used for the purpose of conservation, hence the current contractual agreement between SANParks and the Riemvasmaak Trust including the acceptance of an annual ex gratia payment – this highlights the need for clarity on land ownership and the appropriate landuse thereof.	Cabinet’s decision to deproclaim Portion 1 of Farm no. 498 recommended that the area be jointly managed for conservation. It is understood that no contract exists between SANParks and the Riemvasmaak Community Trust and that an <i>ex gratia</i> (not obligated by law) payment is made by SANParks to the trust annually.
	7.4.		The draft scoping report uses location alternatives interchangeable between alternatives sites along the Orange River versus alternative sites in the country which limits a proper understanding of what feasibility studies were done towards alternatives sites for the waterfall, no indication is given as to where the 12 sites along the Orange River were located (Ps. both Neusberg and Boegoeberg are ideal alternative sites to the Augrabies Falls National Park site which together is likely to deliver at least 30% of the 75MW allocation for small hydro stations).	Refer to comment 3.7 above and response thereto.  The applicant has assessed numerous sites on the Orange River, apart from Augrabies Falls. Most of these sites are located on the Lower Orange River. The applicant has found that, of the sites assessed, only Neusberg Weir, Augrabies Falls and Boegoeberg Weir are sites that might offer a financially viable project under the REIPPP program.  In addition sites along Tukela River were investigated. These sites were found undesirable for reasons that appear from 3.2.2

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	7.5.		<p>It is a grave concern that the draft scoping report down plays the status of a National Park with the high positive social impact that the project will have (especially for the landowners, i.e. Riemvasmaak Community), as well as the contribution it will make to the energy grid in South Africa as the best practicable environmental option for the proposed site of development thereby disregarding regrettably the importance of a National Park and the legal status thereof.</p>	<p>of the FSR.</p> <p>The DSR on various occasions notes the legal status of the AFNP. One such example is on p.41 which reads as follows:  <i>“The proposed project would be located in the AFNP. Aspects of the proposed project would be within the areas zoned as “Primitive” and “Remote” as per the AFNP Management Plan. Should the proposed project receive environmental approval it would be necessary to amend the park management plan to allow for a hydropower station within these zones.”</i></p> <p>As noted on p.42 of the DSR, it is being proposed to undertake a sustainability assessment for the proposed project, which is an assessment not usually undertaken within an EIA in South Africa. The framework will take cognisance of the Management Plan for the AFNP .</p> <p>Question 8 of this framework asks the following:  <i>“Considering the need to secure ecological integrity and a healthy bio-physical environment, do the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), allow the best practicable environmental option to be selected?”</i></p> <p>Not only will this be assessed by Aurecon, it would also be assessed by all the relevant specialists. The sustainability assessment looks to confirm that the project would not prevent the Park from continuing conservation and hence prevent the Park from continuing its positive impact on tourism (and hence</p>

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				social benefits) in the Northern Cape. It was however important to note the potential socio-economic benefits of the proposed project as that is one of the main reasons for pursuing it.

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3.	8.	Eugene Visser	From a tourism perspective a weir above the Augrabies falls would be totally unacceptable. The face value of the waterfall is linked to the amount of water that cascades down it. During a significant time of the year it will be a controlled stream of water cascading down the falls. This will create a boring situation that would result in diminishing tourism numbers. As mentioned I would become part of the problem as it would cause me financial harm. You cannot guarantee that tourism is not affected and if the project does negatively affect tourism, who is going to compensate me?	The weir and off-take structure would be designed in such a way as to always allow a minimum 30 m <sup>3</sup> /s to pass through the weir to the falls, provided this volume of water is flowing in the river. Additional flows, as may be required in terms of the Environmental Flow Reserve (EFR) requirements would also pass through the weir. Only some of the water in excess of 30 m <sup>3</sup> /s and any additional amount required in terms of the EFR requirements would be diverted for power generation. A maximum of 37 m <sup>3</sup> /s would be diverted for the proposed project. In other words if the flow in the river is 100 m <sup>3</sup> /s, the proposed hydropower station would divert 37 m <sup>3</sup> /s and let through the remaining 63 m <sup>3</sup> /s. If there is only 30 m <sup>3</sup> /s available in the river, the hydropower station would not be operating to allow the

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				<p>30 m<sup>3</sup>/s to pass the weir. The off-take structure would comprise a trash rack and operable gate. The purpose of the gate would be twofold. Firstly it would allow for limiting flow of water to the stations during low flow periods so as to ensure the obligations to maintain the EFR in the Orange River are met. Secondly, during peak flows in the Orange River it would ensure that only the volume of water required for electricity generation (i.e. a maximum of 37 m<sup>3</sup>/s) would be diverted to the water conveyance infrastructure. Note that the weir structure is proposed in order to raise the water level to ensure sufficient offtake, and would have very limited storage capacity compared to Neusberg Weir for instance.</p> <p>The visual effect of the reduced flow on the Augrabies Falls will be assessed by a visual specialist during the EIA phase of the project. The potential visual impact will also be assessed from a tourism perspective by the socio-economic specialist to assess the impact of reduced flows on tourism.</p>
7.	9.	Graham Page	The Falls are now open for viewing at night and if the site has bright lights it will affect the sight.	Any lighting required for the project at night would be shielded so as not to impact on the viewing of the falls at night.
5.	10.1.	Dr Howard Hendricks (SANParks)	The draft scoping report ignored SANParks concern about diverting a sizable portion of the river's flow from the falls that would have a negative impact on the visitor experience to the falls – instead, the report confuses this concern with the visual impact group rather than a tourism experience which highlight the shortcoming of the draft scoping report in defining a tourism experience as merely a visual impact;	<p>Refer to comments 3.6 and 8 above and response thereto. The terms of reference for the socio-economic study includes the following:</p> <ul style="list-style-type: none"> <li>• Provide comment on the impact on tourism, using the existing Tourism Study for the proposed project as a basis;</li> </ul>

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<b>TOURISM</b>				
<b>IAP Ref. No.</b>	<b>Comment No.</b>	<b>Name</b>	<b>Issue</b>	<b>Response</b>
				<ul style="list-style-type: none"> <li>Assess the impact of the reduced flow over the Falls on tourism.</li> </ul>
	10.2.		SANParks submits grave concern about the fact that the draft scoping report incorporates the impact on tourism synonymous with the visual impact of the proposed development and loosely as part of the impact on the socio-economic environment – the impact on tourism has merit to be investigated on its own, hence a separate and additional specialist study will be required.	Refer to comments 3.6 and 8 above and response thereto.

<b>BIODIVERSITY</b>				
<b>IAP Ref. No.</b>	<b>Comment No.</b>	<b>Name</b>	<b>Issue</b>	<b>Response</b>
3.	11.	Eugene Visser	The so-called biodiversity studies that were undertaken claimed that no flora or fauna would be affected by the proposed scheme. Would you then break down the hydropower station and rehabilitate, or would you just ignore the impacts? I want to put it on record that you would be held responsible for every negative impact to our Park (AFNP).	<p>The initial biodiversity studies, conducted as part of the Draft Basic Assessment Report, which included a Botanical Assessment assessed five alternative layouts of the proposed project. The findings of the Botanical report for the construction phase assessed the potential impact on botany, with mitigation, as ranging from Medium to Very High (negative).</p> <p>Based on this and other studies only Option 2a is being assessed in the EIA process as this option was considered to</p>



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				<p>be acceptable to all the specialists.</p> <p>The proposed project would not have an impact on flora during the operational phase of the project as the project would then be implemented and flora would be rehabilitated as per a rehabilitation plan drawn up by a botanist.</p> <p>The impact on fauna, including avifauna, was previously assessed by Aurecon, however further input will be obtained from an ecologist in the EIA phase who will provide information on the potential impacts on fauna.</p> <p>As noted in comment 6.2 above, the EIA process is aimed at identifying all potential impacts and assessing their significance. Where they cannot be avoided, mitigation measures are put forward to lower their significance as far as possible. This information is then presented to the competent authority (i.e. DEA) who then make a decision on whether the project should receive environmental authorisation.</p> <p>Rehabilitation of the site will form part of the decommissioning phase and is dealt with in section 5.5 of the FSR.</p>
4.	12.1.	Nardus Du Plessis (SANParks)	There is an active water bird breeding colony at the exact place where the weir is proposed. At the moment the young have not left the nests yet. I estimate that about 40 to 60 nests forms part of this colony. Species include Darters, White-breasted cormorant and Reed cormorant. This is not to say that more species does not breed as part of this colony. Only the one colony is visible from the side of the watercourse but this is not to say that more colonies do not	Your comment has been forwarded to the Ecologist for further investigation. The potential impact of the proposed project on the water bird breeding colony will be assessed in the EIA report.

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			exist in the vicinity of the proposed weir. Water bird numbers in general are surprisingly low in the Augrabies Falls National Park which make this colony so much more valuable. It should be investigated whether any more such colonies are to be found inside of the park boundaries as well as nearby (outside) the park boundaries. What needs to be done is to do a survey by watercraft to establish whether any more colonies exist.	
	12.2.		The draft scoping report ignored SANParks concern about diverting a sizable portion of the river's flow from the falls that would have a negative impact on the visitor experience to the falls – instead, the report confuses this concern with the visual impact group rather than a tourism experience which highlight the shortcoming of the draft scoping report in defining a tourism experience as merely a visual impact.	Refer to comment 8 above and response thereto.
5.	13.1.	Dr Howard Hendricks (SANParks)	The draft scoping report is silent on the planned volume of water to be diverted during the low flow period; the minimum reserve flow is required to maintain ecosystem integrity whilst an additional amount of volume of water will be required to provide a heightened tourism experience at the falls.	Refer to comment 8 above and response thereto.
	13.2.		From a species management point of view, the scoping report falls short on the importance the park provides towards the conservation of many species to this environment, including large breeding colony of birds nesting in trees along the river and on a small islands whilst the disturbance of	Refer to comment 12.1 above and response thereto. Further to the above, the purpose of the DSR is to identify potential impacts (i.e. on Fauna, Flora, Aquatic Ecology, Visual, etc.). Based on this preliminary study the necessary specialists are then appointed during the EIA stage to assess the

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			normal riverine habitat and the interference with the flow and stratum of the river bed and bank are likely to permanently flood many large rocks in the vicinity of the weir thereby disturbing a watercourse that would otherwise have been used as perching sites for birds such as cormorants which constitutes a prohibition in NEM:PAA Regulations.	significance of potential impacts that would result from the proposed project.  It should be noted that the river regularly floods the rocks referred to as part of its annual cycle. The potential impact(s) of the proposed weir on, <i>inter alia</i> , the birds will be assessed in the EIA Report.
1.	14.1.	Kobus van Coppenhagen (I&AP)	In the immediate area of the proposed weir, we could clearly observe a large and "noisy" breeding colony of birds, nesting in the trees on a small island. Three nesting/breeding species were observed and it was clear from droppings marking the branches of other trees in the area, that it was not yet fully colonised for this breeding season and that this site was repeatedly used over a long period of time. The species observed were African Darter, White-breasted Cormorant and Reed Cormorant, none of which are mentioned in your avifauna discussion on p 61 of the DSR. A number of other birds were observed and heard (hadeda) but we did not have time to spare. Many large rocks in the area were also exposed, which would be permanently flooded by a water level increase of 2, 5 meters. We also noticed otter droppings with crustacean residue on the river bank. We do not exactly know how the environment would be affected by the clearing of virgin riverine habitat and the interference with the flow and stratum of the river bed and bank. NEMPAA regulation 1061; article 41, specifically prohibits disturbance of a watercourse inside a National Park. A SANBI report of 1995	Refer to comment 12.1 and 13.2 above and response thereto.

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			mentions 192 species of birds for this area.	
	14.2.		Due to the topography, exhibiting many drainage courses crossed at right angles by the vehicle track and variations in elevation it became apparent that it would be virtually impossible to integrate the water conduit structure into the existing terrain, without modifying it substantially.	Refer to comment 6.1 above and response thereto.
	14.3.		It is worthwhile to mention that there is no existing "road", which just needs to be "widened" and that the construction of a road alone would alter the terrain substantially. The track also displays a lot of hoof prints of animals, but we did not attempt to establish their movements. The northern section of the National Park would practically be cut into two fragments by this development and considering the long continuous length of the underground conduits, the linear disturbance would be up to 10 times the length of e.g. the proposed Boegoeberg Hydroscheme. This disturbance would also become a new seedbed for the propagation of invasive plants e.g. <i>Prosopis</i> spp., all of which have recently been cleared in this section of the National Park.	The term "road" used in the DSR refers to an existing track that is and can be used by vehicles. For the proposed project the existing track would be widened to 4 m with passing bays every 400 m, depending on the sensitivity of a particular area. The significance of the impact of the widening of the existing track will be assessed by the relevant specialists in the EIA phase.  The Environmental Management Plan (EMP) that would be drafted during the EIA phase would put forward measures to be implemented to avoid the introduction of invasive species (e.g. an ongoing alien invasive plan would need to be implemented to ensure that alien invasive plants do not take hold in the construction footprint). The EMP is a legally binding document that must be incorporated into the documents of the Contractor that would undertake the works. The implementation of the EMP is monitored by an Environmental Control Officer (ECO).
	14.4.		Re-vegetation as proposed in p 29 of DSR is not possible without irrigation since the average rainfall in this area is only 124,4mm per annum (std. dev=73,47mm) (SANBI report), not	The botanical specialist will compile a vegetation rehabilitation plan in the EIA phase. This is likely to include recommendations for a nursery to ensure that mature plants can be used in the

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			251 mm as in DSR p 54 and summer temperature can exceed 40 degrees C, so daily irrigation is required (annual evaporation is >3000mm). A SANBI report also refers to the fact that recruitment of plants is episodic rather than a regular occurrence, which really makes every existing plant specimen valuable. We urge the applicant to arrange a site meeting and to indicate exactly where the various elements would be sited for both options and it would be quite in order if DEA and DWA inspect this terrain at the same time.	rehabilitation of the site.  See also response to comment 3.3 above with respect to a site visit. Note that a meeting and site visit were held with DEA and DWA, amongst others, on 28 August 2013. We are awaiting the notes of the meeting from DEA.
	14.5.		It would be pertinent to note that there is still a resident group of the rare Mountain Zebra in this section of the National Park, amongst many animals. Although black rhino were re-introduced 20 years ago the area was never fenced with electric wiring and to prevent animals such as giraffe from taking flight, during construction it would be prudent to make electric fencing of the whole northern section of the Park a priority. A SANBI report mentions 51 species of mammals and a total of 68 amphibians and reptiles. We have previously referred to the fact that only specialists know where and how to observe many of the creatures in this area, e.g. scorpions, reptiles, etc. In a 17 m wide linear construction corridor as envisaged in the DSR p 29, a large percentage of this biota would be destroyed unwittingly.	An ecologist has been appointed to assess the significance of impacts on fauna that could be caused by the proposed project. Measures will be put forward to mitigate the potential impacts identified. This comment has been sent to the specialist for his consideration.

**HERITAGE**

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1.	15.	Kobus van Coppenhagen (I&AP)	During the short visit one does become aware of an aire of solitude and the large scale disturbance envisioned would harm it irreversibly. The numbers of cultural sites along both routes are a "red flag" and the possibility of objections by individual families at any stage before or after commencement would cause serious problems.	The Heritage Specialist will assess the potential impact of the proposed project on heritage resources. During the initial BA process grave sites which need to be avoided were pointed out. The proposed layout option has taken this into account. The Heritage Specialist was accompanied by one of the Riemvasmaak Community members who lived on Melkbosrand on his latest site visit (7 September 2013) to ensure that all culturally important heritage resources are identified.
6.	16.1.	Kathryn Smuts (SAHRA)	Thank you for your indication that development is to take place in this area.  In terms of the National Heritage Resources Act, no 25 of 1999, heritage resources, including archaeological or palaeontological sites over 100 years old, graves older than 60 years, structures older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resources authority. This means that before such sites are disturbed by development it is incumbent on the developer (or mine) to ensure that a Heritage Impact Assessment is done. This must include the archaeological component (Phase 1) and any other applicable heritage components. Appropriate (Phase 2) mitigation, which involves recording, sampling and dating sites that are to be destroyed, must be done as required.	Noted. A Heritage consultant has been appointed to undertake a Heritage and Archaeological impact assessment. This will be sent to SAHRA for comment once it is available.
	16.2.		In your application received by SAHRA, it is indicated that there will be an assessment of the heritage resources; this should be inclusive of an Archaeological and Palaeontological Impact Assessment. The Phase 1	Refer to comment 16.1 above and response thereto.

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			Archaeological Impact Assessment Report that will identify the archaeological sites and assess their significance and make recommendations (as indicated in section 38) about the process to be followed. A Palaeontological study must be undertaken to assess whether or not the development will impact upon palaeontological resources - or at least a letter of exemption from a Palaeontologist is needed to indicate that this is unnecessary. If the area is deemed sensitive, a full Phase 1 Palaeontological Impact Assessment will be required and if necessary a Phase 2 rescue operation might be necessary.	
	16.3.		Any other heritage resources that may be impacted such as built structures over 60 years old, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict, and cultural landscapes or viewscapes must also be assessed. SAHRA looks forward to receiving these heritage reports and will provide comment on them before the project can commence.	Noted. These will be assessed by the appointed Heritage consultant. A representative from the RVM Community accompanied the Heritage Specialist on site on 7 September 2013 to point out any and all heritage resources.

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**ANNEXURE 1: Comments Received**