

APPENDIX E5

MINUTES OF MEETINGS

	DRAFT MINUTES EIA Phase Focus Group Meeting – Mooivallei Landowners	Queries:	Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nemai.co.za
Clients:	 	Project Name:	Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)
Date:	03 October 2018	Project No.:	10580
Date:	03 October 2018	Time:	14:00 – 17:00
Chairperson:	D. Henning	Place:	Kumba Bioscope Hall, Thabazimbi

LW: These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.

Attendance
Refer to the completed Attendance Register contained in Appendix A.

NO.	DESCRIPTION	ACTION	TARGET DATE															
1.	Opening and Welcome																	
1.1	D Henning opened the meeting with a prayer and welcomed everyone present. He emphasised the following: <ul style="list-style-type: none"> The public meeting will be conducted in Afrikaans but the text in the presentations will be in English. Attendees may use their language of preference; The public meeting forms part of the Environmental Impact Assessment (EIA) process for the proposed Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A); and Matters raised will be incorporated into the EIA's Comments and Responses Report. 	-	-															
2.	Attendance and Apologies																	
2.1	No apologies were noted at the meeting. D. Henning introduced the following members of the project team: <table border="1"> <thead> <tr> <th>Organisation</th> <th>Role</th> <th>Representatives</th> </tr> </thead> <tbody> <tr> <td>DWS</td> <td>Applicant</td> <td>R. Gillmer</td> </tr> <tr> <td>TCTA</td> <td>Implementing Agent</td> <td>K. Mabitsela A. Nelwamondo</td> </tr> <tr> <td>MCC</td> <td>Technical Team</td> <td>J. Kroon</td> </tr> <tr> <td>Nemai Consulting</td> <td>Environmental Assessment Practitioner</td> <td>D. Henning C. van der Hoven</td> </tr> </tbody> </table>	Organisation	Role	Representatives	DWS	Applicant	R. Gillmer	TCTA	Implementing Agent	K. Mabitsela A. Nelwamondo	MCC	Technical Team	J. Kroon	Nemai Consulting	Environmental Assessment Practitioner	D. Henning C. van der Hoven	-	-
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Nemai Consulting	Environmental Assessment Practitioner	D. Henning C. van der Hoven																
NO.	DESCRIPTION	ACTION	TARGET DATE															

NO.	DESCRIPTION	ACTION	TARGET DATE
3.	Purpose of the Meeting		
3.1	<p>D. Henning indicated that the purpose of the meeting included the following</p> <ul style="list-style-type: none"> • To provide an overview of the proposed MCWAP-2A; • To present the status of the EIA; • To provide an overview of the draft EIA Report for the proposed MCWAP-2A: Water Transfer Infrastructure; • To provide an overview of the draft Scoping Report for the proposed MCWAP-2A: Borrow Pits; and • To provide a platform for project-related discussions. 	-	-
4	Project Overview		
J. Kroon stated that the content of the draft EIA Report and appendices and prevailing Republic of South Africa (RSA) legislation takes preference over any of the presentations or answers provided during the meeting, should any conflict arise.			
4.1	<u>Context</u>		
4.1.1	<p>J. Kroon presented the following:</p> <ul style="list-style-type: none"> • Understanding RSA's water scarcity; • National rainfall and potential evaporation; • Internationally shared basins; • Sectoral water usage; • Reconciliation strategy studies; • Energy and water for energy; • National development imperatives; • Role and function of existing NWRI to support MCWAP; • Proposed MCWAP (New NWRI); • Key technical EIA issues; and • Institutional arrangements following implementation. 	-	-
5	EIA – Water Transfer Infrastructure		
5.1	<u>Overview of the Draft EIA Report</u>	-	-
5.1.1	<p>D. Henning presented the following:</p> <ul style="list-style-type: none"> • MCWAP-2A components – <ul style="list-style-type: none"> ◦ Water Transfer Scheme Infrastructure; • Outline of the EIA process; • Content of the EIA Report; • Environmental Legal Framework; • Project Description; • Alternatives; • Profile of the receiving environment; • Specialist studies; • Impact assessment and mitigation measures; • Public participation; and • Conclusions and recommendations. 		
5.2	<u>Specialist Studies</u>	-	-
5.2.1	<ul style="list-style-type: none"> • A. Phamphé presented a summary of the Terrestrial Ecological Impact Assessment; • A. Gouws presented a summary of the Agricultural Impact Assessment and Wetland Impact Assessment; and • B. Orban presented a summary of the Wildlife Impact Assessment. 		

NO.	DESCRIPTION	ACTION	TARGET DATE
6	EIA – Borrow Pits		
6.1	<u>Overview of the Draft Scoping Report</u>	-	-
6.1.1	D. Henning presented the following: <ul style="list-style-type: none"> • Content of the scoping report; • Programme; 		
7.	Discussion		
7.1	B. Enslin asked whether the reports can be downloaded. D. Henning explained that copies of the two reports, Draft EIA Report (Water transfer Infrastructure) and the Draft Scoping Report (Borrow Pits) including the appendices, can be accessed on the Nemai Consulting's website, and an entire MCWAP project webpage of the Department of Water and Sanitation (DWS)	-	-
7.2	W. de Clercq pointed out that the road in the Mooivallei area is registered as a servitude road. He added that post construction the road must be driveable by all types of vehicles, not just 4X4s. D. Henning explained that the process they must follow is to determine the condition of the road before construction and to ensure that the road is suitable for construction, and if it is not suitable then that road will have to be upgraded before construction can take place. After using the road, the road must be left in a proper condition so that the state, municipality or landowners can say that they are satisfied with the condition of the road. J. Kroon added that the Department will need a right-of-way servitude during the construction and operational phases from the main road to the weir.	-	-
7.3	K. Hermann mentioned that in the beginning it was suggested that all the old spoil heaps from the mine should be used to rebuild the road and make it driveable again. He also explained that at the abstraction works, a large part of the land would have to be used as a servitude, in order to store the material from the mine. The access road is a priority, and must always be accessible so that it can be used by both the landowners, and the contractor. K. Hermann added that his concern is that in the agricultural areas where there is currently irrigation, there will now be a 25 m servitude with a permanent road as part of access between the weir and the desilting works. They will therefore not be able to plant anything in that section because it will be a permanent loss of soil. R. Botha explained that the Department would also need regular access to the pump station. J. Kroon added that permanent access between the weir and desilting works will be required.	-	-
7.4	B. Enslin asked about the Environmental Impact Assessment Process for the proposed power line project, and whether their program is in line with the MCWAP program. D. Henning explained that Eskom would have to apply for it and it would run a separate basic assessment process that is much shorter than the current process that MCWAP runs. They still have to start with that process.	-	-
7.5	G. Bauer pointed out that it is the first time he is seeing the construction camps on the maps. D. Henning explained that the final positions are only finalized by the contractor and will be negotiated with the landowners, but the pre-requisites of the EIA Process prescribes that potential construction camps are indicated and should also be assessed as part of the EIA phase. A. Nelwamondo explained that the camps would only be offices and temporary laydown areas for construction material, no accommodation will be in the construction camps. J. Kroon added that only security staff of the Department would require	-	-

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	accommodation on site, it will be the same as it was with MCWAP Phase 1. G. Bauer then asked if the accommodation would be required at the weir and at the desilting works. J. Kroon stated that accommodation will only be required for security personnel at the pumping station area.		
7.6	K. Hermann said that he assumes that the weir, pump stations and desilting works would be highly protected by security. J. Kroon explained that further in the process, the South African Police Service will have to assess the security risk of the project, and will then provide a classification of the status of security that will be required for the project. A. Nelwamondo explained that with Phase 1 they have currently have an agreement with the landowner that if there is a visitor at the gate, the visitor must declare who they are visiting and it will then have to be confirmed with that person who will then have to give the permission of access. At Phase 1 there are currently 18 security personnel on site, and they are accommodated at the pumping station. The reason is that a rapid security response is needed and also because the pumping station is far away from the nearest town. K. Hermann added that there must definitely be a fence at Mooivallei area, where monitoring must take place because the use of the road will ultimately start escalating in the future. D. Henning and A. Nelwamondo explained that it is very rare that the road will be used so often during the operational phase and under normal circumstances they will not patrol every hour or on a daily basis. K. Hermann said that there has to be a gate at the main road in order to help facilitate the monitoring. All construction roads in the Mooivallei area must be upgraded and in a good condition at all times.	-	-
7.7	G. Bauer pointed out that the area where the entire pumping station is positioned for the moment is frequent floods, and the area has been flooded twice in the last four years. The water is about 1½ to 2 m deep when it floods there. A. Nelwamondo stated that it is noted and explained that this will be part of the design engineers' task to review during the optimisation.	-	-
7.8	J. Kroon asked whether the landowners pump water from the river and boreholes, whether they have an existing legal water use and what is the quality of the water? W. de Clercq said that they make use of both the river and boreholes, and Portions 8 and 9 uses the water from the river, and Portion 7 makes use of boreholes. G. Bauer said he was surprised when he saw that the river was classified as a Class C because he knows that the Thabazimbi sewerage works were pumping raw sewage into the river at times, approximately a kilometre upstream from the weir's proposed position. D. Henning explained that the specialist did not only look at water quality, but he also looked at the aquatic invertebrates, fish and riparian vegetation to come to that classification. W. De Clercq asked if the roads would be sprayed during construction to control the dust. D. Henning explained as part of the environmental management program, there is a section that gives specific mitigation measures for the management of dust during construction. There are also methods, other than water, to control dust, for example the use of polymers, and the dust is also monitored during construction by the use of dust buckets, where the quantities of dust are compared to the prescribed air quality standards.	-	-
7.9	M. Hermann asked how long will the construction period in the Mooivallei area be. D. Henning said the plan is that after environmental authorisation is granted, to begin construction at the last quarter of 2019. Prior to this, the tender design must take place and land acquisition process must be completed. The construction period depends on the contractor, so it's difficult to say at this stage how long it will be for each farm. K. Hermann said the construction would certainly be carried out by	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
	a few contractors. A. Nelwamondo explained that there would be one or two principal contractors, and under the contractor there will be sub-contractors.		
7.10	K. Hermann said they (TCTA) would have to work together with Eskom because a part of the pipeline route would affect the power line that provides power to the owners in the Mooivallei area. His understanding is that the power line is then temporarily shifted and the owners will still be supplied with power during the construction period in the area.	-	-
7.11	K. Hermann stated that after environmental authorization has been issued, much will happen before construction can begin, and will anyone explain the final route to the affected landowners? A. Nelwamondo explained that after environmental authorisation is granted, the team must do an asset and infrastructure assessment to see what will be affected by the construction servitude and within the 100 m corridor. Individual meetings will also be held with all directly affected landowners. K. Hermann explained that his entire house is directly affected by the planned pipeline servitude, which also has a major impact on his land, so the meetings need to take place rather sooner than later so that he can start planning ahead.	-	-
7.12	G. Bauer stated that people have been saying that what they all should be concerned about is that when the weir is constructed, the borehole water levels below the weir will decrease and eventually dry up. He added that his gut feel is that the weir will actually increase the recharge of the underground water. D. Henning stated that the principle conveyed during all the meetings is that the existing lawful water users should not be affected. The weir also makes provision for water to flow over the weir, as well as a gauging facility which will measure the flow over the weir. The intention is not to be an impoundment, it is to assist with abstraction to provide sufficient pumping head.	-	-
7.13	W. de Clercq asked how deep the pipeline will be, because his concern is whether his borehole will be affected. D. Henning stated that if something had to happen to the borehole during construction, there is a mechanism in place that they should look in to any concern raised, and if it is linked to the construction, then there is an obligation to fix that concern, and an investigation has to be done and depending on the concern raised, it will find its way to the community liaison officer, and then it goes to the project team or can be elevated all the way up to the contract manager. J. Kroon also added that he suspects that before construction begins, TCTA might instruct someone to conduct a baseline study on the boreholes and their yield. W. de Clercq also stated that the blasting can also have an impact on the borehole. D. Henning stated that if blasting has to be done, if there is a risk to property or infrastructure, or a bat cave, then there is the possibility to do controlled blasting in order to mitigate the risks to existing infrastructure.	-	-
7.14	K. Hermann also mentioned that he had previously lost a borehole due to a mine that was operated on the property adjacent to his farm, and when he informed the mine of his issue, they did nothing about it and how was he expected to go up against the mine as an individual. His concern is what protection do landowners have to avoid such an issue from happening. D. Henning explained that during the implementation of the project, an independent person is involved and that the process and the program they follow is there to protect the landowner. The environmental impact study is also there to ensure that a protocol is in place.	-	-
7.15	W. de Clercq asked whether there is anything that protects landowners when an issue has been raised and is busy being negotiated, that it does not take 10 to 15 years to reach a conclusion or is resolved, because	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
	the Department can carry the legal costs but landowners cannot. D. Henning explained that a certain target is given to the project team and contractor to resolve the issue. Firstly, there is the recognition of the concern raised, which is given within 24 hours, and then the concern is categorised and depending on the category, a target date is given to the contractor in order to provide not just feedback, but also an answer to resolve the issue.		
7.16	B. Enslin stated that Eskom has an option document when they acquire a servitude, and in the document there are certain conditions, so every landowner in the negotiation process can write specific conditions for their property in this document, does TCTA have such a document? A. Nelwamondo stated that they currently do not have such a document, but conditions are considered when one-on-one consultations are held with landowners during the negotiation process, and an agreement is made that contains the certain conditions of TCTA and the landowners.	-	-
8.	Closure		
8.1	D. Henning thanked everyone for their positive participation and valuable input. The meeting adjourned at 16:30.	-	-

Appendices

Appendix A – Attendance Register

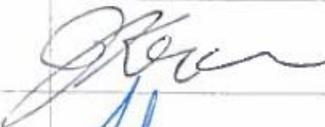
Appendix B – Presentation

APPENDIX A

ATTENDANCE REGISTER

	ATTENDANCE REGISTER – Environmental Impact Assessment: Focus Group Meeting – Mooivallei Landowners	Queries: Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nemai.co.za
Clients:	 water & sanitation Department Water and Sanitation REPUBLIC OF SOUTH AFRICA  TCTA A new word for water	Project Name: Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A) Project No.: 10580
Date:	03 October 2018	Time: 14h00 – 17h00
Chairperson:	F. Vogel	Place: Kumba Bioscope Hall, Thabazimbi

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Fanie Vogel		Meeting Chairman	☎ 082 325 3519 ✉ Fanie.vogel@gmail.com		
Ronald Gillmer	DWS	Chief Engineer: Options Analysis	☎ 012 336 6933 ☎ 082 791 0833 ✉ GillmerR@dws.gov.za		
Hannes Pretorius	DWS	Area Manager: Hartbeespoort	☎ 012 253 1093 ☎ 082 806 3681 ✉ PretoriH@dws.gov.za		
Rens Botha	DWS Limpopo North West Free State Prov. ops	Chief Engineer: Water Resources Management	☎ 012 392 1308 ☎ 082 808 9560 ✉ BothaR@dws.gov.za		
Azwianewi Nelwamondo	TCTA	Environmental Manager	☎ 012 683 1200 ☎ 082 809 5101 ✉ ANelwamondo@tcta.co.za		
Kgopotso Mabitsele	TCTA	Project Manager	☎ 012 683 1200 ✉ kmabitsele@tcta.co.za		✓
Andries Thebe	TCTA	Land Acquisition Manager	☎ 012 683 1200 ✉ athebe@tcta.co.za		✓
Them bani Mashiane	TCTA	Project Coordinator	☎ 012 683 1223 ☎ 078 696 2564 ✉ tmashiane@tcta.co.za		✓
Segomotso Kelefetswe	TCTA		☎ 012 683 1200 ✉ SKelefetswe@tcta.co.za		✓

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Thato Shale	TCTA	Social Specialist	012 683 1229 tshale@tcta.co.za		
Jaap Kroon	TCTA/Aurecon	Engineer	083 627 5911 jaap@kroon.co.za		
Christian Van Der Hoven	Nemai Consulting	EIA Public Participation	011 781 1730 ChristianVdH@nemai.co.za		
Donavan Henning	Nemai Consulting	EIA Project Leader	011 781 1730 082 891 0604 donavanh@nemai.co.za		
<i>BREUNEDINSON SEWU KIDEWITCH</i>		<i>COMPENSATION AND SECURITY CONSULTANTS</i>	<i>011-7362619 0828726242 SEWUKIDEWITCH@GMAIL.COM</i>		
<i>Wessel de Chocq</i>		<i>Geo -</i>	<i>073 438 5948 wesselac@gmail.com</i>		
<i>Lothas Herman</i>		"	<i>0831519964</i>		
<i>M Hermann</i>		"	<i>0832336222</i>	<i>M Hermann</i>	
<i>Chapman</i>	<i>SELF</i>	<i>owner</i>	<i>0832555323 bawng@icloud.com</i>		

APPENDIX B

PRESENTATIONS

	KONSEPNOTULE Omgewingsimpakbepaling: Fokusgroepvergadering – Mooivallei Grondeienaars	Navrae:	Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nema.co.za
Kliënt:	 water & sanitation Department: Water and Sanitation REPUBLIC OF SOUTH AFRICA  A new word for water	Projek Naam:	Mokolo en Krokodilrivier (Wes) Wateraanvullings Projek (Fase 2A) (MKWAP-2A)
Datum:	03 Oktober 2018	Tyd:	14:00 – 17:00
Voorsitter:	D Henning	Plek:	Kumba Bioskoopsaal, Thabazimbi

LW: Die notule is nie 'n verbatim weergawe van die besprekings nie maar eerder 'n opsomming van die belangrike besprekings tydens die vergadering.

Teenwoordig

Verwys na die teenwoordigheidslys aangeheg as Bylaag A.

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM												
1.	Opening en Verwelkoming														
1.1	D. Henning het die vergadering met 'n gebed geopen en almal verwelkom. Hy het die volgende beklemtoon: <ul style="list-style-type: none"> Die Openbare vergadering sal in Afrikaans gehou word maar die aanbiedings sal in Engels op die skerm verskyn. Sprekers kan bydraes in Afrikaans of Engels doen; Die vergadering is deel van die Omgewingsimpak Bepaling (OIB) Proses vir die voorgestelde Mokolo en Krokodilrivier (Wes) Wateraanvullings Projek (Fase 2A) (MKWAP-2A); en Belangrike kwessies sal genotuleer word en ingevoer word as deel van die OIB Proses, in die Kommentaar en Terugvoeringsverslag. 	-	-												
2.	Teenwoordigheid en Verskonings														
2.1	Geen verskonings is aangeteken nie. D. Henning het die lede van die projekspan voorgestel, soos hieronder getabuleer: <table border="1"> <tr> <td>DWS</td> <td>Applikant</td> <td>R. Gillmer</td> </tr> <tr> <td>TCTO</td> <td>Implementeringsagent</td> <td>K. Mabitsela A. Nelwamondo A. Thebe T. Shale</td> </tr> <tr> <td>MCC</td> <td>Tegniese span</td> <td>J. Kroon</td> </tr> <tr> <td>Nemai</td> <td>OIB Praktisyn</td> <td>D. Henning C. van der Hoven</td> </tr> </table>	DWS	Applikant	R. Gillmer	TCTO	Implementeringsagent	K. Mabitsela A. Nelwamondo A. Thebe T. Shale	MCC	Tegniese span	J. Kroon	Nemai	OIB Praktisyn	D. Henning C. van der Hoven	-	-
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MCC	Tegniese span	J. Kroon													
Nemai	OIB Praktisyn	D. Henning C. van der Hoven													
3.	Doelwitte van en Reëls vir die Vergadering														

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
3.1	<p>D. Henning het aangedui dat die doelwitte van die Openbare vergadering die volgende insluit:</p> <ul style="list-style-type: none"> • Om 'n oorsig van die voorgestelde MKWAP-2A te voorsien; • Om die status van die Omgewingsimpakbepaling (OIB) aan te bied; • Om 'n oorsig van die Konsep OIB-verslag vir die voorgestelde MKWAP-2A Wateroordragskema te voorsien; • Om 'n oorsig van die Konsep Omvangsbepalingsverslag vir die voorgestelde Leengroewe te voorsien; en • Om 'n geleentheid vir projekverwante besprekings te bied. 	-	-
4	Projek Oorsig		
J. Kroon meld dat die inhoud van die Konsep Omgewingsimpakbepalingsverslag en voorkomende wetgewing van die Republiek van Suid Afrika (RSA) voorkeur neem oor enige aanbieding of antwoorde verstrekk gedurende die vergadering, sou daar 'n konflik bestaan.			
4.1	<u>Konteks</u>		
4.1.1	<p>Aanbieding is deur J. Kroon gedoen wat die volgende hoofpunte ingesluit het:</p> <ul style="list-style-type: none"> • Verstaan RSA se waterskaarste; • Nasionale reënval en potensiële verdamping; • Internasionale gedeelde watergebiede; • Projek oorsig; • Sektorale watergebruik; • Rekonsiliasie strategie studies; • Energie en water vir energie; • Nasionale ontwikkelingsvereistes; • Rol en funksie van bestaande NWRI om MCWAP te ondersteun; • Voorgestelde MCWAP (Nuwe NWRI); • Belangrike tegniese OIB-kwessies; en • Institusionele reëlings na implementering. 	-	-
5	Omgewingsimpakbepalingsverslag – Wateroordragskema		
5.1	<u>Oorsig van die konsep OIB verslag</u>	-	-
5.1.1	<p>Aanbieding is deur D Henning gedoen wat die volgende hoofpunte ingesluit het:</p> <ul style="list-style-type: none"> • OIB-Proses – <ul style="list-style-type: none"> ○ Wateroordragskema-infrastruktuur; • Inhoud van die OIB verslag; • Omgewingsregsraamwerk; • Projek Beskrywing; • Alternatiewe; • Profiel van die ontvangsomgewing; • Spesialis studies; • Impakbepaling en versagtingsmaatreëls; • Openbare deelname; en • Gevolgtrekkings en aanbevelings. 		
5.2	<u>Spesialis studies</u>	-	-
5.2.1	<ul style="list-style-type: none"> • A. Phamphe het 'n opsomming van die Terrestriële Ekologiese Impakstudie aangebied; 		

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
	<ul style="list-style-type: none"> B. Orban het 'n opsomming van die Wild Impakstudie aangebied; en A. Gouws het 'n opsomming van die Landbou impakstudie en Sosio-ekonomiese Impakstudie aangebied. 		
6	Omvangsbepalingsverslag – Leengroewe		
6.1	<u>Oorsig van die Omvangsbepalingverslag</u>	-	-
6.1.1	D. Henning het die volgende aangebied: <ul style="list-style-type: none"> Inhoud van die Omvangsbepalingverslag; en Program. 		
7.	Bespreking		
7.1	B. Enslin het gevra of jy die verslae kan aflaai. D. Henning het verduidelik dat 'n kopie van die twee verslae, Konsep Omgewingsimpak bepaling (Wateroordragskema) en die Konsep Omvangsbepaling verslag (leengroewe) sowel as die bylae beskikbaar is op die Nemaï Consulting webblad, en daar is ook 'n hele MKWAP projek webblad van die Departement van Water en Sanitasie.	-	-
7.2	W. de Clercq het uitgewys dat die pad in die Mooivallei gebied is 'n serwituitpad. Hy het ook gesê dat die pad moet teen alle tye rybaar wees vir alle karre, en nie net 4x4s nie. D. Henning het verduidelik dat die proses wat hulle moet volg is om voor konstruksie die toestand van die pad te bepaal en seker maak of die pad goed genoeg sal wees vir konstruksie, as dit nie geskik is nie dan sal die pad opgegradeer moet word voor konstruksie kan plaasvind. Na die kontrakteur die pad klaar gebruik het, moet die pad gelos word in 'n gerehabiliteerde toestand sodat die staat, munisipaliteit of grondeienaars kan afteken dat hul tevrede is met die toestand van die pad. J. Kroon het bygevoeg dat hulle 'n reg-van-weg tydens konstruksie en bedryfsfase gaan vereis van die hoofpad tot by die stuwal.	-	-
7.3	K. Hermann het genoem dat heel in die begin was die voorstel gegee dat al die ou afvalhope gebruik word om die pad se vlak weer op te bou en rybaar te maak. Hy het ook verduidelik dat by die onttrekkings punt sal 'n groot gedeelte van die grond gebruik moet word as 'n serwituit, om die grond van die myn af daar te kan stoor. Die pad is 'n prioriteit, en moet so toeganklik as moontlik wees sodat die pad deur die grondeienaars en die konstruksie span gebruik kan word. K. Hermann het ook bygevoeg dat sy bekommernis is dat by die landbou gedeeltes waar daar tans besproeiing plaasvind, gaan daar nou 'n 25 m serwituit wees met 'n permanente pad as deel van toegang tussen die stuwal en die ontslikkingwerke. Hulle sal nie daar kan plant in daardie gedeelte nie omdat dit 'n permanente verlies van die grond is. R. Botha het verduidelik dat daar sal gereelde toegang moet wees na die pompstasie. J. Kroon het bygevoeg dat permanente toegang tussen die stuwal en ontslikkingwerke benodig sal word.	-	-
7.4	B. Enslin het gevra oor die omgewingsimpakbepaling proses vir die voorgestelde kraglyn projek, en of hul program in lyn is met die MKWAP program. D. Henning het verduidelik dat Eskom daarvoor sal aansoek doen en dit sal 'n aparte basieseassesseringproses volg wat baie korter is as die proses waarop MKWAP is. Eskom moet nog met daardie proses begin.	-	-
7.5	G. Bauer het uitgewys dat hy nou die konstruksiekampe vir die eerste keer op die kaarte sien. D. Henning het verduidelik die finale posisies deur die kontrakteur gefinaliseer en onderhandel moet word met die grondeenaar, maar die voorvereistes van die omgewingsimpakbepaling	-	-

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
	<p>proses sê dat moontlike konstruksiekampe aangedui word en ook geassesseer moet word as deel van die omgewingsimpakbepaling fase. A. Nelwamondo het verduidelik dat die kampe net kantore en tydelike stoorareas sal wees vir konstruksie materiaal, geen akkommodasie sal op terrein wees nie. J. Kroon het bygevoeg dat die Departement net vir sekuriteit personeel moet akkommodasie hê, net soos hoe dit was met MKWAP Fase1. G. Bauer het toe gevra of dit by die stuwal en by die ontslikking werke sal wees? J. Kroon het verduidelik dat daar sal net oornag skuriteit personeel benodig word by die pompstasie.</p>		
7.6	<p>K. Hermann het gesê dat dit kan aanvaar word dat die stuwal, pompstasie en ontslikking werke sal hoogs beskerm word deur sekuriteit. J. Kroon het verduidelik dat vêrder in die proses moet die Suid-Afrikaanse Polisie diens 'n evaluering doen op risiko in die area, en dan sal hul 'n klassifikasie gee vir die status van sekuriteit wat benodig sal word vir die projek. A. Nelwamondo het verduidelik dat met Fase 1 het hulle 'n huidige ooreenkoms met die grondeienaar dat as daar 'n besoeker by die hek is, moet die persoon verklaar wie hulle besoek, en dit sal dan met daardie persoon bevestig word en die persoon sal moet toestemming gee vir toegang. Op Fase 1 is daar 18 sekuriteit personeel op terrein, en hul word geakkommodeer by die pompstasie, en die rede vir dit is vir vinnige sekuriteitsreaksie en ook omdat die pompstasie baie ver van die dorp af is. K. Hermann het bygevoeg dat daar definitief 'n hek moet wees by Mooivallei, waar monitering moet plaasvind, omdat die pad se gebruik in die toekoms sal eskaleer. D. Henning en A. Nelwamondo het verduidelik dat dit baie selde is dat die pad so dikwels gebruik sal word tydens die bedryfsfase, en onder normale omstandighede sal hulle nie elke uur of op 'n daaglikse basis patroleer nie. K. Hermann het gesê dat daar een hek moet wees by die hoofpad om monitering makliker te maak. Die paaie in die Mooivallei gebied moet opgegradeer word en ten alle tye in 'n goeie toestand wees.</p>	-	-
7.7	<p>G. Bauer het uitgewys dat die area waar die hele pompstasie om die oomblik geposisioneer is, gebeur gereelde vloede, en die area was al twee kere onder water in die laaste vier jaar vanaf hy daar gebly het. Die water is omtrent 1½ tot 2 meter diep wanneer dit daar oorstrom. A. Nelwamondo het verduidelik dat dit deel van die ontwerp ingenieur se taak sal wees om daarna te kyk tydens optimisering.</p>	-	-
7.8	<p>J. Kroon het gevra of die eienaars water van die rivier en boorgate pomp, het hulle 'n bestaande wettige watergebruik en wat is die kwaliteit van die water. W. de Clercq het gesê dat rivier- en boorgatewater word gebruik, en Gedeelte 8 en 9 gebruik rivierwater, en Gedeelte 7 het boorgate. G. Bauer het gesê dat hy verbaas was toe hy sien dat die rivier geklassifiseer is as 'n klas C, want hy weet dat die Thabazimbi rioolwerke met tye rou riool in die water pomp. D. Henning het verduidelik dat die spesialis het nie net na water kwaliteit gekyk nie, maar ook na akwatiese invertebrate, visse en rivieroewer plantegroei om by daardie klassifisering uit te kom. W. De Clercq het gevra of die paaie natgespuit sal word tydens konstruksie om die stof te kontroleer. D. Henning het verduidelik dat daar 'n deel is van die omgewingsbestuurprogram wat spesifieke maatreëls gee vir die beheer van stof tydens konstruksie. Daar is ook ander metodes as water om stof te beheer, die gebruik van polimere, en stof word ook tydens konstruksie gemonitor deur die gebruik van stof bakke, waar die hoeveelhede stof vergelyk word met die voorgeskrewe lugkwaliteit-standaarde.</p>	-	-
7.9	<p>M. Hermann het gevra hoe lank sal konstruksie tydperk wees in die Mooivallei gebied. D. Henning het gesê dat die plan is om na omgewings magtiging uitgereik is, om einde 2019 te begin met konstruksie. Voor dit kan begin moet detail ontwerp plaasvind en grondverwerwing proses</p>	-	-

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
	moet eers voltooi word. Die tydperk hang af aan die kontrakteur, so dit is moeilik om presies te sê hoe lank dit sal duur by elke plaas op hierdie stadium. K. Hermann het gesê dat die konstruksie sal seker uitgevoer word deur 'n paar kontrakteurs. A. Nelwamondo het verduidelik dat daar sal een of moontlik twee kontrakteurs wees, en onder die kontrakteur sal daar ook sub-kontrakteurs wees.		
7.10	K. Hermann het gesê hul sal saam met Eskom moet werk omdat 'n deel van die pyplynroete die kraglyn wat vir die eienaars in die Mooivallei gebied krag lewer, gaan beïnvloed. Sy begrip is dat die kraglyn sal dan tydelik geskuif word en die eienaars gaan nog met krag voorsien moet word tydens die konstruksie periode in die gebied.	-	-
7.11	K. Hermann het verduidelik dat na omgewingsmagtiging uitgereik word, gaan daar nog baie gebeur voor dat konstruksie kan begin, en sal daar iemand wees wat die finale roete kom verduidelik aan die geaffekteerde grondeienaars? A. Nelwamondo het verduidelik dat na omgewingsmagtiging uitgereik word, moet die span 'n bate- en infrastruktuur assessering doen om te sien wat geaffekteer sal word deur die serwituut en binne die 100 m korridor. Individuele vergaderings sal ook dan gehou word met al die grondeienaars. K. Hermann het verduidelik dat sy hele huis word direk geraak deur die beplande pyplyn serwituut, en gaan 'n groot impak hê op sy grond, so die vergaderings moet vroeg plaasvind sodat hy kan begin planne maak	-	-
7.12	G. Bauer het gesê dat mense bekommerd is dat wanneer die stuwal gebou word, die boorgatwatervlakke onder die stuwal sal verminder en uiteindelik opdroog. Hy het bygevoeg dat sy gevoel is dat die stuwal eintlik die herlaai van die ondergrondse water sal verbeter. D. Henning het gesê dat die beginsel wat tydens al die vergaderings oorgedra word, is dat die bestaande wettige watergebruikers nie nadelig geraak moet word nie. Die stuwal sal ook voorsiening maak vir die vloei van water oor die wal, asook 'n meetfasiliteit wat die vloei oor die stuwal sal meet. Die bedoeling is nie om 'n dam te wees nie, dit is net om met die onttrekking te ondersteun, dit wil sê drukhoogte verskaf.	-	-
7.13	W. de Clercq het gevra hoe diep die pyplyn sal wees, want sy kommer is of sy boorgat geraak sal word. D. Henning het gesê dat indien daar tydens die konstruksie iets met die boorgat gebeur, daar bestaan 'n meganisme waarvolgens die kontrakteur aandag moet gee aan enige besorgdheid, en as dit aan die konstruksie gekoppel is, is daar 'n verpligting om daardie saak op te los, en 'n ondersoek moet gedoen word. Afhangende van die gerapporteerde kwessie sal dit na die gemeenskapskakeelbeampte gaan, en dan kan dit of na die projekspan verwys word of dit kan opgeneem word met die kontrakbestuurder. J. Kroon het ook bygevoeg dat hy vermoed dat voordat konstruksie begin, sal TCTO iemand aanstel om 'n basislynstudie op die boorgate en hul lewering te doen. W. de Clercq het ook gesê dat die skietwerk 'n impak op die boorgat kan hê. D. Henning het gesê dat indien daar sprake van skietwerk is, as daar 'n risiko bestaan op eiendom of infrastruktuur, of 'n vlermuigrot, dan is daar die moontlikheid om beheerde skietwerk te doen om die risiko's vir bestaande infrastruktuur te beheer.	-	-
7.14	K. Hermann het ook genoem dat hy voorheen al 'n boorgat verloor het deur 'n myn wat aangrensend aan sy plaas bedryf was, en toe hy die myn in kennis stel van sy probleem, het hulle niks daaraan gedoen nie en hy kan as 'n individu nie teen die myn opstaan nie. Sy bekommernis is watter beskerming het die grondeienaars om so iets te kan vermy. D. Henning het verduidelik dat daar is 'n onafhanklike persoon tydens die implementering van die projek, en daardie proses en program is juis daar om julle te beskerm, en die voorsienings van die	-	-

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
	omgewingsimpakstudie is ook daar om seker te maak dat protokol in plek is.		
7.15	W. de Clercq het gevra of is daar enigiets wat 'n persoon beskerm dat as daar 'n kwessie geopper word en daar is onderhandeling, dat dit nie vir 10 tot 15 jaar neem om tot by 'n oplossing uit te kom nie, want die Departement kan die regs-kostes dra, maar grondeienaars kan nie. D. Henning het verduidelik dat 'n sekere teikendatum word aan die projekspan en kontrakteur gegee om die kwessie op te los. Eerstens is daar die erkenning van die beswaar binne 24 uur, en dan word dit gekategoriseer en afhangend van waar die beswaar lê, is 'n teiken gegee vir die kontrakteur om terugvoering en 'n antwoord te gee.	-	-
7.16	B. Enslin het geopper dat Eskom 'n opsiedokument het wanneer hulle 'n serwituut verkry, en in die dokument is daar sekere voorwaardes, sodat elke grondeiener in die onderhandelingsproses spesifieke voorwaardes vir hul eiendom in hierdie dokument kan skryf. Hy het gevra of TCTO so 'n dokument het tydens die verkrygings proses? A. Nelwamondo het verklaar dat hulle tans nie so 'n dokument het nie, maar voorwaardes word oorweeg wanneer individuele konsultasies gehou word met grondeienaars tydens die onderhandelingsproses en die ooreenkoms met die grondeiener bevat sekere voorwaardes van TCTO en die grondeienaars.	-	-
8.	Afsluiting		
8.1	D. Henning het almal teenwoordig bedank vir hul positiewe deelname en waardevolle insette. Die vergadering het om 16:30 verdaag.	-	-

Bylae
Bylaag A – Teenwoordigheidslys
Bylaag B – Aanbiedings

BYLAAG A

TEENWOORDIGHEIDSLYS

	ATTENDANCE REGISTER – Environmental Impact Assessment: Focus Group Meeting – Mooivallei Landowners	Queries:	Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nemai.co.za
Clients:	 water & sanitation Department Water and Sanitation REPUBLIC OF SOUTH AFRICA  TCTA A new word for water	Project Name:	Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)
Date:	03 October 2018	Project No.:	10580
Chairperson:	F. Vogel	Time:	14h00 – 17h00
		Place:	Kumba Bioscope Hall, Thabazimbi

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Fanie Vogel		Meeting Chairman	☎ 082 325 3519 ✉ Fanie.vogel@gmail.com		
Ronald Gillmer	DWS	Chief Engineer: Options Analysis	☎ 012 336 6933 ☎ 082 791 0833 ✉ GillmerR@dws.gov.za		
Hannes Pretorius	DWS	Area Manager: Hartbeespoort	☎ 012 253 1093 ☎ 082 806 3681 ✉ PretoriH@dws.gov.za		
Rens Botha	DWS Limpopo North West Free State Prov. ops	Chief Engineer: Water Resources Management	☎ 012 392 1308 ☎ 082 808 9560 ✉ BothaR@dws.gov.za		
Azwianewi Nelwamondo	TCTA	Environmental Manager	☎ 012 683 1200 ☎ 082 809 5101 ✉ ANelwamondo@tcta.co.za		
Kgopotso Mabitsela	TCTA	Project Manager	☎ 012 683 1200 ✉ kmabitsela@tcta.co.za		✓
Andries Thebe	TCTA	Land Acquisition Manager	☎ 012 683 1200 ✉ athebe@tcta.co.za		✓
Them bani Mashiane	TCTA	Project Coordinator	☎ 012 683 1223 ☎ 078 696 2564 ✉ tmashiane@tcta.co.za		✓
Segomotso Kelefetswe	TCTA		☎ 012 683 1200 ✉ SKelefetswe@tcta.co.za		✓

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Thato Shale	TCTA	Social Specialist	012 683 1229 tshale@tcta.co.za		
Jaap Kroon	TCTA/Aurecon	Engineer	083 627 5911 jaap@kroon.co.za		
Christian Van Der Hoven	Nemai Consulting	EIA Public Participation	011 781 1730 ChristianVdH@nemai.co.za		
Donavan Henning	Nemai Consulting	EIA Project Leader	011 781 1730 082 891 0604 donavanh@nemai.co.za		
<i>BREUNED JONEN SEWU KIDEWITCH</i>		<i>COMPENSATION AND SECURITY CONSULTANTS</i>	<i>011-7362619 0828726242 SEWUKIDEWITCH@GMAIL.COM</i>		
<i>Wessel de Chocq</i>		<i>Geo -</i>	<i>073 438 5948 wesselac@gmail.com</i>		
<i>Lothas Herman</i>		"	<i>0831519964</i>		
<i>M Herman</i>		"	<i>0832336222 0832555323</i>	<i>M Herman</i>	
<i>Chapex</i>	<i>SELF</i>	<i>owner</i>	<i>baewj@icloud.com</i>		

BYLAAG B

AANBIEDINGS




Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)
ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

FOCUS GROUP MEETING – Mooivallei Landowners

3 October 2018

WATER IS LIFE. SANITATION IS DIGNITY



1) OPENING AND WELCOME



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2) ATTENDANCE AND APOLOGIES



Please complete & sign the Attendance Register (provide email address)

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2.1) PROJECT TEAM

	ROLE IN PROJECT	PROJECT TEAM MEMBERS
DWS	Applicant	➢ R. Gillmer 
TCTA	Implementing Agent	➢ A. Nelwamondo ➢ K. Mabitsela ➢ T. Mashiane ➢ A. Thebe ➢ S. Keleletswe ➢ T. Shale 
MCC	Technical Team	➢ J. Kroon ➢ J. Pienaar 
Nemai Consulting	EIA Practitioner	➢ D. Henning ➢ C. van der Hoven 

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3.1) PURPOSE OF THE MEETING

- ❖ To present the **status of the EIA**.
- ❖ To provide an **overview of the draft EIA Report** for the proposed MCWAP-2A: Water Transfer Infrastructure.
- ❖ To afford an opportunity to the **Mooivallei Landowners** to raise their specific comments.
- ❖ To afford an opportunity to DWS to provide motivation with regards to **specific issues** pertaining to MCWAP-2A.
- ❖ To provide a platform for project-related discussions.



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3.2) RULES OF THE MEETING

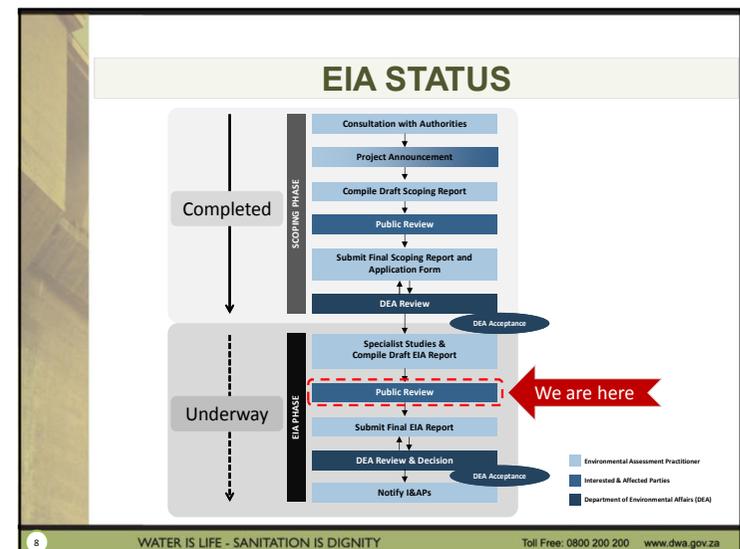
- ❖ Questions to relate to project at hand
- ❖ Address project team through facilitator
- ❖ Identify yourself before asking a question
- ❖ Meeting closing time
- ❖ Cell phones off, please

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AGENDA

	Agenda Items	Speaker
1	OPENING AND WELCOME	
2	ATTENDANCE AND APOLOGIES	Chairperson
3	PURPOSE & RULES OF THE MEETING	
4	WATER TRANSFER INFRASTRUCTURE - EIA REPORT	
4.1)	Overview of the Draft EIA Report	
4.2)	Specialist Studies	
4.3)	Impact Assessment & Mitigation Measures	
4.4)	Alternatives	D. Henning
4.5)	Public Participation	
4.6)	Conclusions & Recommendations	
5	BORROW PITS - SCOPING REPORT	
5.1)	Overview of Draft Scoping Report	
6	DISCUSSION	All
7	WAY FORWARD & CLOSURE	Chairperson

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4.1) OVERVIEW OF THE DRAFT EIA REPORT

Content of EIAR

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4.1) OVERVIEW OF THE DRAFT EIA REPORT

ENVIRONMENTAL LEGAL FRAMEWORK

<input checked="" type="checkbox"/>	Constitution of the Republic of South Africa, (No. 108 of 1996)	
<input checked="" type="checkbox"/>	National Environmental Management Act (No. 107 of 1998)	DEA
	EIA Regulations (as amended):	
<input checked="" type="checkbox"/>	• GN No. 982 of 4 December 2014	
<input checked="" type="checkbox"/>	• GN No. 983 of 4 December 2014	
<input checked="" type="checkbox"/>	• GN No. 984 of 4 December 2014	
<input checked="" type="checkbox"/>	• GN No. 985 of 4 December 2014	
<input checked="" type="checkbox"/>	Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)	DMR
<input checked="" type="checkbox"/>	National Water Act (Act No. 36 of 1998)	DWS
	National Environmental Management: Air Quality Act (Act No. 39 of 2004)	
	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	
	National Environmental Management: Waste Act (Act No. 59 of 2008)	
	National Forests Act (No. 84 of 1998)	
	Occupational Health & Safety Act (Act No. 85 of 1993)	
	National Heritage Resources Act (Act No. 25 of 1999)	
	Limpopo Environmental Management Act (Act No. 7 of 2003)	
	Other...	

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4.1) OVERVIEW OF THE DRAFT EIA REPORT

PROJECT DESCRIPTION

- Vleëpoort Abstraction Weir
- Low-lift Pumping Station
- Low-lift Rising Main (2 pipes)
- Sedimentation Works
- Balancing Reservoir
- High-lift Pumping Station
- High-lift Rising Main to BPR
- BPR
- Gravity Pipeline from BPR to OR
- OR
- Gravity pipeline from OR to Tee-off
- Ancillary infrastructure

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4.1) OVERVIEW OF THE DRAFT EIA REPORT

PROJECT DESCRIPTION

Typical Pipeline Servitude

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4.1) OVERVIEW OF THE DRAFT EIA REPORT

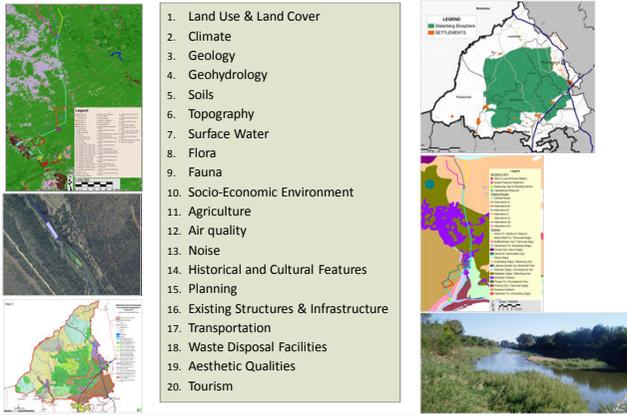
ALTERNATIVES

- ❖ **Alternative Water Resources –**
 - Ground Water
 - Re-use of Effluent in the Project Area
 - Mokolo Dam
 - Crocodile Water
 - Return Flows in Crocodile River (West) and Vaal River Catchments
 - Creating More Storage by Raising of Existing Dams and/or Building New Dams
 - Abstraction Point at Faure Weir
 - Water Transfer from Rivers beyond the Borders of South Africa
- ❖ **MCWAP-2A Layout Alternatives –**
 - Pre-feasibility Study Options
 - Feasibility Options
 - EIA Options (pipeline route options and “no go” option)

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4.1) OVERVIEW OF THE DRAFT EIA REPORT

PROFILE OF RECEIVING ENVIRONMENT

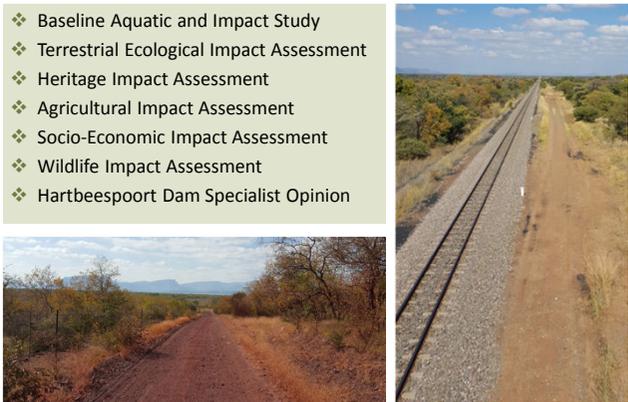


1. Land Use & Land Cover
2. Climate
3. Geology
4. Geo hydrology
5. Soils
6. Topography
7. Surface Water
8. Flora
9. Fauna
10. Socio-Economic Environment
11. Agriculture
12. Air quality
13. Noise
14. Historical and Cultural Features
15. Planning
16. Existing Structures & Infrastructure
17. Transportation
18. Waste Disposal Facilities
19. Aesthetic Qualities
20. Tourism

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4.2) SPECIALIST STUDIES

- ❖ Baseline Aquatic and Impact Study
- ❖ Terrestrial Ecological Impact Assessment
- ❖ Heritage Impact Assessment
- ❖ Agricultural Impact Assessment
- ❖ Socio-Economic Impact Assessment
- ❖ Wildlife Impact Assessment
- ❖ Hartbeespoort Dam Specialist Opinion

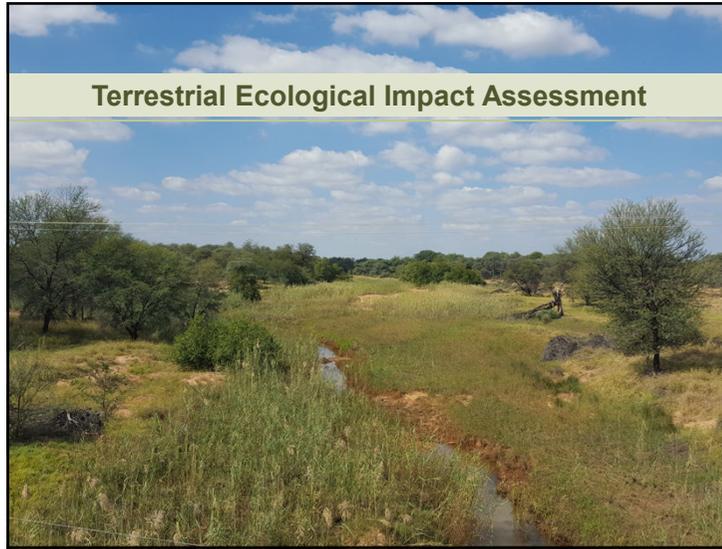


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4.2) SPECIALIST STUDIES

- ❖ **Information incorporated into the EIAR:**
 - Assumptions and limitations
 - Description of the receiving environment in a more detailed and site-specific manner
 - Summary of each specialist study , focusing on the approach to the study, key findings and conclusions drawn
 - Impacts assessment and the identified mitigation measures
 - Evaluations of the alternatives included in comparative analysis to identify the most favourable option
 - Address comments made by I&APs that related to specific environmental features
 - Salient recommendations made by the specialists were taken forward to the final EIA Conclusions and Recommendations

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4.2) SPECIALIST STUDIES

TERRESTRIAL ECOLOGICAL IMPACT ASSESSMENT

- ❖ **Flora:**
 - Encroachment into Limpopo Conservation Plan
 - Protected trees
- ❖ **Fauna:**
 - Mooivallei bat cave
 - Protected species (Python and Bullfrog)
- ➔ **Mitigation measures, e.g.:**
 - Permits from DAFF and LEDET
 - Environmental sensitivity walk down survey



Three small images: a tree, a hole in the ground, and a snake.

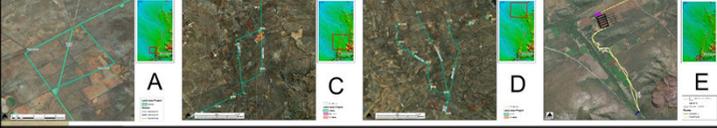
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4.2) SPECIALIST STUDIES

AGRICULTURAL IMPACT ASSESSMENT

Land Use:	Route	Fallow	Grazing	Irrigated	Old lands	Orchards	TOTAL
	A1		104,6				104,6
	A2		11,9				116,9
	Central A		62,2				62,2
	C		172,0			1,3	173,3
	Central C		141,1				141,1
	D1		196,9				196,9
	D2		198,9		22,2		221,1
	D3		253,2		8,7		261,9
	E	3,3	38,7	11,5		0,7	54,2
	Central E	1,8	40,5	9,0		1,4	52,7
	Central		680,7	17,8	17,8		716,3
	TOTAL		2 005,7	38,3	48,7	3,4	2 101,2



Five small maps labeled A, C, D, and E showing different land use areas.

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4.2) SPECIALIST STUDIES

AGRICULTURAL IMPACT ASSESSMENT

❖ **Key findings:**

- Approximately 95% of the land is grazing.
- Irrigated land only along the Crocodile River.
- Permanent loss of irrigated land – Balancing Dams, Desilting Works & Pump Station.
- Animal watering or handling facilities to be moved or replaced.
- A temporary loss for grazing land within construction servitude.
- Access to houses in proximity of the routes will impact on the farming operations.
- Borrow pits: land only used as grazing or browsing for animals .

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4.2) SPECIALIST STUDIES

WILDLIFE IMPACT ASSESSMENT

❖ **Potential impacts:**

- Habitat loss
- Habitat fragmentation
- Wildlife dispersal and migration
- Wildlife diversity
- Land-use
- Noise
- Dust
- Environmental pollution
- Veld fires
- Security

➔ MCWAP-2A is considered viable and all wildlife associated concerns can be mitigated to reduce potential impacts

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4.2) SPECIALIST STUDIES

SOCIO-ECONOMIC IMPACT ASSESSMENT

- ❖ Situation analysis describing the socio-economic status of the study area
- ❖ Targeted engagement with stakeholders
- ❖ Impact assessment and recommended mitigation measures
- ❖ Potential impacts –
 - ❑ **Health and socio-economic well-being impacts** – annoyance due to dust and noise, security/Increase in crime, increased risk of HIV and AIDS, personal safety and increased hazard exposure;
 - ❑ **Quality of the living environment (liveability) impacts** - Disruption of daily living activities including aspects such as damage to property, access to land and livelihoods during construction; perceived quality of life;
 - ❑ **Economic and material well-being impacts (positive)** – the economic benefits of increased water supply, the social benefits of reduced air pollution, increase in employment opportunities, increased opportunities for SMMEs and indirect employment impacts;
 - ❑ **Economic and material well-being impacts (negative)** – loss of productive land, servitudes being registered over land, impacts on game farming income, loss of land for productive agriculture and loss of property value;
 - ❑ **Cultural impacts** – possible heritage impacts;
 - ❑ **Institutional, legal, political and equity impacts** - Effect on existing infrastructure facilities and socio-economic services, attitude formation towards project, decreased level of community participation in decision making, loss of empowerment, compliance with municipal by-laws; and
 - ❑ **Gender relations impacts** - cultural resistance towards women, division of labour.

➔ The negative impacts can be successfully mitigated.

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4.2) SPECIALIST STUDIES

AQUATIC IMPACT ASSESSMENT

- ❖ Present Ecological State –
 - ❑ Crocodile River Reach EcoStatus = C
 - ❑ Matlabas River Reach EcoStatus = C
- ❖ Single Species of conservational concern = *Oreochromis mossambicus*. No threat posed by proposed project.
- ❖ Riparian delineation.
- ❖ Impacts.
- ❖ Mitigation measures.
- ❖ No fatal flaws identified.




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4.2) SPECIALIST STUDIES

HERITAGE IMPACT ASSESSMENT

❖ **Key findings:**

- ❑ A total of 18 heritage sites were identified, including:
 - Five black homesteads where the risk of unmarked stillborn graves exist.
 - Five sites containing confirmed graves and possible graves.
 - Two Stone Age sites.
 - Three historic farmsteads.
 - Two metalworking sites associated with the Iron Age.
 - Memorial where cremated ash may have been placed.

➔ On the condition that the general recommendations are adhered to, no heritage reasons can be given for the development not to continue.

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4.3) IMPACT ASSESSMENT & MITIGATION MEASURES

❖ **Identification of Impacts –**

- ❑ An appraisal of the project activities and components
- ❑ Impacts associated with listed activities contained in GN No. R. 983, R. 984 and R. 985 of 4 December 2014, as amended
- ❑ An assessment of the receiving biophysical, social, economic and built environment
- ❑ Findings from specialist studies
- ❑ Issues highlighted by environmental authorities
- ❑ Comments received during public participation from IAPs.

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4.3) IMPACT ASSESSMENT & MITIGATION MEASURES

1. Land Use & Land Cover
2. Climate
3. Geology
4. Geohydrology
5. Soils
6. Topography
7. Surface Water
8. Flora
9. Fauna
10. Socio-Economic Environment
11. Agriculture
12. Air quality
13. Noise
14. Historical and Cultural Features
15. Planning
16. Existing Structures & Infrastructure
17. Transportation
18. Waste Disposal Facilities
19. Aesthetic Qualities
20. Tourism

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4.3) IMPACT ASSESSMENT & MITIGATION MEASURES

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4.3) IMPACT ASSESSMENT & MITIGATION MEASURES

Examples of Potential Impacts & Mitigation Measures follow

Note the following:

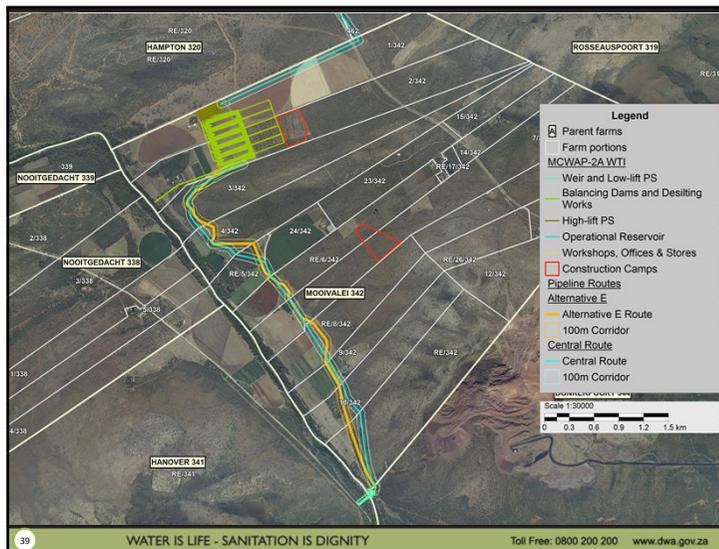
- ❑ Details of assessed impacts included in the EIAR
- ❑ Comprehensive list of mitigation measures included in the EMPr

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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Land Use	<ul style="list-style-type: none"> Temporary loss of land used for agriculture and game farming within pipeline servitude. Permanent loss of land at abstraction works, low-lift pumping station, balancing dam, desilting works, high-lift pumping station, BPR, OR and chambers. Servitude restrictions. Disturbances on game farms. 	<ul style="list-style-type: none"> Permanent loss of land at abstraction works, low-lift pumping station, balancing dam, desilting works, high-lift pumping station, BPR, OR and chambers. Servitude restrictions and inspections. Operation and maintenance functions. Impacts to land use surrounding Hartbeespoort Dam due to fluctuating water levels. 	<ul style="list-style-type: none"> Compensation to be determined by an independent valuer, in accordance with prevailing legislation. Optimisation of final pipeline route to be considered in the design phase to avoid existing structures and buildings, as well as other sensitive features (where possible). EMPr

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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Geology	<ul style="list-style-type: none"> Potential disturbance of the aquifer from blasting. Contamination of groundwater primary aquifer with water from more saline secondary aquifer as a result of blasting. Potential contamination of groundwater during the construction stage. Possible influence to groundwater flow as a result of trenching during construction. 	<ul style="list-style-type: none"> Possible pollution of the aquifer with water during the maintenance of the infrastructure. Impacts to the recharge of the alluvial aquifer downstream of the abstraction weir, due to surface water and groundwater interactions. 	<ul style="list-style-type: none"> Suitable protection of groundwater during excavations and blasting. Implement mitigation measures suggested as part of the geotechnical investigations. Reduce sediment loads in water from dewatering operations. Monitoring of ground- and surface water levels, as well as chemistry, to confirm the link between surface and groundwater. Appropriate measures to be identified to address disturbances, as necessary. EMPr.

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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction & Operational Phase Potential Issues / Impacts	Mitigation
Water Use	<ul style="list-style-type: none"> Impacts to Existing Lawful Water Users 	<ul style="list-style-type: none"> Manage water quality during construction. Establish <u>operating rules</u> with MCWAP-2A releases to make provision for (amongst others) multiple users along the river stretch (irrigation, transfer and Ecological Reserve), with varying assurance of supply criteria. Implement and sustain the <u>River Management System</u> to monitor, control and manage the releases into the river, the flows in the river and abstractions from the river.

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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Hydrology	<ul style="list-style-type: none"> Temporary impacts to flow during the instream works associated with the construction of the weir and pipeline crossings. 	<ul style="list-style-type: none"> Alteration of flow regime by the weir structure. Impact of the proposed Abstraction Works on <u>flood levels</u> and on infrastructure up- and downstream of the weir. Reduction in the average levels of the upstream impoundments during the operation of the scheme. 	<ul style="list-style-type: none"> Minimise influence to downstream flow regime during construction. Consider further as part of land acquisition process for the abstraction weir's impoundment up to the 1:100 year flood level and buffer zone
Water Quality	<ul style="list-style-type: none"> Sedimentation from instream works. Water quality impacts due to spillages and poor construction practices. 	<ul style="list-style-type: none"> During the maintenance of the pipeline and reservoirs the raw water conveyed and stored within this system, which is water of poor quality from the Crocodile River, will be <u>released into the Matieland River</u> and other watercourses from scour valves. 	<ul style="list-style-type: none"> Conduct water quality monitoring (baseline and during construction) at suitable up- and downstream sites. Where necessary, install in-stream silt traps. EMPr.

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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Terrestrial Ecology	<ul style="list-style-type: none"> Encroachment into CBAs and ESAs, which are important in terms of biodiversity, ecosystem functionality and ecological processes. Vegetation will primarily be lost in areas that are to be cleared for the project infrastructure. The potential loss of significant flora species may occur. Fauna could be <u>adversely affected through construction-related activities</u> (noise, dust, light pollution, illegal poaching, and habitat loss). This is especially relevant to sensitive game species (including exotic game). 	<ul style="list-style-type: none"> The establishment of trees within the pipeline servitude will not be allowed as roots may compromise the stability of the pipeline. Disruptions to game farms during operation and maintenance activities. 	<ul style="list-style-type: none"> Search, rescue and relocation be conducted taking into consideration red data, protected and endangered flora and fauna species. Rehabilitation of areas affected by construction activities. Mitigation measures recommended as part of Wildlife Impact Assessment. EMPr.

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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Socio-economic Environment	<ul style="list-style-type: none"> Loss of land (including structures and cultivated areas) through project infrastructure. Loss of agricultural production. Risk to game and livestock as a result of construction related hazards. Loss of income in eco-tourism sector (hunting and game farming). Potential damage to property (e.g. gates, fences, structures). Servitude restrictions; Use of local road network. Safety and security. Impact to visual quality and sense of place. Nuisance from dust and noise. Light pollution. Influx of people seeking employment and associated impacts (e.g. foreign workforce, cultural conflicts, squatting, demographic changes, anti-social behaviour, and incidence of HIV/AIDS). Reduction in property value. If the projected development materialise the population and specifically the urban population of Lephalale will grow substantially. 	<ul style="list-style-type: none"> Use of local road network for operation and maintenance purposes. Impact to visual quality and sense of place. Provision of light at infrastructure may cause light pollution. Inundation of a low level bridge due to the weir's backwater effect. The pumping stations will be operating continuously and may cause noise pollution. Cumulative impacts to properties that are already affected by existing linear infrastructure. Impacts to smaller properties, where the servitude may affect the critical mass required to continue with the current land use. The operating level of the Hartbeespoort Dam will fluctuate as per seasonal rains, with associated impacts to the surrounding recreational water users (active and passive). 	<ul style="list-style-type: none"> Mitigation measures recommended as part of the SEIA. EMPr.

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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Agriculture	<ul style="list-style-type: none"> Loss of cultivated land within construction domain. Loss of grazing land within construction domain. Loss of stock watering points within construction domain. Disruptions to farming operations as a result of construction-related use of existing access roads. Loss of fertile soil through land clearance. 	<ul style="list-style-type: none"> Potential impacts to water users (and associated agro-economic impact from reduced crop and food production) downstream of the abstraction works on the Crocodile River. Permanent loss of cultivated land due to physical infrastructure. 	<ul style="list-style-type: none"> Mitigation measures recommended as part of the SEIA. EMPr.



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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Existing Structures & Infrastructure	<ul style="list-style-type: none"> Risk of damaging existing services, infrastructure and structures during construction. Disruptions to traffic on local road network during construction. This is associated with road crossings, where the pipeline route follows existing road alignments and as a result of general use of the roads by construction vehicles. 	<ul style="list-style-type: none"> Impact of the proposed Abstraction Works on flood levels and on infrastructure up- and downstream of the weir. Servitude restrictions. 	<ul style="list-style-type: none"> Identify and record existing services and infrastructure. Conform to requirements of relevant service providers and infrastructure. Notify landowners of any disruptions to essential services. Deviate landowners' existing services (e.g. reticulation, irrigation lines), where possible, to accommodate construction activities. Adequate reinstatement and rehabilitation of affected environment. EMPr.



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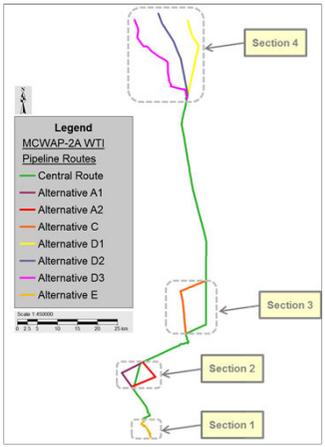
Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Transportation	<ul style="list-style-type: none"> Increase in traffic on the local road networks. Develop temporary access and haul roads. Risks to road users. 	<ul style="list-style-type: none"> Permanent access along the pipeline servitude will be required after construction. 	<ul style="list-style-type: none"> Determine and document the road conditions of the D1649, D3677, R510 and D175 (and all other public roads), as well as all private access roads that will be affected by construction traffic, as relevant. Maintain adequate road conditions. Selective upgrade of the relevant access roads to ensure that they are capable of accommodating the type of vehicles and/or mechanical plant using these roads. Obtain the necessary approval for road upgrades, pipe-jacking and wayleave for road construction from the relevant authorities Make provision for community members to access their properties safely. EMPr.



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4.4) ALTERNATIVES



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4.4) ALTERNATIVES

❖ Summary of Preferred Options:

Project Area	Alternatives	Terrestrial Ecology	Aquatic	Agriculture	Heritage	Socio-Economic	Wildlife	Wetlands	Technical
Section 1	Central Route		-						✓
	Alternative E	✓		✓	✓	✓			
Section 2	Central Route	✓					✓		✓
	Alternative A1		-	-	-	-			
	Alternative A2								
Section 3	Central Route		-	-		✓	✓		✓
	Alternative C	✓			✓				
Section 4	Alternative D1				✓	✓	✓		
	Alternative D2		-	-			✓	✓	
	Alternative D3	✓							✓

❖ Comparative Impacts of Alternatives →

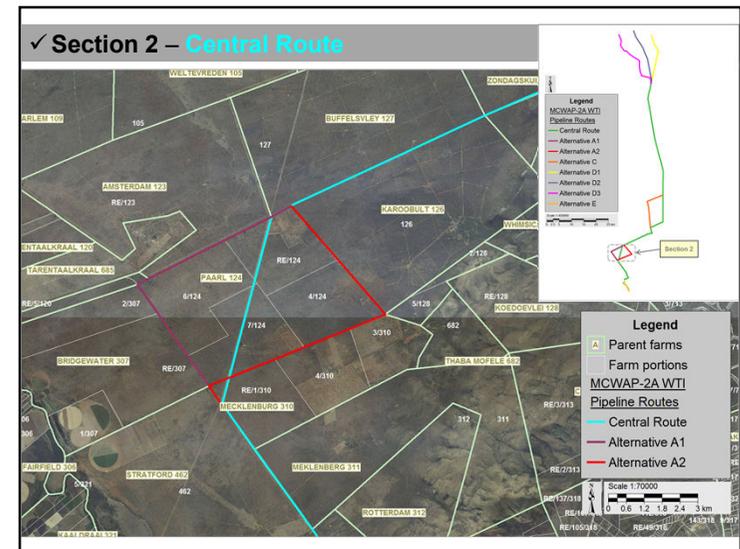
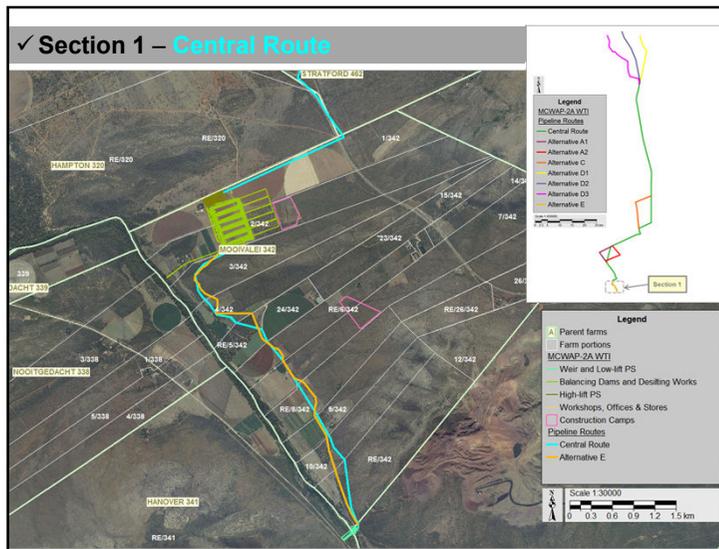
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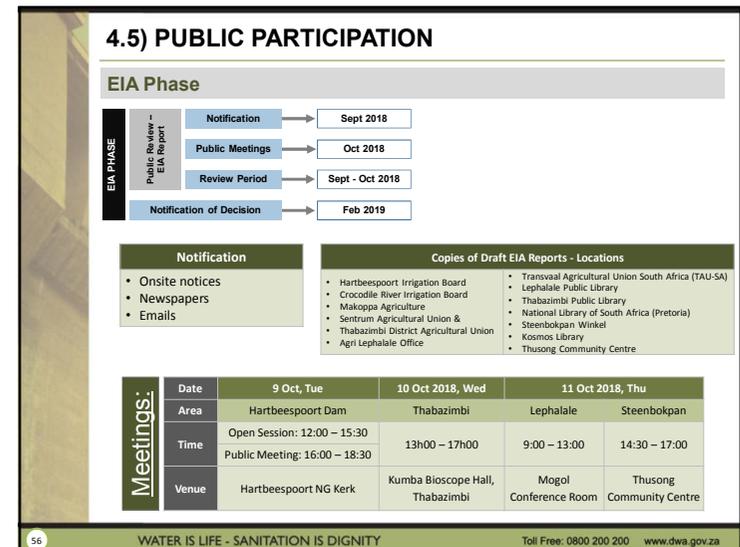
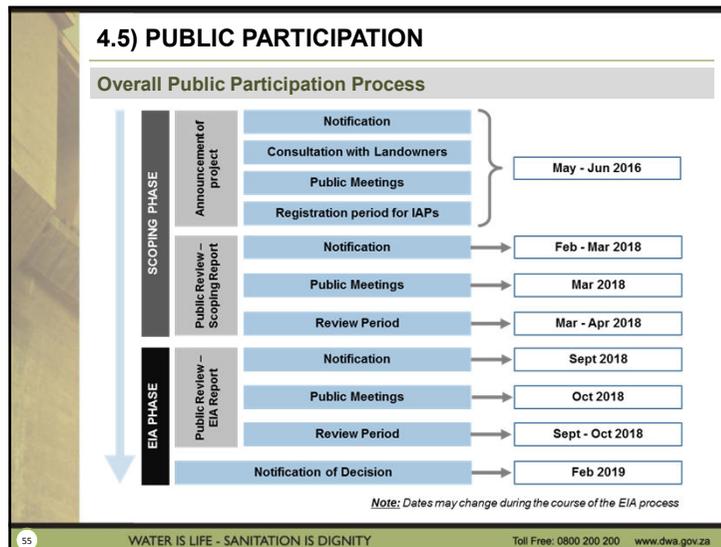
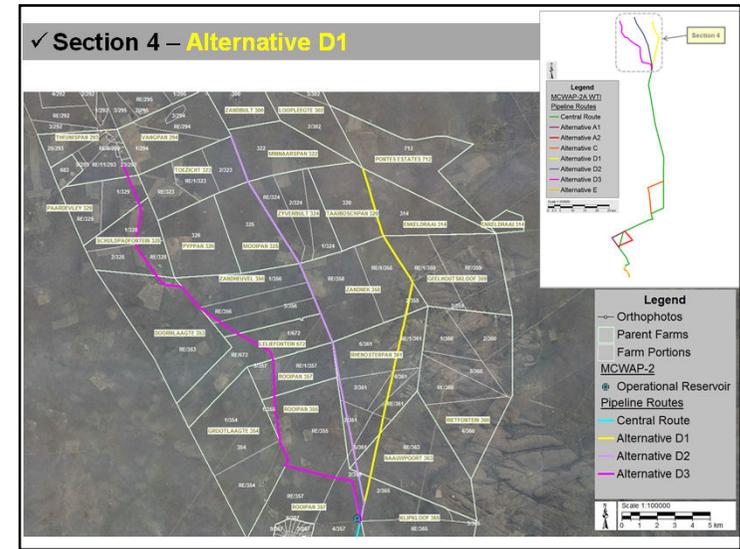
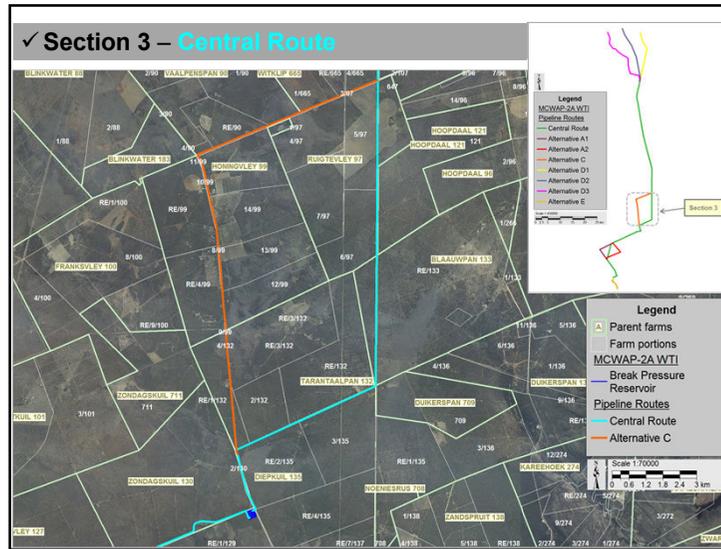
4.4) ALTERNATIVES

Best Practicable Environmental Options

- ✓ Section 1 – Central Route
- ✓ Section 2 – Central Route
- ✓ Section 3 – Central Route
- ✓ Section 4 – Alternative D1

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4.5) PUBLIC PARTICIPATION

EIA Phase

Websites:

WATER IS LIFE, SANITATION IS DIGNITY

<http://www.dwa.gov.za/Projects/MCWAP/> or
<http://www.nemai.co.za/environmental.html>

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4.5) PUBLIC PARTICIPATION

Focus Group Meetings

Irrigators

Crocodile-West Irrigation Board & Hartbeespoort Irrigation Board

02 October 2018
13:00 – 17:00
Koedoeskop Agricultural Union Hall

Makoppa Ad Hoc Committee

03 October 2018
09h00 – 12h30
Kumba Bioscope Hall, Thabazimbi

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4.5) PUBLIC PARTICIPATION

Focus Group Meetings

Mooivallei Landowners

03 October 2018
14:00 – 17:00
Kumba Bioscope Hall, Thabazimbi

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4.6) CONCLUSIONS & RECOMMENDATIONS

❖ Sensitive environmental features –

- ❑ Watercourses
- ❑ Heritage and archaeological sites
- ❑ Flora and fauna of conservation concern
- ❑ Game farming
- ❑ Dolomitic conditions
- ❑ Aquifer
- ❑ Existing agricultural water users
- ❑ River Management System
- ❑ Safety and security
- ❑ HBP Dam limnological & socio-economic
- ❑ Traffic on the public roads
- ❑ Existing infrastructure and structures
- ❑ Construction-related nuisance to sensitive socio-economic receptors

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4.6) CONCLUSIONS & RECOMMENDATIONS

- ❖ Sensitive environmental features
- ❖ Environmental Impact Statement:
 - ❑ Key mitigation measures
 - ❑ Water-related concerns
 - ❑ HBP Dam - government waterwork
 - ❑ Options assessed
 - ❑ Engagement with I&APs
 - ❑ Critical environmental activities - project life-cycle

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4.6) CONCLUSIONS & RECOMMENDATIONS

- ❖ Sensitive environmental features
- ❖ Environmental Impact Statement
- ❖ Recommendations:
 - ❑ Environmental sensitivity walk through survey
 - ❑ Roads (D1649, D3677, R510 and D175) & private roads
 - ❑ Land acquisition and compensation process
 - ❑ Biosecurity protocols
 - ❑ Management of impacts associated with the scouring of sediment
 - ❑ Environmental Monitoring Committee
 - ❑ Rehabilitation Management Plan
 - ❑ Specialists' recommendations
 - ❑ Monitoring –
 - Baseline Monitoring
 - Environmental Monitoring
 - Compliance Monitoring and Auditing

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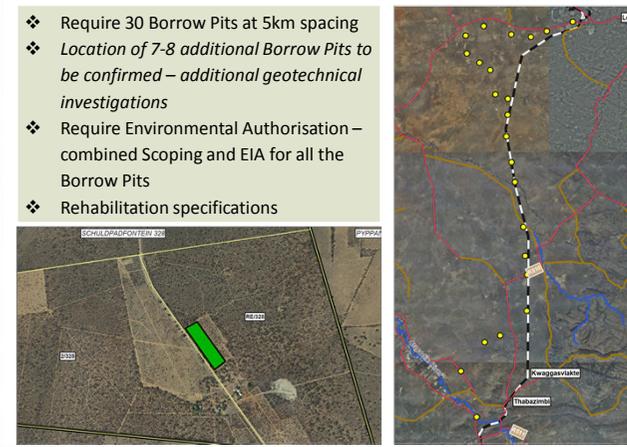
5) EIA – BORROW PITS



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5.1) Overview of Draft Scoping Report

- ❖ Require 30 Borrow Pits at 5km spacing
- ❖ *Location of 7-8 additional Borrow Pits to be confirmed – additional geotechnical investigations*
- ❖ Require Environmental Authorisation – combined Scoping and EIA for all the Borrow Pits
- ❖ Rehabilitation specifications



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5.1) Overview of Draft Scoping Report

Content of Scoping Report

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5.1) Overview of Draft Scoping Report

Programme

No.	Task Name	Start	Finish
1	IAPs Review of Draft Scoping Report	Sep 2018	Oct 2018
2	Submit Final Scoping Report to DMR		Oct 2018
3	DMR Review and Acceptance	Oct 2018	Dec 2018
4	Compile Draft EIA Report	Oct 2018	Jan 2019
5	IAPs Review of Draft EIA Report	Feb 2019	Mar 2019
6	Submit Final EIA Report to DMR		Mar 2019
7	DMR Review and Decision	Apr 2019	Jul 2019
8	IAP Notification		Jul 2019

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6) DISCUSSION

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Thank you

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<https://www.dwa.gov.za/projects/mcwap/>

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	<u>DRAFT MINUTES</u> EIA Phase Public Meeting – Hartbeespoort	Queries:	Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nemai.co.za
Clients:	 	Project Name:	Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)
		Project No.:	10580
Date:	9 October 2018	Time:	16:00 – 18:30
Chairperson:	F. Vogel	Place:	Hartbeespoort NG Church

LW: These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.

Attendance
<i>Refer to the completed Attendance Register contained in Appendix A.</i>

NO.	DESCRIPTION	ACTION	TARGET DATE																		
1.	Opening and Welcome																				
1.1	F. Vogel opened the meeting and welcomed everyone present. He emphasised the following: <ul style="list-style-type: none"> The public meeting will be conducted in Afrikaans but the text in the presentations will be in English. Attendees may use their language of preference. The public meeting forms part of the Environmental Impact Assessment (EIA) process for the proposed Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A); and Matters raised will be incorporated into the EIA's Comments and Responses Report. 	-	-																		
2.	Attendance and Apologies																				
2.1	No apologies were noted at the meeting. F. Vogel introduced the following members of the project team: <table border="1"> <thead> <tr> <th>Organisation</th> <th>Role</th> <th>Representatives</th> </tr> </thead> <tbody> <tr> <td>DWS</td> <td>Applicant</td> <td>R. Gillmer</td> </tr> <tr> <td>TCTA</td> <td>Implementing Agent</td> <td>K. Mabitsela A. Nelwamondo</td> </tr> <tr> <td>MCC</td> <td>Technical Team</td> <td>J. Kroon</td> </tr> <tr> <td>Nemai Consulting</td> <td>Environmental Assessment Practitioner</td> <td>D. Henning C. van der Hoven</td> </tr> <tr> <td></td> <td>Specialists</td> <td>C Chidley (Socio-economic) M Howard (HBP Dam)</td> </tr> </tbody> </table>	Organisation	Role	Representatives	DWS	Applicant	R. Gillmer	TCTA	Implementing Agent	K. Mabitsela A. Nelwamondo	MCC	Technical Team	J. Kroon	Nemai Consulting	Environmental Assessment Practitioner	D. Henning C. van der Hoven		Specialists	C Chidley (Socio-economic) M Howard (HBP Dam)	-	-
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NO.	DESCRIPTION	ACTION	TARGET DATE
3.	Purpose of the Meeting		
3.1	F. Vogel indicated that the purpose of the meeting included the following <ul style="list-style-type: none"> To provide an overview of the proposed MCWAP-2A; To present the status of the EIA; To provide an overview of the draft EIA Report for the proposed MCWAP-2A: Water Transfer Infrastructure; To provide an overview of the draft Scoping Report for the proposed MCWAP-2A: Borrow Pits; and To provide a platform for project-related discussions. 	-	-
4	Project Overview		
J. Kroon stated that the content of the draft EIA Report and prevailing Republic of South Africa (RSA) legislation takes preference over any of the presentations or answers provided during the meeting, should any conflict arise.			
4.1	<u>Context</u>		
4.1.1	J. Kroon presented the following: <ul style="list-style-type: none"> Understanding RSA's water scarcity; National rainfall and potential evaporation; Internationally shared basins; Sectoral water usage; Reconciliation strategy studies; Energy and water for energy; National development imperatives; Role and function of existing NWRI to support MCWAP; Proposed MCWAP (New NWRI); Key technical EIA issues; and Institutional arrangements following implementation 	-	-
4.2	<u>Discussion</u>		
4.2.1	F. Botha stated that he was unable to see the duration of the drought periods on the slide which showed the levels of the Hartbeespoort Dam, specifically troughs where it indicated the periods prior to the last 10 years where the level went down to 60%. He also added that he didn't see a projection of what the levels of the dam will be in the future. F. Vogel stated that the three distinct drought periods showed in the presentation were during the years 1971, 1984 and 1992. He also added that the stochastic projections of what the dam levels may be in the future will be provided in the slides to follow.	-	-
5	EIA – Water Transfer Infrastructure		
5.1	<u>Overview of the Draft EIA Report</u>		
5.1.1	D. Henning presented the following: <ul style="list-style-type: none"> MCWAP-2A components – <ul style="list-style-type: none"> Water Transfer Scheme Infrastructure; Outline of the EIA process; Content of the EIA Report; Environmental Legal Framework; Project Description; Alternatives; Profile of the receiving environment; 	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
	<ul style="list-style-type: none"> • Specialist studies; • Impact assessment and mitigation measures; • Public participation; and • Conclusions and recommendations. 		
5.2	<u>Specialist Studies</u>		
5.2.1	<ul style="list-style-type: none"> • M. Howard presented a summary of the Hartbeespoort Dam Specialist Opinion; and • C. Chidley presented a summary of the Socio-Economic Impact Assessment. 	-	-
6.	Discussion		
6.1	F. Botha stated that M. Howard referred to 'Algae', and asked whether that includes Cyanobacteria (blue-green algae). M. Howard stated that it is correct and that all primary producers were included. F. Botha added that it is very significant that it drops to 15 m where the algae can still survive. M. Howard stated that what outcompetes the microcystis to everything else is the fact that it has gas vacuoles in it which allows it to come to the top, and therefore it outcompetes the blue-green algae. He added that that's where the problem lies is at the moment you can get rid of the shift from the cyanobacteria out, then the green algae can float up and down, and that is the biggest problem with the dam is that it is currently dominated by cyanobacteria.	-	-
6.2	G. Law indicated the study considered the impact of a 2 m drop, and he asked what the impact of a 6 m drop is. M. Howard stated that the dam is not stratified in winter and therefore if it had to drop to 6 m with the implementation of MCWAP, there would be no change. There is no thermocline in winter, but in spring when the thermocline starts developing, it will be similar to what happened from 2004 to 2009. This means that there will be no change to the stratification pattern with the implementation of MCWAP.	-	-
6.3	P. Venter asked what the effect would be on the thermocline if there is more hyacinth on the dam. He noted that presently there is 150-200 hectares in the past two years. M. Howard stated that his study didn't look at that aspect, but research has been done and shows that it can act as a cover and the roots of the hyacinth absorbs oxygen, it therefore becomes oxygen limited underneath the hyacinth cover and lower oxygen level at the top and lower solar penetration. He indicated that you then get a period where it is mixed for longer and the thermocline is broken down for a longer period of time due to this matt of hyacinth, which typically occurs towards the end of summer. However, in the winter the hyacinth starts to die off and it is then in senescence and doesn't grow. P. Venter added that it is normally the case, however, for the Hartbeespoort Dam it is different and since they have stopped harvesting, the hyacinth has actually increased during the winter months. He indicated that the hyacinth creates its own micro-climate. He further noted that the hyacinth in the Hartbeespoort Dam stays for extended periods.	-	-
6.4	F. Botha stated that there is a good example of the impact of hyacinth and he referred to a slide in the presentation. He pointed out that there is no spike even during the summer period and that is because the chlorophyll-a level is low due to the phytoremediation of hyacinth, which have cleared the dam with a secchi disk depth showing 2 m and more.	-	-
6.5	M. Burger stated that he also has an earth dam and it is good for the dam level to drop and lower in volume, and in the shallow areas they dry and then die. He added that for Hartbeespoort Dam they can use the dry	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
	periods to clean out the dam's sediment. The dam's capacity can increase if you remove the sediment currently in the bottom of the dam.		
6.6	F. Botha stated that he would like to add to the comment made about the 'muddy planes'. He noted that the drop in level will create about 800 hectares of muddy planes and in spring it becomes the area of cultivation of hyacinth seeds that germinate in the mud. What happens is there are millions of small hyacinth plants in the mud and when the dam then starts to increase in water level, all the hyacinth enters the dam and the hyacinth then starts to grow at a tremendous rate. Even when the hyacinth is brown, they remove a lot of nutrients and multiply vegetatively and form daughter plants and don't need photosynthesis to grow.	-	-
6.7	G. Law stated that if the dam level even drops 5 m by his estate, it creates a security problem because a footpath is created right around about 80% of the dam, which impacts on 90% of the estates. He indicated that this is a security impact that hasn't been taken seriously enough in the study, which only focuses on the state land. He also added that the other flaw of the project is that a drought season has not been taken into consideration, and between 1997 and 2007 there have been no drought so does that mean that it goes down from 67% to 10% in a drought season? He asked what happens when no rain comes in one year, which hasn't been presented. He asked if the dam is going to get to a point where you can't even pump water out of the dam and then the local community won't even be able to get water. He indicated that with regards to the socio-economic impact, it was stated that the value of property goes up when there's water and goes down when there isn't water, and the landowner benefits from that. However, the municipality actually benefits from it because he pays rates and taxes on the value of his land, so if the properties around the dam are devalued then you will ultimately devalue an already bankrupt municipality, which will have a huge impact on the employment. He also stated that he disagrees that tourism is only 0,9%, as it is impossible and there has been no consideration of how many cars actually drive to the area around the dam every weekend. Development and tourism has grown in the last 7 years. Another impact will be on the restaurants around the dam, or activities associated with the dam like people who come to look at the dam and not necessarily use it. If there is a mud pit, it will affect the restaurants as no one will go there because of the smell. The other biggest employment line is the low income employees who work at these restaurants and hotels and BnB's around the dam. Estates around the dam are reliant on water supply from boreholes, and when the water drops the water table drops as well. He asked if an impact study was done to see what the effect will be on estates losing their water. Half the harbours will have no water and there will be no access to the dam. The reality is that for 6 months there will be no recreational or tourism activities around the dam and coupled with water restrictions, it will shut down golf courses around the dam and places like Magalies park. He stated that the Socio-Economic Impact Assessment did not have enough detail. F. Vogel stated the drought forecasts are based on the full spectrum of high and low flows. He noted that they look at the hydrology from 1910 and all the droughts in the history where they determine the basis, and it is on that basis which the predictions are made. In our country we have become very aware of droughts, and this area is very fortunate in the last 20 years we did not have serious droughts.	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
6.8	<p>G. Law asked if the project gets going and the water is supplied to the end users, what happens if there is a drought. He asked if the end user will get less water or will the farmers and residents of Hartbeespoort Dam come second because the water is needed for Medupi. F. Vogel stated that there is a national policy for all the catchments in South Africa, which allocates priority in terms of who can be restricted (i.e. categories). The restrictions are that gardening and farming are cut back first, and then other users and some industries. When restrictions are in place, it means that everyone will be restricted but with different levels. He also added that in J. Kroon's presentation reference was made to an 'operating forum' that gets involved with annual decision making. During periods of droughts there is a mechanism to inform users.</p>	-	-
6.9	<p>Judy stated that she was shocked that the team was more representing Medupi and Matimba than the social and environmental issues. She asked if anyone had read the latest IPCC report and if you had you wouldn't be promoting this project. Gauteng is rapidly growing at half a million people that all have to be fed and we are running out of water and pursuing a fossil fuel economy. She added that she lives by the dam and has a grandchild and not sure how we will be able to afford food for him without water. She stated that they cannot afford this water to go to Medupi, and in this time and day we must let the past mistakes stay in the past and not perpetuate the cost we are all going to pay for the past mistakes. We must stop the madness now and we need to use water where it is most needed, for people and for agriculture. She indicated that the report does not include the option to go for renewable energy instead and just cutting our losses, which is the prime fatal flaw in this entire exercise. In the technical study we didn't see who we are giving up the livelihoods of our people for, who is benefiting from this. Is it Medupi? We have all read the newspapers and we know who are behind Medupi and all the coal industries, and we know what's happening with the social situation. We are further feeding these industries with our resources. There is no alternative to water, however there are plenty alternatives to energy, and nowhere in the report is it saying this. No climate scenarios and no preparation for droughts were made, which is coming our way. The last point is the on the Hartbeespoort economy. If you look at Hartbeespoort Dam, it's called "Harties" because the heart of the economy is that dam. If you mess with that your 1,7 growth rate will be finished because we are all going to go. You are feeding a fossil fuel economy that is unsustainable and completely off the track with climate change, and you are saying that 'we are growing the economy'. You are taking away an economy that is actually working and where thousands of people are making a livelihood, and robbing them of something that's working and trying to make something that is not going to work, work. F. Vogel stated that the fossil fuel power and renewable energy debate has already been dealt with in the Environmental Authorisation of Medupi. He noted that this debate is regarding the best way to provide water to that system. Anyone here or in the country will not disagree with you regarding the importance of water, and food for people, but people also need power and many other things. The Hartbeespoort Irrigation Board in the Crocodile River catchment uses approximately 80 million cubic meters per annum, and the Crocodile River (West) Irrigation Board uses approximately 120 million cubic meters per annum, which totals 200 million cubic meters per annum that is already being allocated to farming practices and food production. The water transferred to Lephalale may reach approximately 70 million cubic meters per annum, and because of the arguments you have mentioned it may be less due to the pressure of not using fossil fuels. The water is</p>	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
	not just for Medupi, but for the whole of Lephalale, as it is a very dry area. J. Kroon also mentioned that the current draft IRP is in the 60-day public review period, and the way to influence that decision is not through this project, but rather through the IRP review period. D. Henning also added that the water that is targeted to transfer emanates from the Vaal catchment, and is the return water from the wastewater treatment works. The drive for the project is the Flu-Gas Desulphurization (FGD) technology, which is to enhance the emissions in terms of sulphur content.		
6.10	P. Hollick stated that he stays in Westlake Estate and has concerns with regards to the water table and level around the dam, and has yet to hear what the effect will be of the water level on the boreholes. He stated that most of the estates all run off boreholes and if the levels are going to go down due to this project that this will impact on the residents. F. Botha added that he has done a study together with TUT students on the water quality of the borehole water in the area (Schoemansville, Ifafi, and Meerhof) and could not find a link between the dam and the borehole water. This is because the boreholes are fed by an aquifer, which is not linked to the dam. However, he can't say how it is on the western side, a test can be done to see if the borehole water contains phosphates, which is a clear indicator if the borehole is linked to the dam. They also have a specialist by the dam in Meerhof, who has done his PHD on the underground water system in the area. D. Henning will engage with the mentioned specialist further.	D. Henning	TBC
6.11	G. Havenann stated that with regards to risk mitigation, which might or might not have been included in the documentation, the question that the whole economic development of an area depends on the resource it surrounds. Here it is a state-owned resource, which is water. If you have an economy that has been developed around it and you start killing the economy by withdrawing the water, then surely they can take the issue to the constitutional court. There will be economic impacts because the economy is built around the water resource and not anything else and that is where the development comes from. If you kill that area you kill the development. He added that you need to take into consideration that you will find all the landowners around the dam will start going to the constitutional court because the businesses and economy is being killed. C. Chidley stated that the economic data can be relied on and it is based on 2017 data. If you look at tourism data in the Madibeng Municipality, it shows approximately R500 million value for accommodation and catering in 2017. The point that tourism is obscured is correct, because there is a certain amount of retail made that occurs from day tourism. The impact is robust and won't be killed, it will possibly reduce. The economy is mixed and isn't just focussed on the dam, but also on Tshwane and Johannesburg, and on mining and manufacturing and a lot of people that stay here don't all have waterfront properties. It's not only focussed on the perimeter of the dam.	-	-
6.12	P. Venter stated that there was a previous socio-economic study done which looked specifically on the property prices of the Hartbeespoort Dam in totality, and the turnover of property prices which is an economy in itself. If you consider the impact of the dam on property prices, such as the impacts caused by the hyacinth on the dam, people don't even come to play golf on the golf courses. The broader economy should be looked at because it drops when the prices of the local investments drop. Many developments are ready to start, however, it is the national economy that keeps them down, but many agents want to know when the hyacinth will be cleared. The growing economy around	-	-

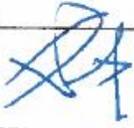
NO.	DESCRIPTION	ACTION	TARGET DATE
	Hartbeespoort is property related and a broader look is needed. We need to be sensitive to the investors around the dam.		
7.	Closure		
7.1	F. Vogel thanked everyone for their participation and also stated that written comments will also be appreciated. The meeting adjourned at 18:30.	-	-

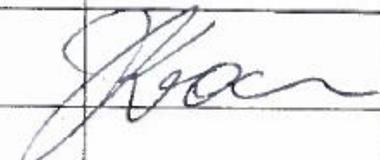
Appendices
Appendix A – Attendance Register
Appendix B – Presentation

APPENDIX A

ATTENDANCE REGISTER

	ATTENDANCE REGISTER – EIA Phase Public Meeting: Hartbeespoort	Queries:	Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nemai.co.za
Clients:	 water & sanitation Department Water and Sanitation REPUBLIC OF SOUTH AFRICA  TCTA A new word for water	Project Name:	Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)
Date:	09 October 2018	Project No.:	10580
Chairperson:	F. Vogel	Time:	12:00 – 18:30
		Place:	Hartbeespoort NG Church

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Fanie Vogel		Meeting Chairman	☎ 082 325 3519 ✉ Fanie.vogel@gmail.com		
Ronald Gillmer	DWS	Chief Engineer: Options Analysis	☎ 012 336 6933 ☎ 082 791 0833 ✉ GillmerR@dws.gov.za		
Hannes Pretorius	DWS	Area Manager: Hartbeespoort	☎ 012 253 1093 ☎ 082 806 3681 ✉ PretoriH@dws.gov.za		
Petrus Venter	DWS	Deputy Regional Director: North West	☎ 012 253 1026 ☎ 082 807 6098 ✉ VenterP@dws.gov.za		
Rens Botha	DWS Limpopo-North West Proto-CMA Prov. Ops	Chief Engineer: Water Resources Management	☎ 012 392 1308 ☎ 082 808 9560 ✉ BothaR@dws.gov.za		
Azwianewi Nelwamondo	TCTA	Environmental Manager	☎ 012 683 1200 ☎ 082 809 5101 ✉ ANelwamondo@tcta.co.za		Apology
Kgopotso Mabitsela	TCTA	Project Manager	☎ 012 683 1200 ☎ kmabitsela@tcta.co.za		APOLGY
Themhani Mashiane	TCTA	Project Coordinator	☎ 012 683 1223 ☎ 078 696 2564 ✉ tmashiane@tcta.co.za		

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Andries Thebe	TCTA	Land Acquisition Manager	☎ 012 683 1200 ✉ athebe@tcta.co.za		
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Minenthle Luthuli	TCTA		☎ 012 683 1226 ✉ mluthuli@tcta.co.za		
Jaap Kroon	TCTA/Aurecon	MCC	☎ 083 627 5911 ✉ jaap@kroon.co.za		
Johan Pienaar	MCC	Project Manager	☎ 012 643 0670 ☎ 082 808 7166 ✉ johanpie@mcwap.co.za		
Pieter van Rooyen	WRP Consulting Engineers	Water Resources Specialist	☎ 012 346-3496 ☎ 082 321 3446 ✉ Pieterv@wrp.co.za		
Christian Van Der Hoven	Nemai Consulting	EIA Assistant	☎ 011 781 1730 ✉ ChristianVdH@nemai.co.za		
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Mike Hasool	"	HBO Windy	☎ 072 699 2734		

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
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Jaco MALAN	Universal Lead SA	MP	0828248925		
Paul Hollick			0829253862 PAUL.HOLLICK167@GMAIL.COM		
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Fredli Botha	HRSC Headq	fjbotha@icon.co.za	0836407717		
DUNCAN HOLMES	CARIBBEAN BEACH CLUBS	GM	0820708032		
GREG LAW	CARIBBEAN BEACH HOT		0794942293		
Akua Lavenan	Pwale	dreamview@telkon.co.za	0829095489		

APPENDIX B

PRESENTATIONS

water & sanitation
Department: Water and Sanitation
REPUBLIC OF SOUTH AFRICA

TCTA
A new word for water

Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

HARTBEESPOORT
Open Session (12:00 – 15:30)
Public Meeting (16:00 – 18:30)

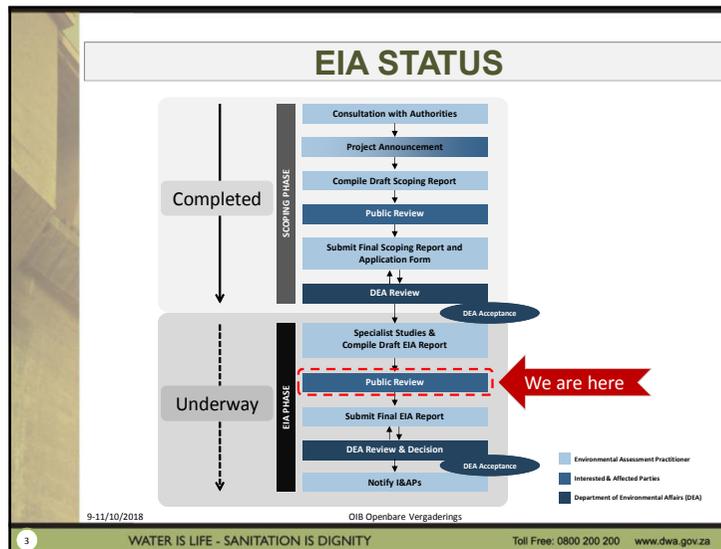
9 October 2018

WATER IS LIFE. SANITATION IS DIGNITY

1) OPENING AND WELCOME

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PUBLIC MEETING AGENDA

	Agenda Items	Speaker
1	OPENING AND WELCOME	
2	ATTENDANCE AND APOLOGIES	Chairperson
3	PURPOSE & RULES OF THE MEETING	
4	PROJECT OVERVIEW	J. Kroon
5	WATER TRANSFER INFRASTRUCTURE - EIA REPORT	
5.1	Overview of the Draft EIA Report	D. Henning
5.2	Specialist Studies	
	a) Hartbeespoort Dam Specialist Opinion	M. Howard
	b) Socio-Economic Impact Assessment	C. Chidley
6	DISCUSSION	ALL
7	WAY FORWARD & CLOSURE	Chairperson

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2) ATTENDANCE AND APOLOGIES



Please complete & sign the Attendance Register (provide email address)

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2.1) PROJECT TEAM

	ROLE IN PROJECT	PROJECT TEAM MEMBERS
DWS	Applicant	➤ R. Gillmer 
TCTA	Implementing Agent	➤ A. Nelwamondo ➤ K. Mabitsela ➤ T. Mashiane ➤ A. Thebe ➤ S. Keleletswe ➤ T. Shale 
MCC	Technical Team	➤ J. Kroon ➤ J. Pienaar 
Nemai Consulting	EIA Practitioner	➤ D. Henning ➤ C. van der Hoven ➤ D. Ramosa 
	Specialists	➤ C Chidley (Socio-economic) ➤ M Howard (HBP Dam)

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3.1) PURPOSE OF THE MEETING

- ❖ To provide an overview of the proposed MCWAP-2A.
- ❖ To present the status of the Environmental Impact Assessment (EIA).
- ❖ To provide an overview of the Draft EIA Report for the proposed MCWAP-2A: Water Transfer Infrastructure.
- ❖ To provide a platform for project-related discussions.



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3.2) RULES OF THE MEETING

- ❖ Questions to relate to project at hand
- ❖ Opportunities for seeking clarification at end of presentations
- ❖ Address project team through facilitator
- ❖ Identify yourself before asking a question
- ❖ Meeting closing time
- ❖ Cell phones off, please

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4) PROJECT OVERVIEW

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Qualifications

- The EIA report and appendices take preference over this presentation, statements or responses should they be in conflict.
- Prevailing RSA legislation takes preference over this presentation, statements or responses should they be in conflict.

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Abbreviations

- DEA – Department of Environmental Affairs;
- DoE – Department of Energy;
- DWS – Department of Water and Sanitation;
- EIA – Environmental Impact Assessment;
- FGD – Flue-gas desulfurisation;
- IRP – Integrated Resource Plan;
- NWRI – National Water Resources Infrastructure;
- NWA - National Water Act;
- PICC – Presidential Infrastructure Co-ordination Committee;
- RSA – Republic of South Africa;
- SIP – Strategic Integrated Projects;
- TCTA – Trans-Caledon Tunnel Authority;

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CONTEXT

Existing National Water Resources infrastructure (mainly dams) in the Greater Project Area to serve Municipal/Domestic, Industrial and Agricultural water Needs are shown in the alongside artistic view.

An overview will be presented highlighting RSA Water Resource Management matters and the historical development in the Greater Project Area superimposing the issues identified during the EIA relating to the proposed MCWAP-2A

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4.1) UNDERSTANDING RSA'S WATER SCARCITY

- Southern Africa is **semi-arid** for the most part – **30th driest country** in the world
- Spatial distribution of run-off uneven
- Need **dams** to store water to carry over from wet years to dry years **but we are reaching our limits**
- Require **complex infrastructure** to convey water to demand centres
- Going further a field to meet the growing demand
- Improved evaluation of options to reconcile demand and supply, e.g. **Reconciliation Strategies**

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4.2) NATIONAL RAINFALL AND POTENTIAL EVAPORATION

Note: Skewed distribution of rainfall which decrease westwards whilst evaporation rates increase westwards

With Climate Change it is highly probable that this distribution will intensify, the east will get wetter and west drier.

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- Inter basin NWRI needed to balance supply and demand; and
- Many rivers used for conveyances, e.g. Ash, Nuwejaarspruit, Sundays, Little Fish, Lions, etc.

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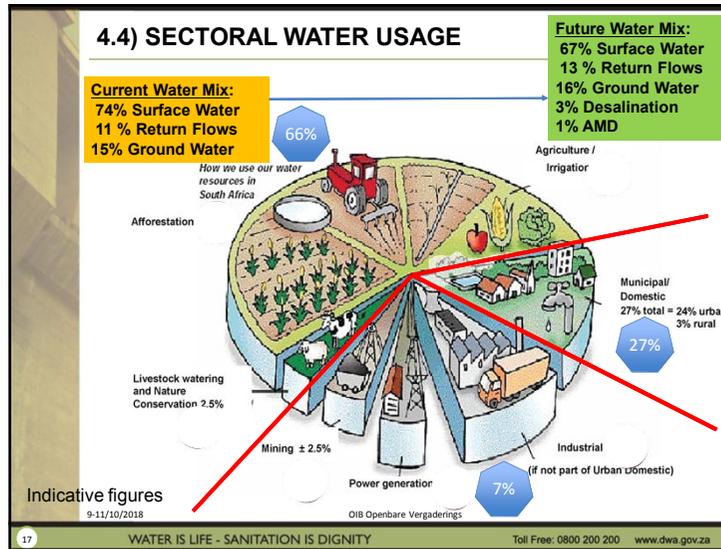
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4.3) INTERNATIONALLY SHARED BASINS

- 4 rivers shared with 6 neighbouring countries
- basins cover 60 % of SA land area
- Contribute 45% of country's total river flow
- support ± 70% of gross domestic product
- Un Convention on Non-Navigable Rivers
- SADC Protocol on Shared Water Courses – Reference in EIA

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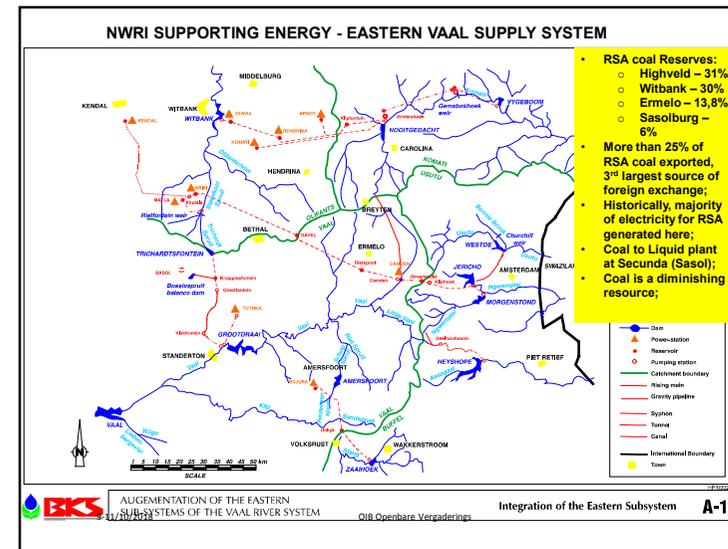


- ### 4.5) RECONCILIATION STRATEGY STUDIES
- Develop future water requirement scenarios in consultation with users (2008, 2012 and 2015) – During the previous Public Meetings Mr. van Rooyen presented the 2015 Recon demonstrating the availability of water for the proposed MCWAP-2A. Presentations are included in EIA. Refer to DWS website for 2015 Recon.
 - Investigate all possible water resources and other interventions
 - Investigate all possible methods for reconciling the requirements with the available resources
 - Make recommendations for development and implementation of interventions
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4.6) ENERGY AND WATER FOR ENERGY

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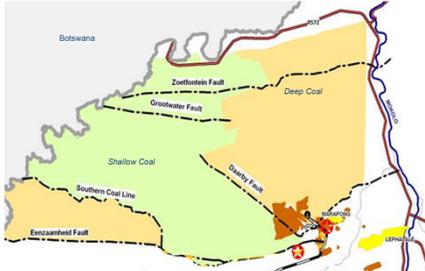
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WATERBERG COAL FIELDS (11% OF RESERVES)

“Driver for increased Need for Water in the Lephalale Area”

- **Matimba Power Station:**
 - Started in 1981
 - 4 000 MW
 - Mokolo Dam
 - Largest direct dry-cooled station in the world
 - FGD to be retrofitted – water requirements to be sourced from Crocodile (West)
- **Medupi Power Station:**
 - Under construction
 - 4 800 MW
 - Mokolo Dam
 - MCWAP-1 commissioned in 2015
 - FGD to be retrofitted – water requirements to be sourced from Crocodile (West)



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INTEGRATED RESOURCE PLAN (IRP)

- The **Integrated Resource Plan** in the RSA context is not the **Energy Plan** - it is a **National Electricity Plan**. It 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**;
- DWS follows the latest approved IRP issued in 2010;
- New draft IRP issued on 27 Aug 2018, 60 days for comments. It includes inter alia renewables, coal and nuclear as part of the electricity mix over the given period.
- 6 Sept 2018 Eskom received Authorisation for FGD for Medupi.

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4.7) NATIONAL DEVELOPMENT IMPERATIVES

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PLANS AND ACTS

- **National Development Plan**
- **Infrastructure Development Act, No. 23 of 2014 (GN No. 37712)**
 - To provide for the facilitation and **co-ordination** of public infrastructure development which is of significant economic or social importance to the Republic;
 - To ensure that infrastructure development in the Republic is given **priority in planning, approval and implementation**;
 - To ensure that the **development goals of the state are promoted** through infrastructure development;
 - To **improve the management** of such infrastructure during all life-cycle phases, including planning; and
 - Approval, implementation and operations; and to provide for matters incidental thereto.
 - **Part 3** covers Strategic Integrated Projects (**SIPs**);
 - **Section 5** empowers the PICC to **expropriate** land i.t.o. the Expropriation Act;
 - **Section 18** dealing with **environmental assessments**; and
 - **Schedule 3** containing a list of the **18 SIPs** which existed when the Act commences (2 June 2014).

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SIP 1: Unlocking the Northern Mineral Belt with Waterberg as the Catalyst

Unlocking SA's northern mineral belt in one of the poorest provinces (Limpopo) through key infrastructure provision in the Waterberg and Steelpoort districts, initiating new energy and industrial development, shifting coal from road to rail in Mpumalanga and increasing rail capacity to Richards Bay whilst supporting regional integration

Proposal

Investment in rail, water pipelines, energy generation and transmission infrastructure will catalyse unlocking of rich mineral resources in Limpopo resulting in up to 98 000 direct jobs across the areas covered. Urban development in the Waterberg will be the first major post-apartheid new urban centre and will be a "green" development project.

Mining includes coal, platinum and other minerals for local use and export, hence the rail capacity is being extended to Mpumalanga power stations and for export, principally via Richards Bay and in future Maputo (via Swaziland link).

The additional rail capacity will shift coal from road to rail in Mpumalanga with positive environmental and social benefits. Supportive logistics corridors will help to strengthen Mpumalanga's economic development.

Primary Mineral Reserves

Coal: 18bn tons	Platinum: 6323 tons
Chromium: 5.6 bn tons	Palladium: 3 611 tons

Components

- Rail and road:**
 - Waterberg - 600km rail (increase capacity to 112Mtpa)
 - Mpumalanga - 140km rail (increase capacity to 32Mtpa)
 - Swazi link - 163km (increase capacity from 16Mtpa to 33Mtpa)
 - Export link - upgrade Ermelo to Richards Bay
 - Rolling stock: 14000 wagons, 1000 locomotives
 - Road: national, provincial and municipal roads
 - Moloto corridor centered around deeper economic linkages with Gauteng
- Water:**
 - Mokolo Phase 2 - 170km water pipeline providing potentially 150Mm³ per annum
 - De Hoop Dam (80Mm³ per annum) and distribution system (260km pipeline)
- Electricity:**
 - New Coal fired power station (Coal 3) 4800MW, and transmission lines
- Urban development, including human settlement, energy, roads, etc.:**
 - Housing, community centers, public transport, green urban development and roads
- Port:**
 - Richards Bay capacity from 14.2Mtpa to 23.7Mtpa
- Industrial Development:**
 - 80 000 barrels/day coal-to-liquid plant (Matlha)
 - Coal Mines: 3 mines 5-10 Mtpa per mine

Project location

9-11/10/2018

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4.8) ROLE AND FUNCTION OF EXISTING NWRI TO SUPPORT MCWAP

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1. HARTBESPOORT DAM

• Following the 1899 – 1902 Anglo-Boer War widespread poverty and joblessness order of the day

• Engineering solution

• Constructed HBD in 1923 on Crocodile River, raised in 1970

• 59 m high

• Capacity - 185.6 million m³

• Land compensation originally settled in Court

• Supply water to irrigation, industry and domestic users

• Receives water from highly developed urban areas in catchment - rapid runoff, return flows, etc.

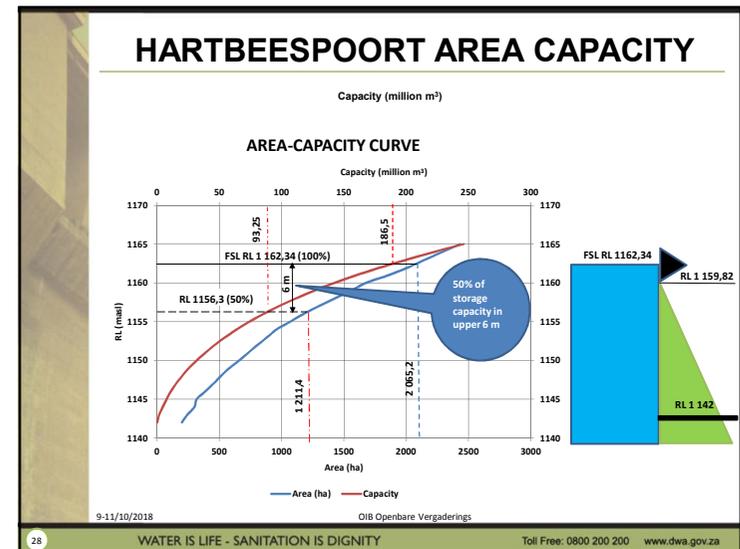
Minister visited the dam on 15 June 2018 to familiarise himself with the water quality and land matter challenges at the dam. He said: "we have to ensure there is one government programme that includes all the spheres of government. We want to formalize a provincial joint tactical centre. Priorities must be determined at a local level. SALGA must also play a part as it is central to local government activities."

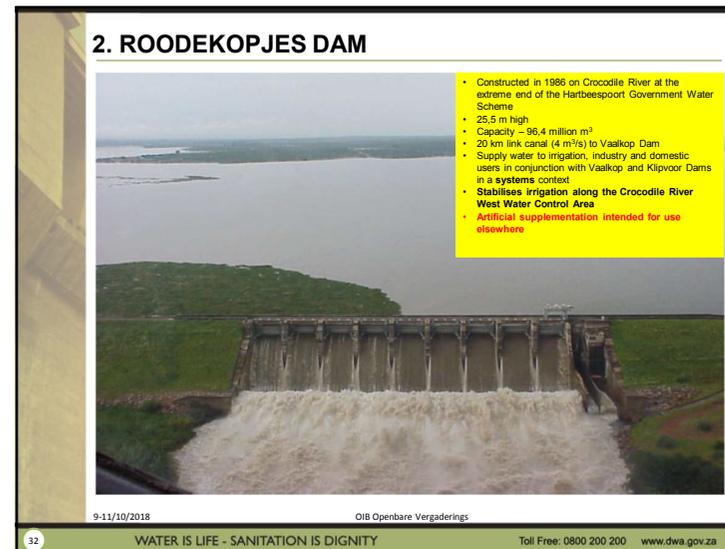
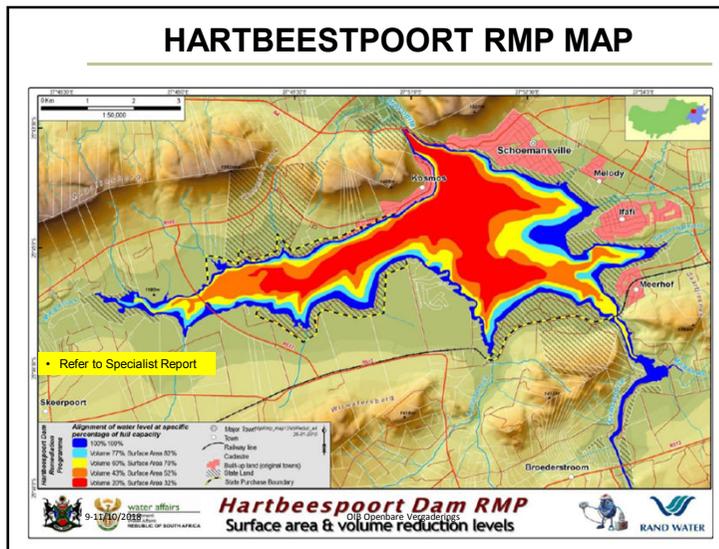
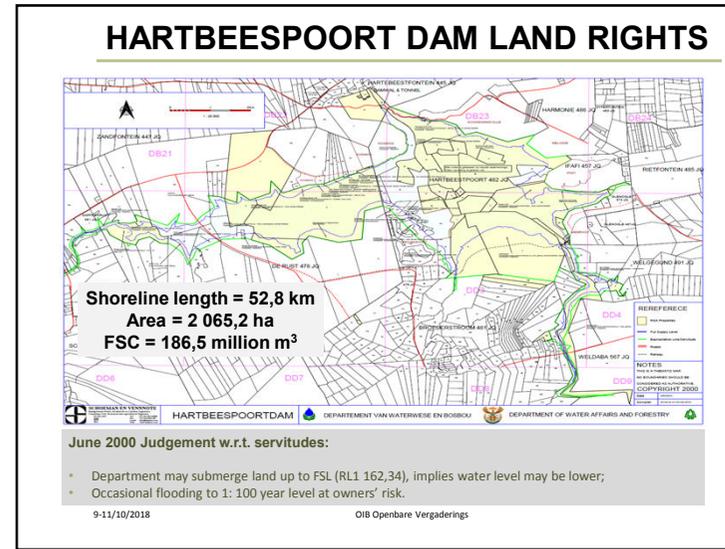
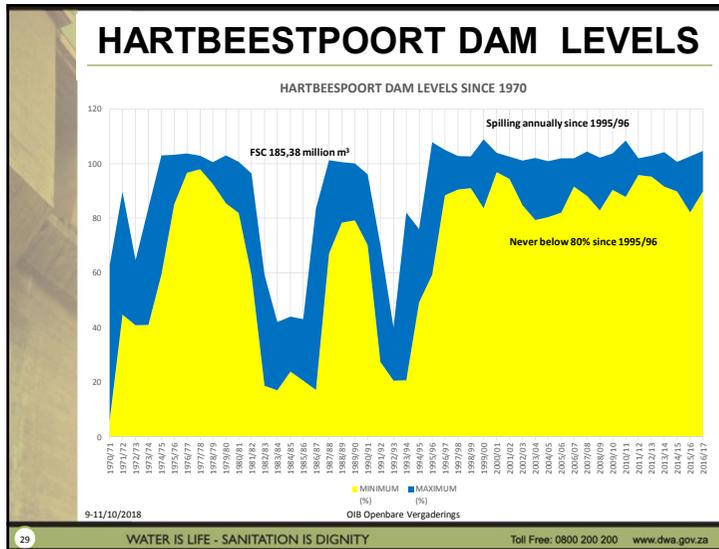
It is envisaged that this process will be implemented independently from the MCWAP.

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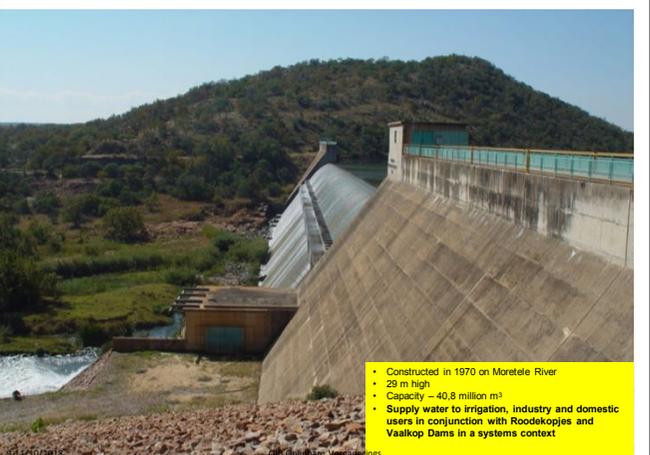
3. VAALKOP DAM



- Constructed in 1972 on Elands River
- 32 m high
- Capacity – 51,4 million m³
- Supply water to irrigation, industry and domestic users in conjunction with Roodekopjes and Klipvoor Dams in a systems context

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4. KLIPVOOR DAM



- Constructed in 1970 on Moretele River
- 29 m high
- Capacity – 40,8 million m³
- Supply water to irrigation, industry and domestic users in conjunction with Roodekopjes and Vaalkop Dams in a systems context

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5. MOKOLO DAM AND PUMPING STATION



- Constructed in 1980 on Mokolo River
- 55 m high
- Capacity – 145,8 million m³
- Supply water to irrigation, industry (mining and energy) and domestic (Lephalale and Maropong) users
- Provide water for MCWAP-1 since June 2015

Mokolo Pumping Station

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4.9) PROPOSED MCWAP (NEW NWRI)

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OBJECTIVE OF MCWAP

TO AUGMENT THE WATER SUPPLY TO THE LEPHALALE AREA TO MEET INCREASING DOMESTIC (LEPHALALE AND MAROPONG) AND INDUSTRIAL (ENERGY AND MINING) NEEDS UTILISING THE AVAILABLE YIELD OF THE EXISTING MOKOLO DAM (MCWAP-1) AND SURPLUS RETURN FLOWS FROM GAUTENG BEING DISCHARGED IN THE CROCODILE RIVER (WEST) CATCHMENT (MCWAP-2A)

M MOKOLO AND
C CROCODILE RIVER (WEST)
WAP WATER AUGMENTATION PROJECT

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WATER TRANSFER INFRASTRUCTURE

1. EIA alternatives evaluated for MCWAP-2A

No.	Components of Water Transfer Infrastructure
1	Vlieëpoort Weir and Abstraction Works
2	Balancing Reservoir, Desilting Woks, High Lift Pump Station
3	Transfer & Delivery Systems
4	Break Pressure Reservoir
5	Operational Reservoir
6	Roads

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4.10) KEY TECHNICAL EIA ISSUES

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A. ALTERNATIVES TO & LOCALITY OF VLIEËPOORT WEIR OPTION

- THE TECHNICAL REPORTS ARE AVAILABLE ON THE DWS WEBSITE
- SECTION 10 OF THE EIA PROVIDES THE MODUS OPERANDI FOLLOWED TO SELECT THE PREFERRED SOLUTION
- THE COMMENTS AND RESPONSE REPORT WAS UPDATED TO RESPOND TO COMMENTS SINCE THE PREVIOUS PUBLIC MEETINGS

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B. IMPACTS TO EXISTING WATER USERS

- NO IMPACT ON ENTITLEMENTS OF HARTBESPOORT AND CROCODILE RIVER (WEST) IRRIGATION BOARDS, BASED ON NATURAL YIELD OF RESPECTIVE DAMS
- VERIFICATION AND VALIDATION OF EXISTING LAWFUL WATER USE (ELWU) IN LOWER CROCODILE AREA (A24J) (MAKOPPA) NEARING COMPLETION. EIA CONFIRMED RELEASE OF THE ELWU. MEASURES (OUTLETS AND FLOW GAUGING) INTRODUCED TO ENABLE THE RELEASE OF THE ELWU, IF AVAILABLE

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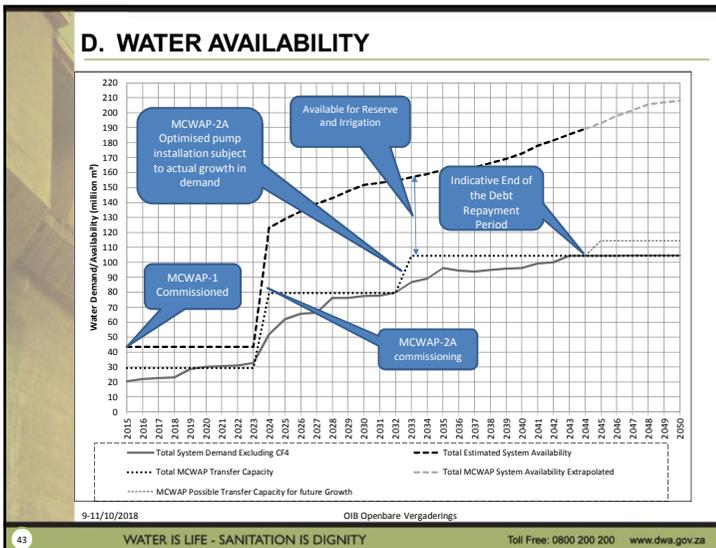
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C. LAND ACQUISITION AND LOSSES

- TCTA PREPARED APPENDIX 1 TO THE EIA DESCRIBING THE METHODOLOGY THAT WILL BE FOLLOWED TO ACQUIRE THE RIGHTS NEEDED FOR THE MCWAP-2A
- PREVAILING LEGISLATION WILL BE FOLLOWED, AT THE MOMENT IT MEANS THE FOLLOWING:
 - Constitution;
 - Promotion of Administrative Justice Act;
 - National Water Act (Section 64(1) and Part 2 of Chapter 13); and
 - Expropriation Act

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INDICATIVE IMPLEMENTATION PROGRAMME

- ❖ Indicative implementation dates for the construction phase:

Commencement of construction	: Fourth Quarter 2019
Construction duration	: 42 months
Commissioning	: Third Quarter 2023
Site Closure & Rehabilitation	: Fourth Quarter 2025
- ❖ Working hours: Sun-rise to sun-set

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4.11) *INSTITUTIONAL ARRANGEMENTS FOLLOWING IMPLEMENTATION*

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“SYSTEM OPERATING FORUM”

“A MCWAP system operating forum will be established by DWS before Operational Declaration, comprising relevant senior stakeholders from various water use sectors (municipal, agriculture and industrial) within the MCWAP water supply system, including TCTA, to provide a consultative platform for implementation, monitoring, auditing, reviewing and updating of system operating rules and/or restrictions”

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RIVER MANAGEMENT SYSTEM

“A RIVER ABSTRACTION AND MANAGEMENT SYSTEM TO MANAGE ABSTRACTIONS FROM, AND THE RIVER FLOW IN, THE CROCODILE RIVER (WEST) BETWEEN HARTBESPOORT DAM AND VLIËËPOORT ABSTRACTION WORKS INCLUDING THE RELEASES AND SPILLS FROM SUCH WORKS AS WELL AS THE MORETELE RIVER FROM KLIPVOOR DAM TO THE CONFLUENCE WITH CROCODILE RIVER (WEST) AND THE ELANDS RIVER FROM VAALKOP DAM TO THE CONFLUENCE WITH THE CROCODILE RIVER (WEST). IT INCLUDES THE CONSTRUCTION OF NEW AND REHABILITATION OF EXISTING FLOW GAUGING STATIONS TO BE USED AS PART OF THE RIVER MANAGEMENT SYSTEM AS THE CASE MAY BE. IT ALSO INCLUDES A SERVITUDE OF AQUEDUCT ACQUIRED IN TERMS OF THE NWA OVER SUCH STRETCHES OF THE SAID RIVERS”

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RIVER MANAGEMENT SYSTEM

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5) EIA - WATER TRANSFER INFRASTRUCTURE

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

MCWAP-2A COMPONENTS

1 Water Transfer Infrastructure Scoping & EIA

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

OUTLINE OF EIA PROCESS

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

Content of EIAR

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

ENVIRONMENTAL LEGAL FRAMEWORK

<input checked="" type="checkbox"/>	Constitution of the Republic of South Africa, (No. 108 of 1996)	
<input checked="" type="checkbox"/>	National Environmental Management Act (No. 107 of 1998)	DEA
	EIA Regulations (as amended):	
✓	• GN No. 982 of 4 December 2014	
✓	• GN No. 983 of 4 December 2014	
✓	• GN No. 984 of 4 December 2014	
✓	• GN No. 985 of 4 December 2014	
<input checked="" type="checkbox"/>	Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)	DMR
<input checked="" type="checkbox"/>	National Water Act (Act No. 36 of 1998)	DWS
	National Environmental Management: Air Quality Act (Act No. 39 of 2004)	
	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	
	National Environmental Management: Waste Act (Act No. 59 of 2008)	
	National Forests Act (No. 84 of 1998)	
	Occupational Health & Safety Act (Act No. 85 of 1993)	
	National Heritage Resources Act (Act No. 25 of 1999)	
	Limpopo Environmental Management Act (Act No. 7 of 2003)	
	Other...	

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

ENVIRONMENTAL LEGAL FRAMEWORK

MCWAP-2A Component	Legislation	Process	Authority
Water Transfer Infrastructure	NEMA ¹	Scoping & EIA	DEA
Borrow Pits	NEMA & MPRDA ²	Scoping & EIA	DMR
Water Use	NWA ³	Water Use Licence Applications	DWS

1) NEMA = National Environmental Management Act (No. 107 of 1998)
 2) MPRDA = Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)
 3) NWA = National Water Act (Act No. 36 of 1998)

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

PROJECT DESCRIPTION

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

ALTERNATIVES

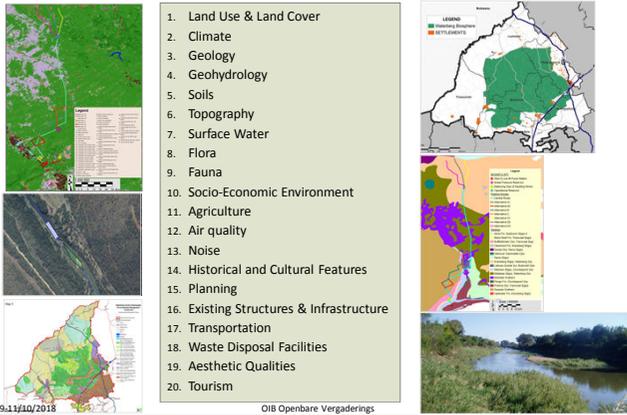
- ❖ **Alternative Water Resources –**
 - Ground Water
 - Re-use of Effluent in the Project Area
 - Mokolo Dam
 - Crocodile Water
 - Return Flows in Crocodile River (West) and Vaal River Catchments
 - Creating More Storage by Raising of Existing Dams and/or Building New Dams
 - Abstraction Point at Faure Weir
 - Water Transfer from Rivers beyond the Borders of South Africa
- ❖ **MCWAP-2A Layout Alternatives –**
 - Pre-feasibility Study Options
 - Feasibility Options
 - EIA Options (pipeline route options and “no go” option)

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

PROFILE OF RECEIVING ENVIRONMENT



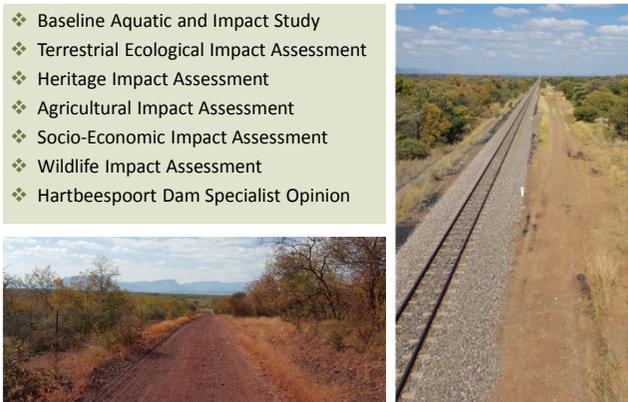
1. Land Use & Land Cover
2. Climate
3. Geology
4. Geohydrology
5. Soils
6. Topography
7. Surface Water
8. Flora
9. Fauna
10. Socio-Economic Environment
11. Agriculture
12. Air quality
13. Noise
14. Historical and Cultural Features
15. Planning
16. Existing Structures & Infrastructure
17. Transportation
18. Waste Disposal Facilities
19. Aesthetic Qualities
20. Tourism

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5.2) SPECIALIST STUDIES

- ❖ Baseline Aquatic and Impact Study
- ❖ Terrestrial Ecological Impact Assessment
- ❖ Heritage Impact Assessment
- ❖ Agricultural Impact Assessment
- ❖ Socio-Economic Impact Assessment
- ❖ Wildlife Impact Assessment
- ❖ Hartbeespoort Dam Specialist Opinion



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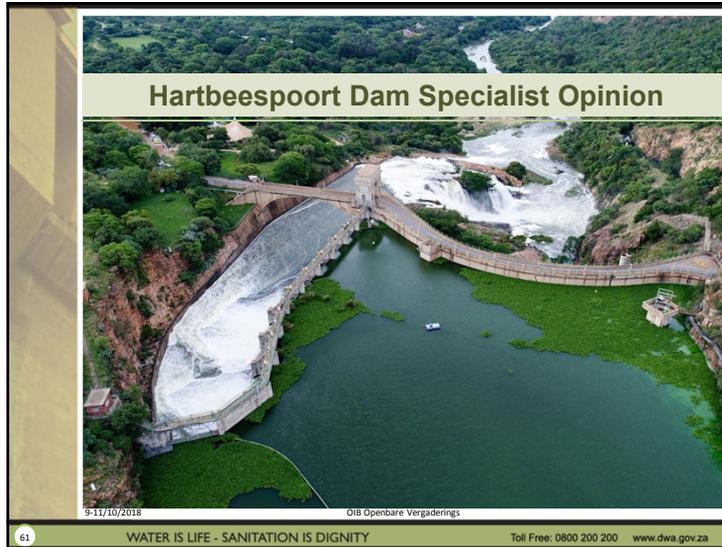
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5.2) SPECIALIST STUDIES

- ❖ **Information incorporated into the EIAR:**
 - Assumptions and limitations
 - Description of the receiving environment in a more detailed and site-specific manner
 - Summary of each specialist study, focusing on the approach to the study, key findings and conclusions drawn
 - Impacts assessment and the identified mitigation measures
 - Evaluations of the alternatives included in comparative analysis to identify the most favourable option
 - Address comments made by I&APs that related to specific environmental features
 - Salient recommendations made by the specialists were taken forward to the final EIA Conclusions and Recommendations

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HORIZON
ENVIRONMENTAL

Mokolo Crocodile Water Augmentation Project

Specialist Opinion
Potential Impacts on Hartbeespoort Dam
Public Meeting
9 October 2018

9-11/10/2018 OIB Openbare Vergaderings

HORIZON
ENVIRONMENTAL

Content

- Terms of Reference
- Data Sources
- Operational Plan
- Impacts on Stratification
- Impacts on Primary Production
- Impacts on Water Quality
- Impacts on Macrophytes
- Mitigation Measures

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HORIZON
ENVIRONMENTAL

Terms of Reference

Identify the impact of the implementation of the MCWAP project on the limnology of Hartbeespoort Dam and specifically potential consequences of the impoundment having variable water levels during certain parts of the year.

The median volume estimates for the Dam's future operational scenarios were used

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Data Sources

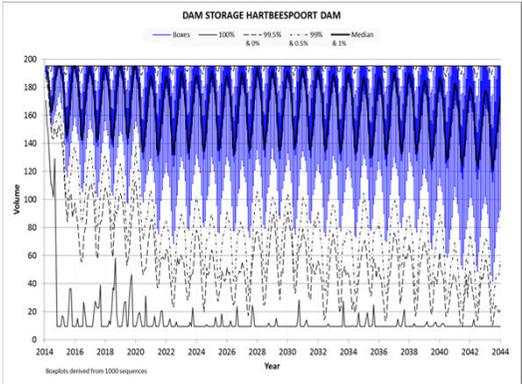


- 1997 to 2018 Water Quality Data;
- 1997 to 2018 National Eutrophication Monitoring Programme;
- 1997 to 2018 Hydrological Monitoring Data;
- “Stelselontleding en gebruiksreëls” – Presentation to Hartbeespoort Dam stakeholders 13 March 2018; and
- Hartbeespoort Public Meeting 13 March 2018.

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Operational Plan





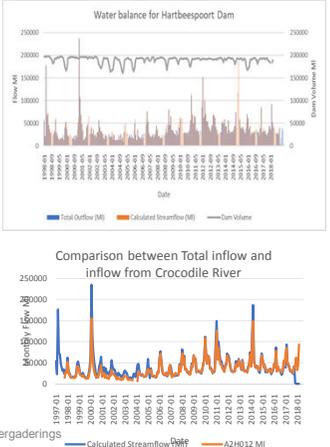
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Operational Plan



Current State

- Maintained at Full Supply Capacity
- Releases are made to supply irrigation, industrial and domestic to Magalies Water, and a small component of local domestic use.
- Inflow dominated by Crocodile River



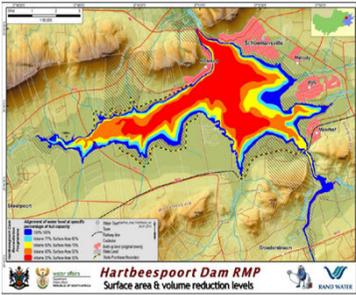
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Operational Plan



Consequence

- When the impoundment is at 50% of its storage capacity, the depth of the impoundment decreases by 6 m.
- At FSC the impoundment is 32.6m deep, at 50% the depth will be 26m which is still above the lowest outflow pipe which is at 20 m below surface
- Surface area will decrease from 2065,20 ha at FSL to 1 253 ha (40 per cent reduction in area)
- Distance from shore to water ranges between little change (at Cosmos) to 500m on the eastern shore. The approximate average distance around the impoundment is 100m.



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Operational Plan HORIZON ENVIRONMENTAL

Impacts

- **Smaller volume** in the impoundment may increase the impact of the nutrient load to the impoundment as there is a smaller buffering capacity;
- **The lowered depth** will impact on shoreline areas as more land is exposed, external influences from wind and sun increase and the stratification patterns within the impoundment may change; and
- The **reduction in surface area** will provide less area for macrophyte infestation and thus the nature of compaction and removal may also change

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Impacts on Stratification HORIZON ENVIRONMENTAL

Water Temperature Profile of the Lake

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Impacts on Stratification HORIZON ENVIRONMENTAL

Current State

- Hartbeespoort Dam shows a strong thermocline at 15 m below surface
- 5 degrees C difference in summer
- 0,5 degrees C in winter
- Thermocline forms the barrier for oxygen replenishment
- Anoxic conditions during summer (<1mg/l)
- Oxygenated in winter (>4 mg/l)

Date

— O-Diss-Water (OXYGEN DISSOLVED) (mg/l) Surface
— O-Diss-Water (OXYGEN DISSOLVED) (mg/l) Depth 15m

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Impacts on Stratification HORIZON ENVIRONMENTAL

Consequences

- Thermocline depth is an important and integrative factor for plankton community structure
- Should the fluctuation in depth last over more than the winter period into the time when stratification occurs, and the impoundment changes its stratification pattern, then this could provide more water habitat for phytoplankton and thus increase the biomass.

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Impacts on Stratification

HORIZON
ENVIRONMENTAL

Impact

- Variable water volumes during the period 2004 to 2009
- Net decrease in depth during the low volume levels was 2 m.
- Still a strong hypolimnion with anoxic conditions
- Predicted water volumes and thus depth for spring and early summer during the implementation of MCWAP indicate that the depth of the impoundment will be 2 m below FSC at this time.
- Impoundment is not stratified during winter, there will be no change to current status of the stratification of the impoundment as a result of MCWAP.

Effect of reduced volume on temperature and oxygen at 15m

UMS

M3

Oxygen 15 m Temperature 15 m Volume

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Impacts on Primary Production

HORIZON
ENVIRONMENTAL

Current State

- The median Chlorophyll a value is 38,4 ug/l.
- OECD Model classifies Hartbeespoort Dam as Eutrophic to Hypereutrophic
- The seasonal variation in concentration demonstrates the role of external factors light, temperature and nutrients
- The winter dominant species are diatoms, specifically *Melosira sp.* In summer, the dominant species is *Microcystis sp.*

CHLOROPHYLL A (ug/L) Hartbeespoort Dam

ug/l

Date

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Impacts on Primary Production

HORIZON
ENVIRONMENTAL

Impacts

- Physical conditions – Temperature
 - Unlikely increase temperature in winter when algal production in the impoundment is already low
 - Summer periods (at 50th percentile), it is estimated that there will be no major change to the thermocline, thus no change in trophic status and algal blooms

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Impacts on Primary Production

HORIZON
ENVIRONMENTAL

- Impacts
- Chemical conditions – Nutrients
 - Generic analysis of TN:TP ratio linked to Chlorophyll a concentration
 - Hartbeespoort Dam shows only limited correlation
 - Would indicate that the nutrient limitation to primary production fluctuates between nitrogen and phosphorous
 - Dominance of algae by *Microcystis sp* is probably a function of its intracellular structures, the gas vesicles, which provide cells with buoyancy

Chlorophyll a v TN:TP

ug/L Chlorophyll a

TN:TP

Time

CHL A-Susp-Water (CHLOROPHYLL A) (ug/L) Result TN:TP

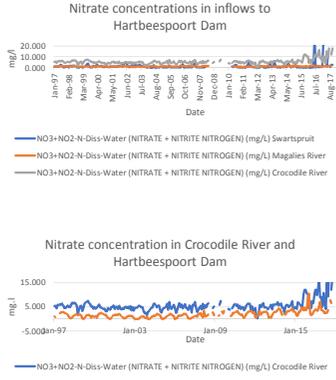
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Impacts on Nutrients



Current State Nitrates

- The inflows to the Dam are point source discharges from WWTWs, diffuse runoff from urban areas (including sewer breaks) and agricultural return flow
- Dominant contributor Crocodile River
- Similar pattern reflected in Hartbeespoort Dam



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Impacts on Nutrients



Impact on Nitrates

- Unlikely to have a significant effect in winter, as primary production is limited by temperature and light during this period.
- During summer periods under the 50th percentile scenario, high concentrations of nitrates are suitable for blooms of algae. With the advent of MCWAP, these high concentrations are expected to continue and thus blooms of algae will continue to occur.

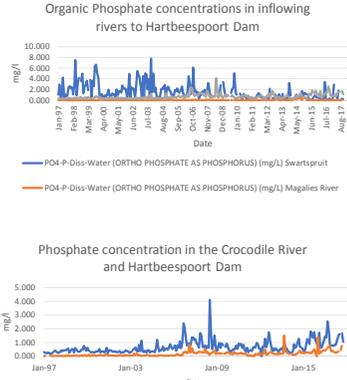
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Impacts on Nutrients



Current State Phosphates

- The consequences of phosphorus enrichment in reservoirs are primarily connected with the emerging abundance of cyanobacteria.
- Crocodile River 6 200 tons from 1997 to 2018
- Sediments 1 000 tons



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Impacts on Nutrients



Impact on Phosphates

- Winter load to the impoundment remains constant as the dominant flow is the Crocodile River.
- However, the lowered water level in the dam will expose a certain portion of the sediments and through desiccation and physical action by wind, phosphates can be released when the impoundment starts to fill.
- Possibility that the primary production in the impoundment will increase during the early spring and summer period when temperature and solar radiation becomes favourable for algal growth

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Impacts on Macrophytes

HORIZON
ENVIRONMENTAL

2004 2016

2017 2018

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Impacts on Macrophytes

HORIZON
ENVIRONMENTAL

Impact

- Water hyacinth die back in the winter periods.
- It's minimum temperature tolerance is 12 degrees C.
- The impact of the MCWAP in winter is unlikely to affect the current status of hyacinth in the impoundment.
- As the temperature rises in spring, the hyacinth begin to recover and once temperatures reach the mid 20's, hyacinth is at its most productive. Hyacinth are prolific growers and can double in mat size within 2 weeks.
- Reduction in area in spring is relatively small and thus there is unlikely to be any significant change to the prolific growth of hyacinth on Hartbeespoort Dam

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Mitigation measures

HORIZON
ENVIRONMENTAL

While there are no specific measures identified as a result of MCWAP implementation, general catchment mitigation measures could include measures such as:

- Reduction at source – reduce nutrient loading by maintaining upgrading point source water treatment works and diffuse source breakdown of water reticulation systems;
- Pre-impoundment treatment – installation of a pre-lake or wetland to assist with the removal of nutrients before they enter the impoundment; and
- In-lake treatment – building from the now defunct Hartbeespoort Dam Management Plan for a longer period of time and a on a continuous basis.

• These actions will also assist with supplying a better quality water to MCWAP in the future.

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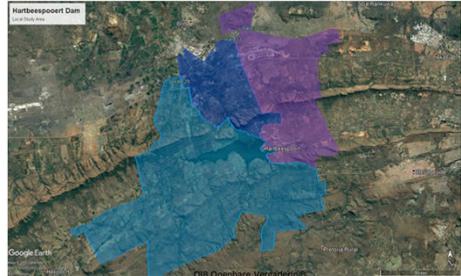
Socio-Economic Impact Assessment

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Methodology

- REGIONAL STUDY AREA - MADIBENG LOCAL MUNICIPALITY;
- LOCAL STUDY AREA – WARD 29, WARD 30 AND WARD 33
- PRIMARY DATA – DATA COLLECTED FROM STAKEHOLDERS DURING PUBLIC PARTICIPATION PROCESS AND DURING SPECIALIST STUDY;
- SECONDARY DATA – CENSUS 2011, QUANTEC ECONOMIC DATA, LIMNOLOGY REPORT



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Regional Economy

Economic Sector	MLM GVA [2010, R' millions]	% of Total
Mining and quarrying	R10 121	34,40%
General government	R4 578	15,56%
Wholesale and retail trade	R3 491	11,86%
Business services	R2 938	9,99%
Transport and storage	R1 442	4,90%
Community, social and personal services	R1 337	4,54%

MIXED REGIONAL ECONOMY - FOUR PILLARS:

- metals mining, mainly platinum;
- national and provincial government;
- wholesale and retail trade (of which retail trade is double that of wholesale trade); and
- professional business services

CATERING AND ACCOMMODATION CONTRIBUTES 0,92% OF THE REGIONAL ECONOMY

STRONG LINKS TO THE CITIES OF TSHWANE AND JOHANNESBURG

RESIDENTIAL AND TRADE HUB SERVING AS A COMMUTER DISTRICT

ECONOMY NOT COUPLED TO THE PROVINCIAL AND DISTRICT ECONOMIES WHICH SHARE RURAL AND MINING DOMINATED ECONOMIES

REGIONAL ECONOMY TIED TO THE SERVICES AND INDUSTRIAL HUBS WITHIN THE SOUTH AFRICAN ECONOMY.

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Regional Economy

Economic Sector	Gross Value Added [2007, R' millions]	Gross Value Added [2017, R' millions]	Compound Annual Growth Rate [%]
Mining and quarrying	R9 128	R10 121	1,04%
General government	R3 217	R4 578	3,59%
Finance, insurance, real estate and business services	R2 955	R3 911	2,84%
Wholesale and retail trade, catering and accommodation	R3 142	R3 760	1,81%
Manufacturing	R2 250	R1 940	-1,47%
Transport, storage and communication	R1 449	R1 786	2,11%
Community, social and personal services	R999	R1 337	2,96%
Construction	R737	R948	2,55%
Agriculture, forestry and fishing	R472	R573	1,96%
Electricity, gas and water	R531	R469	-1,23%

OVERALL GROWTH 1,7% PER YEAR. SOUTH AFRICA = 1,7% OVER THE PERIOD.
 NORTH WEST PROVINCE 0,66% AND BOJANALA PLATINUM DISTRICT MUNICIPALITY 0,59%
 RELATIVELY STRONG ECONOMY WITH TIES TO THE EASTERN INDUSTRIAL AND SERVICES HUBS

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Local Study Area Social Profile

52 782 PEOPLE RESIDING IN THE AREA;

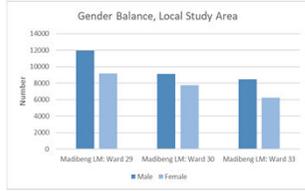
DOMINANT LANGUAGES ARE:

Afrikaans - 32%;
 Xitsonga – 13%;
 Setswana – 12%; and
 English – 12%.

NATIVE XITSONGA SPEAKERS HAIL FROM THE NORTH WESTERN BORDER REGION OF SOUTH AFRICA, INDICATIONS OF A LARGE TRANSIENT POPULATION IN THE STUDY AREA.

Income Values [No. of Households]	Totals	% of Totals
Very Low Income [R1 - R9 600 pa]	2 159	19,1%
Low Income [R9 601 to R38 200 pa]	3 908	37,7%
Middle Income [R38 201 to R614 400 pa]	2 882	36,5%
High Income [R614 60 and above pa]	567	6,7%
Totals:	9 516	100,0%

Dwelling Type	Totals	% of Total
House, separate stand	10 095	48,0%
Traditional Dwelling	162	0,8%
Townhouses/Flats	864	4,1%
Backyard Dwelling or Flatlet	1 575	7,5%
Informal Dwelling	7 977	38,0%
Not Applicable, Other and Unspecified	344	1,6%



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Impacts on the Study Area

WINTER DAM LEVELS WILL DECREASE UP TO 67% OF THE FULL SUPPLY CAPACITY
TRANSLATES TO A DAM LEVEL REDUCTION OF BETWEEN FIVE AND SIX METERS IN 50% OF THE WINTERS
WINTER DAM LEVELS WILL BE BETWEEN THE YELLOW AND THE BLUE AREAS ON THE ADJACENT MAP

AREAS MOST AFFECTED

- EASTERN SHORE, INCLUDING AREAS NEAR IFAFI, MEERHOF AND ESTATE D'AFRIQUE, INCLUDING THE STATE LAND USED AS A CAMPING GROUND
- SOUTHERN SHORE, INCLUDING CLUB NAUTIQUE: THE ISLANDS ESTATE
- WESTERN SHORE, INCLUDING WEST LAKE AND COUNTRY ESTATE, THE COVES, LAKELANDS
- NORTHERN SHORE, INCLUDING KSHANE LAKE LODGE, LELOKO LIFESTYLE ESTATE AND KOSMOS RIDGE
- JETTIES, SLIPWAYS, BOAT HOUSES, MOORINGS, FISHING AND PICNIC AREAS - DISTANCE TO THE WATER WILL BE INCREASED DURING WINTERS

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Impacts Considered

HEALTH AND SOCIO-ECONOMIC WELL-BEING IMPACTS
Making existing boat and watercraft mooring facilities unusable during periods of low water;
Security risk to estates through greater beach area during winter
The creation of muddy plains leading to the water during periods of low water
The impact of the water fluctuation on the Water Hyacinth infestation

QUALITY OF THE LIVING ENVIRONMENT (LIVEABILITY) IMPACTS
Changes in the sense of place for those living next to the water's edge
Recreational use of the water surface
Improvement in the air quality impact of the Medupi and Matimba Power Station

ECONOMIC AND MATERIAL WELL-BEING IMPACTS (NEGATIVE)
Impacts on property values for properties close to the water's edge
Loss in tourism revenue through reduced access to the water's edge during winter

ECONOMIC AND MATERIAL WELL-BEING IMPACTS (POSITIVE)
Increased water supply to the Lephalale area, which will enable economic growth

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Property Implications

- PROPERTIES WITH WATER ACCESS WILL HAVE JETTIES AND OTHER WATER FACILITIES WILL BE OUT OF THE WATER DURING WINTERS.
- THE DAM BELONGS TO THE STATE AND IS A GOVERNMENT WATER WORKS. DAMS ARE CONSTRUCTED TO SUPPLY RAW WATER FOR DOMESTIC, AGRICULTURAL, COMMERCIAL AND INDUSTRIAL USES.
- THEREFORE, THE FLUCTUATION IN DAM LEVELS ARE EXPECTED AT ALL GOVERNMENT WATER WORKS SUCH AS HARTBESPOORT DAM.
- IF THE DAM LEVELS DO NOT FLUCTUATE, AS HAS BEEN THE CASE IN HARTBESPOORT DAM, IS CONSIDERED A BENEFIT TO THE SURROUNDING PROPERTIES.

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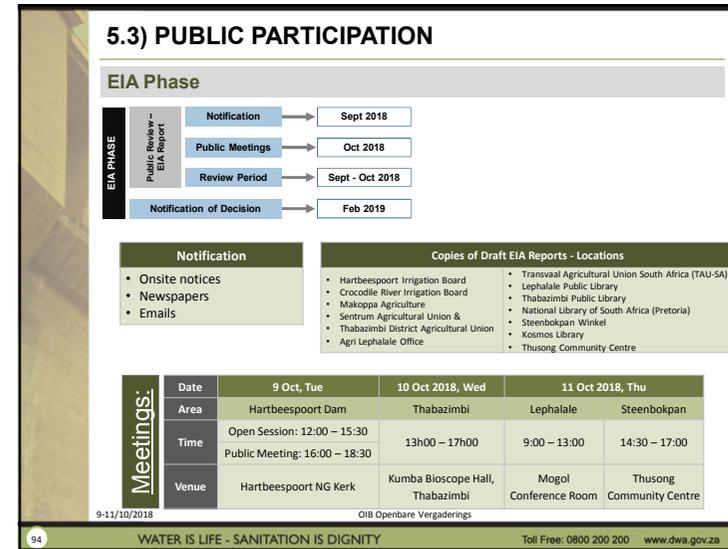
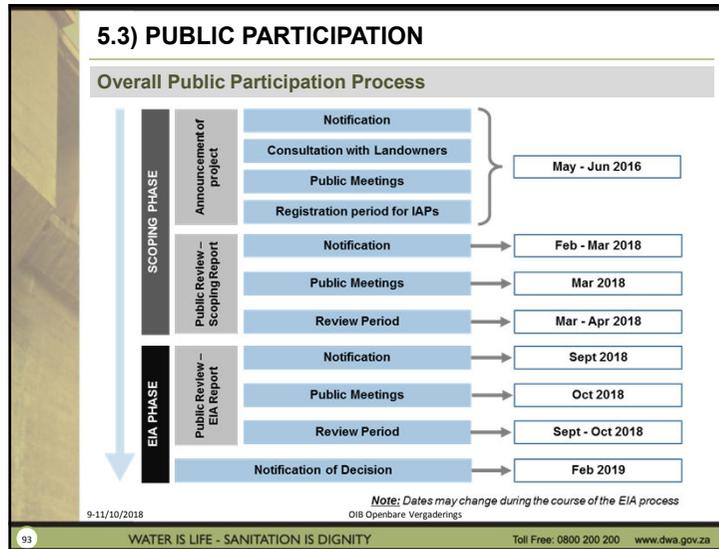
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General Mitigations Recommended

- THE IMPACTS OF THE FLUCTUATING LEVELS OF THE DAM CANNOT BE MITIGATED.
- NOTIFICATIONS TO DAM USERS OF PERIODS OF LOW WATER, THIS WOULD PROVIDE OWNERS TIME TO ADJUST THEIR MOORING FACILITIES PRIOR TO THESE PERIODS OF LOW WATER.
- SAFETY AWARENESS CAMPAIGN PRIOR TO PERIODS OF LOW WATER TO INFORM USERS WITH REGARDS BEACH CONDITIONS.
- NOTIFICATIONS TO DAM USERS OF COMPLETION OF THE PROJECT TO ALLOW TIME FOR SUCH PROPERTIES TO RE-EVALUATE THEIR SECURITY MEASURES.
- THE IMPACT ON PROPERTIES WITH ACCESS TO THE WATER WILL NEED TO RESPOND TO THE FLUCTUATING WATER LEVELS.

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5.3) PUBLIC PARTICIPATION

EIA Phase

Websites:

water & sanitation
Department of Water and Sanitation
REPUBLIC OF SOUTH AFRICA

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Makoppa Ad Hoc Committee

Mokolo/Mokolo and Crocodile River (West): Water Augmentation Project (MCWAP)

<http://www.dwa.gov.za/Projects/MCWAP/> or
<http://www.nemai.co.za/environmental.html>

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5.3) PUBLIC PARTICIPATION

Focus Group Meetings

Irrigators

Crocodile-West Irrigation Board & Hartbeespoort Irrigation Board

02 October 2018
13:00 – 17:00
Koedoeskop Agricultural Union Hall

Makoppa Ad Hoc Committee

03 October 2018
09h00 – 12h30
Kumba Bioscope Hall, Thabazimbi

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5.3) PUBLIC PARTICIPATION

Focus Group Meetings

Mooivallei Landowners
03 October 2018
14:00 - 17:00
Kumba Bioscope Hall, Thabazimbi

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5.4) CONCLUSIONS & RECOMMENDATIONS

❖ Sensitive environmental features –

- ❑ Watercourses
- ❑ Heritage and archaeological sites
- ❑ Flora and fauna of conservation concern
- ❑ Game farming
- ❑ Dolomitic conditions
- ❑ Aquifer
- ❑ Existing agricultural water users
- ❑ River Management System
- ❑ Safety and security
- ❑ **HBP Dam limnological & socio-economic (regulatory framework)**
- ❑ Traffic on the public roads
- ❑ Existing infrastructure and structures
- ❑ Construction-related nuisance to sensitive socio-economic receptors

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5.6) CONCLUSIONS & RECOMMENDATIONS

❖ Sensitive environmental features

❖ Environmental Impact Statement:

- ❑ Key mitigation measures
- ❑ Water-related concerns
- ❑ **HBP Dam - government waterwork**
- ❑ Options assessed
- ❑ Engagement with I&APs
- ❑ Critical environmental activities - project life-cycle

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6) DISCUSSION

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The slide features a header with two logos: the Department of Water and Sanitation of the Republic of South Africa on the left, and TCTA (The Catchment Trust for the Eastern Cape) on the right. The central image shows a scenic view of a river flowing through a rocky, hilly landscape. Below the image, there is a green bar with white text that reads "Please visit the project website for further information:" followed by the URL <https://www.dwa.gov.za/projects/mcwap/>. At the very bottom, a small green bar contains the slogan "WATER IS LIFE. SANITATION IS DIGNITY".

water & sanitation
Department
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

TCTA
A new word for water

Thank you

Please visit the project website for further information:
<https://www.dwa.gov.za/projects/mcwap/>

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	DRAFT MINUTES EIA Phase Public Meeting - Thabazimbi	Queries:	Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nemai.co.za
Clients:	 	Project Name:	Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)
Date:	10 October 2018	Project No.:	10580
Date:	10 October 2018	Time:	13:00 – 17:00
Chairperson:	F. Vogel	Place:	Kumba Bioscope Hall, Thabazimbi

LW: These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.

Attendance
<i>Refer to the completed Attendance Register contained in Appendix A.</i>

NO.	DESCRIPTION	ACTION	TARGET DATE																		
1.	Opening and Welcome																				
1.1	<p>F. Vogel opened the meeting with a prayer and welcomed everyone present. He emphasised the following:</p> <ul style="list-style-type: none"> The public meeting will be conducted in Afrikaans but the text in the presentations will be in English. Attendees may use their language of preference. The public meeting forms part of the Environmental Impact Assessment (EIA) process for the proposed Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A); and Matters raised will be incorporated into the EIA's Comments and Responses Report. 	-	-																		
2.	Attendance and Apologies																				
2.1	<p>No apologies were noted at the meeting.</p> <p>F. Vogel introduced the following members of the project team:</p> <table border="1"> <thead> <tr> <th>Organisation</th> <th>Role</th> <th>Representatives</th> </tr> </thead> <tbody> <tr> <td>DWS</td> <td>Applicant</td> <td>R. Gillmer</td> </tr> <tr> <td>TCTA</td> <td>Implementing Agent</td> <td>K. Mabitsela A. Nelwamondo T. Shale M. Luthuli</td> </tr> <tr> <td>MCC</td> <td>Technical Team</td> <td>J. Kroon</td> </tr> <tr> <td>Nemai Consulting</td> <td>Environmental Assessment Practitioner</td> <td>D. Henning C. van der Hoven</td> </tr> <tr> <td></td> <td>Specialists</td> <td>A Gouws (Agriculture) A Phamphe (Ecology) B Orban (Wildlife) C Chidley (Socio-economic)</td> </tr> </tbody> </table>	Organisation	Role	Representatives	DWS	Applicant	R. Gillmer	TCTA	Implementing Agent	K. Mabitsela A. Nelwamondo T. Shale M. Luthuli	MCC	Technical Team	J. Kroon	Nemai Consulting	Environmental Assessment Practitioner	D. Henning C. van der Hoven		Specialists	A Gouws (Agriculture) A Phamphe (Ecology) B Orban (Wildlife) C Chidley (Socio-economic)	-	-
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NO.	DESCRIPTION	ACTION	TARGET DATE
3.	Purpose of the Meeting		
3.1	F. Vogel indicated that the purpose of the meeting included the following <ul style="list-style-type: none"> To provide an overview of the proposed MCWAP-2A; To present the status of the EIA; To provide an overview of the draft EIA Report for the proposed MCWAP-2A: Water Transfer Infrastructure; To provide an overview of the draft Scoping Report for the proposed MCWAP-2A: Borrow Pits; To provide a platform for project-related discussions. 	-	-
4	Project Overview		
J. Kroon stated that the content of the draft EIA Report and appendices and prevailing Republic of South Africa (RSA) legislation takes preference over any of the presentations or answers provided during the meeting, should any conflict arise.			
4.1	<u>Context</u>		
4.1.1	J. Kroon presented the following: <ul style="list-style-type: none"> Understanding RSA's water scarcity; National rainfall and potential evaporation; Internationally shared basins; Sectoral water usage; Reconciliation strategy studies; Energy and water for energy; National development imperatives; Role and function of existing NWRI to support MCWAP; Proposed MCWAP (New NWRI); Key technical EIA issues; and Institutional arrangements following implementation 	-	-
5	EIA – Water Transfer Infrastructure		
5.1	<u>Overview of the Draft EIA Report</u>	-	-
5.1.1	D. Henning presented the following: <ul style="list-style-type: none"> MCWAP-2A components – <ul style="list-style-type: none"> Water Transfer Scheme Infrastructure; Outline of the EIA process; Content of the EIA Report; Environmental Legal Framework; Project Description; Alternatives; Profile of the receiving environment; Specialist studies; Impact assessment and mitigation measures; Public participation; and Conclusions and recommendations. 		
5.2	<u>Specialist Studies</u>	-	-
5.2.1	<ul style="list-style-type: none"> A. Phamphe presented a summary of the Terrestrial Ecological Impact Assessment; B. Orban presented a summary of the Wildlife Impact Assessment; 		

NO.	DESCRIPTION	ACTION	TARGET DATE
	<ul style="list-style-type: none"> A. Gouws presented a summary of the Agricultural Impact Assessment and Wetland Impact Assessment; and C. Chidley presented a summary of the Socio-Economic Impact Assessment. 		
6	EIA – Borrow Pits		
6.1	<u>Overview of the Draft Scoping Report</u>	-	-
6.1.1	D. Henning presented the following: <ul style="list-style-type: none"> Content of the scoping report; and Programme; 		
7.	Discussion		
7.1	G. Bauer stated that as previously mentioned during the meetings in the Scoping Phase, there is approximately 200 hectares of natural habitat on the remainder portion and portion 10 of the farm Mooivallei 342. Currently the free-ranging game is situated North-East of the pipeline route and the animals' use the Crocodile River as a water source, which will be hindered during the construction period, therefore either temporary access to the river or water provision will be required and have to be maintained for that section of the pipeline during construction. D. Henning stated that in this section the pipeline fragments the property and therefore blocks off the corridor which the animals use to access water. The principal is that access will have to be maintained and will have to be taken into account when planning the construction, and it can also even be included as a condition of the environmental authorisation, and will be incorporated in the conditions of the EMP to be implemented during construction.	-	-
7.2	B. Enslin stated that the wildlife specialist made the recommendation that a 12 month prior notification be given to the landowners who will have to shift their breeding camps on the farms. His recommendation is that more than 12 months be given due to the difficulty of shifting camps on farms. D. Henning stated that best practice is to provide landowners a minimum of 12 months, which TCTA would have to consider. A. Nelwamondo stated that 12 months notification can be given to the landowners during TCTAs commencement of land acquisition and procurement of the contractor.	-	-
7.3	B. Enslin asked whether adjacent properties that have camps against the fence that will be directly affected by the construction servitude, will also be notified and compensated by TCTA in order to shift the camps before construction commences. A. Thebe stated that it will have to be considered and assessed by TCTA during the construction period, as and when it is acquired.	-	-
7.4	C. Vos stated that if the pipeline is constructed on the servitude road next to his farm, it doesn't matter which side the pipeline is constructed, the wildlife on his farm will still be affected by the construction servitude, and will TCTA be able to ensure that there will be no problems. A. Thebe stated that if there is sufficient evidence, a claim may be submitted. A. Nelwamondo stated that the notification will be to all direct and adjacent affected landowners. C. Vos added that what is said and what actually happens on the ground, is not the same and he has experienced this before.	-	-
7.5	A. Botha stated that it was mentioned in the presentation that the dust on site during construction period will be managed by either the use of water, or chemical suppression. She asked what kind of chemicals will be used during construction. D. Henning explained that they won't use	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
	any chemicals that may cause pollution. The norm is to use a water tanker that sprays the roads to manage dust, however the access to water is going to be minimal along the route, therefore alternative methods might be required, such as the use of polymers which bind to the dust particles. There will also be on-site monitoring for air quality, where dust buckets will be used to measure against the standards which are prescribed in legislation and the Environmental Management Programme (EMPr).		
7.6	M. Schrenk stated that he requires the locality maps of the gauging weirs upstream of the Vlieëpoort weir (i.e. Paul Hugo, Sand River and Bierspruit weir). He also requested an electronic copy of the reports as the hardcopy is too big to read in the public library. D. Henning stated that the locality maps and a link to the website in order to access the electronic version of the draft reports, will be provided.	Nemai	TBC
7.7	<p>H. Pieters stated that he comes from Marikana and has previously had many issues with similar projects in the area, but the biggest issue was who do you consult with in order to get assistance. He requested that the list of those contact details of the necessary parties be provided. He heard that there will be blasting during the construction period, and asked at what frequency will the vibrations pass through the ground and what effect will that have on wildlife, if their game breaks fences due to the blasting, how will that be managed. He also added that due to the vibrations, many issues arise in areas that have dolomites present due to the seismic activity caused by blasting. D. Henning explained that Nemai Consulting is the contact person for the EIA phase, then if environmental authorisation is granted and the appeal process has ended, then the contact person will become TCTA, as they are the implementing agent for the project. Then during the construction period, there will be two main contacts, the first will be the Community Liaisons Officer (CLO) who will be on site and can be contacted by the public. The CLO will then record the incident and it will be categorised based on the severity of the impacts and a target date will be set in order to resolve the issue. Then there is also an independent Environmental Control Officer (ECO) who will report on incidents that do not follow conditions prescribed in the EMPr and EA. The ECO then reports the issue to the implementing team, and if they do not resolve the issue then the ECO can present it to DEA and the Green Scorpions. During operation phase, the contact will become the Department of Water and Sanitation.</p> <p>J. Kroon recommended that a section be provided in the EIA Report that explains exactly who the authority belongs too at each phase of the project, as well as a contact person. A. Nelwamondo added that after the EA is granted, notification will be provided to the IAPs which will include all the necessary contact details. F. Vogel added that with regards to the blasting during construction, all the blasting will take place according to the engineers' specifications. J. Kroon stated that the engineers will have specifications for blasting, and the contractor will have to provide evidence that he can comply accordingly, and there will be monitoring and tests in order to approve the methodology before extensive blasting occurs on site. D. Henning also mentioned that detailed geotechnical studies will be carried out in the design phase in order to determine what the exact geological and soil conditions are on site.</p>	-	-
7.8	H. Pieters stated that the pipeline is approximately 3 m in diameter, what pressure will be in the pipe because the concern is that what happens when the pipe bursts.	-	-

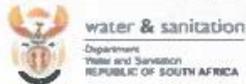
NO.	DESCRIPTION	ACTION	TARGET DATE
7.9	H. Richardson stated that she lives by the Sand River, by the gauging weir. Her concern is that she uses the access road at the back of her plot, which crosses the Sand River, to get the other side of her property with her cattle, and asked how she will be able to access the other side of her property during the construction period. D. Henning stated that provisions have been made in the EMP, to ensure that landowners will have access to their property at all times. Animals will also need access to get to water sources, so during the time when TCTA start negotiating for the servitude as part of the land acquisition process, conditions will be set for the servitude and will also include the specific conditions for every property.	-	-
7.10	G. Bauer stated that with regards to the concern about the impact of the construction servitude on the adjacent property, he suggested that farms with breeding camps situated 150 m from the construction servitude, should also be given the 12 month notice, in order to plan and make arrangements.	-	-
7.11	R. Holtzhausen stated that the EIA was easy to download, however he had difficulties with the large appendices, which will need to be split. He stated that it was mentioned in the EIA, that there will be two pipes, and then a possible third pipeline in the future, is it a mistake or will that actually happen. He also asked whether the road the pipeline follows, which is used for access by the surrounding farms, will become part of the 40 m construction servitude, or will an additional road be built next to the existing one. J. Kroon explained that with regards to the pipeline section between the abstraction works and the low-lift pump station, the rising main will not run 24/7 and will be switched off at times. When switched off, sediment can accumulate in the pipe and therefore a second pipe will be placed parallel to the rising main, which will be used to remove the silt in the rising main. The possible third pipe only becomes applicable when the development in Lephalale increases in the future, and a decision is made to increase the size of the scheme.	-	-
7.12	J. Coetzee stated that where the break pressure reservoir is planned to be in the corner of his property, currently has dolomites all over. D. Henning stated that geotechnical studies were conducted. F. Vogel stated that areas that contain dolomites are not good foundations and if dolomites are on site, then an alternative position might be required.	-	-
7.13	H. Pieters stated that when you enter Thabazimbi, you will see there is a floodline by the road, which was the water level when the area flooded before weirs were introduced. What potential flood risk is caused when the weir is constructed, how will you ensure the safety of the surrounding landowners, and how far upstream will the water be pushed. J. Kroon explained that the Vlieëpoort weir has a central section, and then the pump station and abstraction works is situated on the right. The central section of the weir will allow the water to overflow downstream, and takes the 1:100 year floodline into account. D. Henning explained that the weir is not being built to serve as an impoundment, but does increase the supply level upstream to a certain extent. The engineers ran models to determine what full supply level before and after the implementation of the weir. When the full supply level was determined, it was screened to see what possible impacts it will have to existing infrastructure upstream, where two possible impacts were identified mainly a railway crossing and the low level bridge upstream used by Kumba. There has been engagement with Kumba as there is a possibility that the low level bridge may become flooded.	-	-
7.14	B. Enslin stated that there will be situations along the route where the 12 month notification period will be too short, as the landowner will have to look for a new position to relocate the breeding camp and then move the	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
	wildlife, and he will have to also build new camps. He added that the EA will only be granted in February 2019, and only then will they be able to look at what is on the farms. He recommended that the provision is made for the specific farms that will require more time and those provisions must be included as part of the construction plan for the contractor.		
7.15	M. van Zyl asked B. Orban whether landowners will be compensated for the additional feed that they will have to purchase due to the breeding camp having to be made smaller. B. Orban stated that for the short term, a claim can be made. In the wildlife impact assessment report, it specifically states that the landowner will have to look at what the carrying capacity of the camps are and whether it will be able to support the wildlife within the camp. Decisions will have to be made to see what is optimal for the management of the farm, and if there is no other option, and in the short term you have to provide additional feed, then a substantiated claim can be made.	-	-
7.16	A. Botha asked about the concerns of safety and fire during the construction period, will the police be involved, what process will be implemented. D. Henning stated that the EMPr has many provisions and mitigation measures in order to mitigate impacts such as security and fires during the construction and operation phases. A. Nelwamondo stated that in terms of to security, the whole construction servitude will be fenced off with controlled access to the servitude at all times, which will be managed by the contractor to the satisfaction of the engineer. With regards to the concern of fire, there will have to be a fire management plan before construction begins, which will contain precautionary measures and a protocol to be followed on site, including fire prevention machinery. As part of the health and safety plan for the project, one of the conditions is that the contractor also becomes part of the local fire services. There won't be people looking for employment at the construction servitude, but will occur at the designated labour desks are situated at the towns. D. Henning also added that if the EA is granted, the conditions stipulated in the EMPr and EIA becomes a legal obligation, which has to be followed during the construction and operational phases. The compliance is then monitored by the environmental manager, environmental officer, an independent ECO and CLO.	-	-
7.17	H. Pieters requested for a copy of the minutes of all the meetings held during the EIA phase. D. Henning explained that once they are finalised, the presentations will be appended to the minutes of the meetings, and will be sent through to the IAP.	Nemai	TBC
8.	Closure		
8.1	F. Vogel thanked the attendees for the participation and valuable inputs. The meeting was adjourned at 16:00.	-	-

Appendices
Appendix A – Attendance Register
Appendix B – Presentation

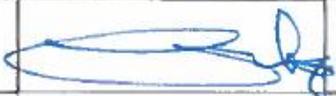
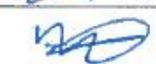
APPENDIX A

ATTENDANCE REGISTER

	ATTENDANCE REGISTER – EIA Phase Public Meeting	Queries:	Donavan Henning ☎ 011 781 1730 ✉ 011 781 1731 ✉ donavanh@nema.co.za
Clients:	 water & sanitation Department Water and Sanitation REPUBLIC OF SOUTH AFRICA	 TCTA A new word for water	Project Name: Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A) Project No.: 10580
Date:	10 October 2018	Time:	13:00 – 17:00
Chairperson:	F. Vogel	Place:	Kumba Bioscope Hall, Thabazimbi

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Fanie Vogel		Meeting Chairman	☎ 082 325 3519 ✉ Fanie.vogel@gmail.com		
Ronald Gillmer	DWS	Chief Engineer: Options Analysis	☎ 012 336 6933 ☎ 082 791 0833 ✉ GillmerR@dws.gov.za		
Hannes Pretorius	DWS	Area Manager: Hartbeespoort	☎ 012 253 1093 ☎ 082 806 3681 ✉ PretoriH@dws.gov.za		
Petrus Venter	DWS	Deputy Regional Director: North West	☎ 012 253 1026 ☎ 082 807 6098 ✉ VenterP@dws.gov.za		
Rens Botha	DWS Limpopo-North West Proto-GMA <i>Pro. Ops.</i>	Chief Engineer: Water Resources Management	☎ 012 392 1308 ☎ 082 808 9560 ✉ BothaR@dws.gov.za		
Azwianewi Nelwamondo	TCTA	Environmental Manager	☎ 012 683 1200 ☎ 082 809 5101 ✉ ANelwamondo@tcta.co.za		
Kgopotso Mabitsela	TCTA	Project Manager	☎ 012 683 1200 ✉ kmabitsela@tcta.co.za		
Themhani Mashiane	TCTA	Project Coordinator	☎ 012 683 1223 ☎ 078 696 2564 ✉ tmashiane@tcta.co.za		

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Andries Thebe	TCTA	Land Acquisition Manager	☎ 012 683 1200 ✉ athebe@tcta.co.za		
Segomotso Kelefetswe	TCTA		☎ 012 683 1200 ✉ SKelefetswe@tcta.co.za		
Thato Shale	TCTA	Social Specialist	☎ 012 683 1229 ✉ tshale@tcta.co.za		
Minenthle Luthuli	TCTA		☎ 012 683 1226 ✉ mluthuli@tcta.co.za		
Jaap Kroon	TCTA/Aurecon	MCC	☎ 083 627 5911 ✉ jaap@kroon.co.za		
Johan Pienaar	MCC	Project Manager	☎ 012 643 0670 ☎ 082 808 7166 ✉ johanpie@mcwap.co.za		
Christian Van Der Hoven	Nemai Consulting	EIA Assistant	☎ 011 781 1730 ✉ ChristianVdH@nemai.co.za		
Daniel Ramosa	Nemai Consulting	EIA Public Participation	☎ 011 781 1730 ✉		
Donavan Henning	Nemai Consulting	EIA Project Leader	☎ 011 781 1730 ☎ 082 891 0604 ✉ donavanh@nemai.co.za		
Phisoa J. J. J. J.	Amis	CEST	☎ 0152901422 ☎ 0825027775		
Ankeferi Phamph A Gouws	Nemai Index	Ecologist EIA	☎ 011 781 1730 ✉ AnkeferiPhamph@nemai.co.za		

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Bon O'Ryan	NABU	LEADER	083400-1031		
Johann Coetzee	Johann Coetzee	Farmer	063 279 7524		
Gerhard HAAS	"	"	0794555423		
ALLAN JORDAN	SANDSPR	"	083 514 9689		
MICHEL ERITSEN	METKUNISED	"	083 253 7581		
Mathes van Zyl	KarooBult	Farmer	083 2689551		
M. SCHRENK	SELF	"	0827082495 MARIUSSCHRENK@GMAIL.COM		
MICHAEL WHITG	BOTHGL FARMS	"	MICHAELWHITG@THABOAGT.CO.ZA 0834122367		
Bernard Erasmus	SEKURITEITWITTE	VALUER	082 9726243 SEKURITEITWITTE@regul.co.za		
Billy NKOISOE	Billy	"	0828691169		
THABO MOGOTLANE	TELNETHOLDINGS	DIRECTOR	THABO@TELNETHOLDINGS.CO.ZA 0829516499		

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
A. Moyo/Kage	Leitho 10 ritsu	Director	076 831 8495		
B. Nkomo	Ben Nkomo Pty Ltd	DIRECTOR	029 071 891 4855		
Johannes Pretorius	MCHENBERAH	owner	CNN NOT BE HERE		✓
Karel Mogofoa	RBC		kimogopodi@gmail.com		
AMANDA BARWING	DI LEON F FAUCHE	owner	leon.fauche@afri.com		
Kees Schuur	Keeswos				
G. Muck	owner owner	owner	0832111383 g.muck@afri.com		
Mateasenyi R-J	Dept of Agric	Nat Res. Tech	078 276 4483 .com ntshebojacqui@gmail.com		
Helq Richardson	Dipgat	owner	083765 8900 heilaklingat@gmail.com		
Ansboth	tarratopu	owner	ansbotha@gmail.com 071 9938382		
Hanna Pretus	"	"	ansbotha@gmail.com 071 9938382		

APPENDIX B

PRESENTATIONS

	KONSEPNOTULE Omgewingsimpakbepaling: Openbare Vergadering – Thabazimbi	Navrae:	Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nema.co.za
Kliënt:	 water & sanitation Department: Water and Sanitation REPUBLIC OF SOUTH AFRICA  A new word for water	Projek Naam:	Mokolo en Krokodilrivier (Wes) Wateraanvullings Projek (Fase 2A) (MKWAP-2A)
Datum:	10 Oktober 2018	Tyd:	13:00 – 17:00
Voorsitter:	F. Vogel	Plek:	Kumba Bioskoopsaal, Thabazimbi

LW: Die notule is nie verbatim weergawe van die besprekings nie maar eerder 'n opsomming van die belangrike besprekings tydens die vergadering.

Teenwoordig

Verwys na die teenwoordigheidslys aangeheg as Bylaag A.

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM															
1.	Opening en Verwelkoming																	
1.1	<p>F. Vogel het almal verwelkom en het die volgende beklemtoon:</p> <ul style="list-style-type: none"> Die Openbare vergadering sal in Afrikaans gehou word maar die aanbiedings sal in Engels op die skerm verskyn. Sprekers kan bydraes in Afrikaans of Engels doen; Die vergadering is deel van die Omgewingsimpak Bepaling (OIB) Proses vir die voorgestelde Mokolo en Krokodilrivier (Wes) Wateraanvullings Projek (Fase 2A) (MKWAP-2A); en Belangrike kwessies sal genotuleer word en ingevoer word as deel van die OIB Proses, in die Kommentaar en Terugvoeringsverslag. 	-	-															
2.	Teenwoordigheid en Verskonings																	
2.1	<p>Geen verskonings was opgemerk nie.</p> <p>F. Vogel het die lede van die projekspan voorgestel, soos hieronder getabuleer.</p> <table border="1"> <tr> <td>DWS</td> <td>Applikant</td> <td>R. Gillmer</td> </tr> <tr> <td>TCTO</td> <td>Implementeringsagent</td> <td>K. Mabitsela A. Nelwamondo A. Thebe T. Shale</td> </tr> <tr> <td>MCC</td> <td>Tegniese span</td> <td>J. Kroon</td> </tr> <tr> <td>Nemai</td> <td>OIB Praktisyn</td> <td>D. Henning C. van der Hoven</td> </tr> <tr> <td></td> <td>Spesialiste</td> <td>A Gouws (Landbou) A Phamphe (Ekologie) B Orban (Wild) C Chidley (Sosio-ekonomies)</td> </tr> </table>	DWS	Applikant	R. Gillmer	TCTO	Implementeringsagent	K. Mabitsela A. Nelwamondo A. Thebe T. Shale	MCC	Tegniese span	J. Kroon	Nemai	OIB Praktisyn	D. Henning C. van der Hoven		Spesialiste	A Gouws (Landbou) A Phamphe (Ekologie) B Orban (Wild) C Chidley (Sosio-ekonomies)	-	-
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Nemai	OIB Praktisyn	D. Henning C. van der Hoven																
	Spesialiste	A Gouws (Landbou) A Phamphe (Ekologie) B Orban (Wild) C Chidley (Sosio-ekonomies)																

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
3.	Doelwitte van en Reëls vir die Vergadering		
3.1	F. Vogel het aangedui dat die doelwitte van die Openbare vergadering die volgende insluit: <ul style="list-style-type: none"> • Om 'n oorsig van die voorgestelde MKWAP-2A te voorsien; • Om die status van die Omgewingsimpakbepaling (OIB) aan te bied; • Om 'n oorsig van die Konsep OIB-verslag vir die voorgestelde MKWAP-2A Wateroordragskema te voorsien; • Om 'n oorsig van die Konsep Omvangsbepalingsverslag vir die voorgestelde Leengroewe te voorsien; en • Om 'n geleentheid vir projekverwante besprekings te bied. 	-	-
4	Projek Oorsig		
J. Kroon meld dat die inhoud van die Konsep Omgewingsimpakbepalingsverslag en voorkomende wetgewing van die Republiek van Suid Afrika (RSA) voorkeur neem oor enige aanbieding of antwoorde verstrek gedurende die vergadering, sou daar 'n konflik bestaan.			
4.1	<u>Konteks</u>		
4.1.1	Aanbieding is deur J. Kroon gedoen wat die volgende hoofpunte ingesluit het: <ul style="list-style-type: none"> • Verstaan RSA se waterskaarste; • Nasionale reënval en potensiële verdamping; • Internasionale gedeelde watergebiede; • Projek oorsig. • Sektorale watergebruik; • Rekonsiliësie strategie studies; • Energie en water vir energie; • Nasionale ontwikkelingsvereistes; • Rol en funksie van bestaande NWHBI om MKWAP te ondersteun; • Voorgestelde MCWAP (Nuwe NWHBI); • Belangrike tegniese OIB-kwessies; en • Institusionele reëlings na implementering. 	-	-
5	Omgewingsimpakbepalingsverslag – Wateroordragskema		
5.1	<u>Oorsig van die konsep OIB verslag</u>	-	-
5.1.1	Aanbieding is deur D Henning gedoen wat die volgende hoofpunte ingesluit het: <ul style="list-style-type: none"> • OIB-Proses – <ul style="list-style-type: none"> ◦ Wateroordragskema-infrastruktuur; • Inhoud van die OIB verslag; • Omgewingsregsraamwerk; • Projek Beskrywing; • Alternatiewe; • Profiel van die ontvangsomgewing; • Spesialisstudies; • Impakbepaling en versagtingsmaatreëls; • Openbare deelname; en • Gevolgtrekkings en aanbevelings. 		
5.2	<u>Spesialis studies</u>	-	-
5.2.1	• A. Phamphe het 'n opsomming van die Terrestriële Ekologiese Impakstudie aangebied;		

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
	<ul style="list-style-type: none"> C. Chidley het 'n opsomming van die Sosio-ekonomiese Impakstudie aangebied; B. Orban het 'n opsomming van die Wild Impakstudie aangebied; en A. Gouws het 'n opsomming van die Landbou impakstudie en Vleiland Impakstudie aangebied. 		
6	Omvangsbepalingsverslag – Leengroewe		
6.1	<u>Oorsig van die Konsep Omvangsbepalingverslag</u>	-	-
6.1.1	D. Henning het die volgende aangebied: <ul style="list-style-type: none"> Inhoud van die Omvangsbepalingverslag; en Program. 		
7.	Bespreking		
7.1	<p>G. Bauer het genoem dat, soos hy alreeds voorheen geopper het tydens die vergaderings in die Omvangsbepalingsfase, dat daar ongeveer 200 hektaar van natuurlike habitat op die restantgedeelte en gedeelte 10 van die plaas Mooivallei 342 is. Tans is die vrye wild geleë noordoos van die pyplynroete en die diere gebruik die Krokodilrivier as 'n waterbron wat gedurende die konstruksie tydperk sal verhinder word. Daarom sal tydelike toegang tot die rivier of watervoorsiening benodig word en dit moet vir die gedeelte van die pyplyn gedurende konstruksie gehandhaaf word.</p> <p>D. Henning het gesê dat in hierdie gedeelte, fragmenteer die pyplyn die eiendom en dus verhinder dit die korridor wat die diere gebruik om toegang tot water te verkry. Die begrip is dat toegang gehandhaaf moet word en in ag geneem moet word in die beplanning van die konstruksie, en dit kan ook selfs as 'n voorwaarde van die omgewingsmagtiging ingesluit word, en sal opgeneem word in die voorwaardes van die omgewingsbestuurprogram, om geïmplementeer te word tydens konstruksie.</p>	-	-
7.2	<p>B. Enslin het gesê dat die wild spesialis die aanbeveling gemaak het dat 'n 12 maande voorafgaande kennisgewing aan die grondeienaars gegee word wat hul teel kampe op die plase moet skuif. Sy aanbeveling is dat meer as 12 maande gegee word weens die ingewikkeldheid om kampe op plase te skuif.</p> <p>D. Henning het gesê dat beste praktyk is om grondeienaars 'n minimum van 12 maande te gee, wat TCTO moet oorweeg.</p> <p>A. Nelwamondo het verklaar dat 12 maande kennisgewing aan die grondeienaars gegee kan word tydens TCTO se aanvang van grondverkryging en aanstelling van die kontrakteur.</p>	-	-
7.3	<p>B. Enslin het gevra of naasliggende eiendomme wat teen die heining grens, wat direk deur die konstruksie serwituut geraak sal word, ook in kennis gestel en vergoed word deur TCTO om die kampe te verskuif voordat konstruksie begin.</p> <p>A. Thebe het gesê dat dit tydens die konstruksieperiode deur TCTO oorweeg sal word en beoordeel word, wanneer dit verkry word.</p>	-	-
7.4	C. Vos het gesê dat indien die pyplyn op die serwituutpad langs sy plaas gebou word, maak nie saak watter kant die pyplyn gebou word nie, sal die wild op sy plaas steeds deur die konstruksie serwituut geraak word	-	-

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
	<p>en sal TCTO in staat wees om te verseker dat daar geen probleme sal wees nie.</p> <p>A. Thebe het gesê dat indien daar voldoende bewyse is, 'n eis ingedien kan word.</p> <p>A. Nelwamondo het verklaar dat die kennisgewing aan alle direkte en aangrensende geaffekteerde grondeienaars verskaf sal word.</p> <p>C. Vos het bygevoeg dat wat gesê word en wat eintlik op die grond gebeur, nie dieselfde is nie en dat hy dit al voorheen ervaar het.</p>		
7.5	<p>A. Botha het gesê dat dit in die voorlegging genoem is dat die stof op die terrein gedurende konstruksietydperk bestuur sal word deur die gebruik van water of chemiese onderdrukking. Sy het gevra watter soort chemikalieë tydens konstruksie gebruik gaan word.</p> <p>D. Henning het verduidelik dat hulle geen chemikalieë sal gebruik wat besoedeling kan veroorsaak nie. Die norm is om 'n watertenk te gebruik wat die paaie te bespuit om stof te bestuur. Die toegang tot water sal egter minimaal langs die roete wees, daarom kan alternatiewe metodes benodig word, soos die gebruik van polimere wat aan die stofdeeltjies bind. Daar sal ook terrein monitering wees vir lugkwaliteit, waar stofbakke gebruik sal word om te meet teen die standaard wat in wetgewing en die omgewingsbestuursprogram voorgeskryf word.</p>	-	-
7.6	<p>M. Schrenk het geopper dat hy die liggingskaart van die meetwalle stroomop van die Vlieëpoort stuwal benodig (Paul Hugo, Sandrivier en Bierspruit). Hy het ook 'n elektroniese afskrif van die verslae versoek omdat die hardekopie te groot is om in die openbare biblioteek te lees.</p> <p>D. Henning het gesê dat die liggingskaarte en 'n skakel na die webwerf om toegang tot die elektroniese weergawe van die konsepverslae te verkry, voorsien sal word.</p>	<i>Nemai</i>	
7.7	<p>H. Pieters het verklaar dat hy van Marikana afkomstig is en het al voorheen baie probleme met soortgelyke projekte in die gebied gehad, maar die grootste probleem was, wie kontak jy om hulp te kry? Hy het versoek dat die lys van daardie kontakbesonderhede van die nodige partye verskaf moet word. Hy het gehoor dat daar tydens die konstruksietydperk met plofstof gewerk sal word en het gevra met watter frekwensie sal die vibrasies deur die grond gaan en watter effek dit op die wild sal hê, indien die wild hul heinings breek, hoe sal dit bestuur word. Hy het ook bygevoeg dat as gevolg van die vibrasies, baie probleme ontstaan in gebiede wat dolomiet het as gevolg van die seismiese aktiwiteit wat deur plofstowwe veroorsaak word.</p> <p>D. Henning het verduidelik dat Nemai Consulting die kontakpersoon vir die Omgewingsimpakbepaling-fase is, dan word die omgewingsmagtiging toegestaan en die appèlproses beëindig, dan sal die kontak persoon TCTO word, aangesien hul die implementeringsagent van die projek is. Dan sal daar gedurende die konstruksietydperk twee kontakte wees. Die eerste sal die gemeenskapsbeheerdersbeampte wees wat op die perseel sal wees en kan direk deur die publiek gekontak word. Die persoon sal dan die geval opteken en dit sal gekategoriseer word op grond van die erns van die impak en 'n teikendatum sal ingestel word om die probleem op te los. Dan is daar ook 'n onafhanklike omgewingsbeheerbeampte wat oor insidente sal rapporteer, wat nie die voorwaardes wat in die omgewingsbestuurprogram en omgewingsmagtiging voorgeskryf is,</p>	-	-

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
	<p>volg nie. Die omgewingsbeheerbeampte rapporteer dan die probleem aan die implementeringspan en as hulle nie die probleem oplos nie, kan die omgewingsbeheerbeampte dit aan die Departement van Omgewingsake en die Groen Skerpioene voorlê. Tydens die bedryfsfase sal die kontak persoon die Departement van Water en Sanitasie word.</p> <p>J. Kroon het aanbeveel dat 'n afdeling in die Omgewingsimpakbepaling-verslag voorsien word wat presies verduidelik wie die owerheid van elke fase van die projek is, sowel as 'n kontakpersoon.</p> <p>A. Nelwamondo het bygevoeg dat, nadat die omgewingsmagtiging toegestaan is, kennis gegee sal word aan die geïnteresseerde en geaffekteerde partye wat al die nodige kontakbesonderhede sal bevat.</p> <p>F. Vogel het bygevoeg dat met betrekking tot die plofstowwe tydens konstruksie, al die skietwerk sal plaasvind volgens die ingenieurs se spesifikasies.</p> <p>J. Kroon het verklaar dat die ingenieurs spesifikasies sal hê vir die gebruik van plofstowwe en die kontrakteur moet bewys lewer dat hy dit kan doen. Daar sal monitering en toetse wees om die metodologie te goedkeur voordat daar ekstensiewe skietwerk op die terrein plaasvind.</p> <p>D. Henning het ook genoem dat gedetailleerde geotegniese studies in die ontwerpfasie uitgevoer sal word om te bepaal wat die presiese geologiese en grondtoestande op die terrein is.</p>		
7.8	<p>H. Pieters het verduidelik dat die pyplyn ongeveer 3 m in deursnit is, en het gevra watter druk in die pyp sal wees want die moeilikheid is wat gebeur as die pyp bars.</p>	-	-
7.9	<p>H. Richardson het verduidelik dat sy by die Sandrivier woon, naby die meetwal. Haar bekommernis is dat sy daardie toegangspad agter haar plot gebruik, wat oor die Sandrivier gaan, om by die ander kant van haar eiendom uit te kom met haar beeste en het gevra hoe sy by die ander kant van haar eiendom sal kan kom gedurende die konstruksieperiode.</p> <p>D. Henning het gesê dat daar in die omgewingsbestuursprogram voorsiening gemaak word om te verseker dat grondeienaars ten alle tye toegang tot hul eiendom sal hê. Diere sal ook toegang benodig om by hul waterbronne uit te kom. Tydens die periode wanneer TCTO begin om vir die serwituut te onderhandel as deel van die grondverkrygingsproses, sal voorwaardes vir die serwituut gestel word en sal ook die spesifieke voorwaardes vir elke eiendom insluit.</p>	-	-
7.10	<p>G. Bauer het gesê dat met betrekking tot die besorgdheid oor die impak van die konstruksie serwituut op die aangrensende eiendom, hy voorgestel het dat plase met teel kampe wat 150 m van die konstruksie serwituut geleë is, ook die 12 maande kennisgewing moet ontvang om te beplan en reëlings tref.</p>	-	-
7.11	<p>R. Holtzhausen het verklaar dat die Omgewingsimpakbepaling-verslag maklik afgelaai kon word, maar hy het probleme gehad met die groot bylaes, wat verdeel moet word. Hy het gesê dat daar in die verslag genoem word dat daar twee pype sal wees, en dan 'n moontlike derde pyplyn in die toekoms, is dit 'n fout of gaan dit gebeur. Hy het ook gevra of die pad wat die pyplyn volg, wat gebruik word om toegang te verkry tot die omliggende plase, deel van die 40 m-konstruksie serwituut sal wees, of 'n addisionele pad langs die bestaande serwituut gebou sal word.</p>	-	-

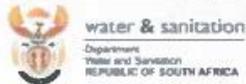
NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
	J. Kroon het verduidelik dat die stygleiding sal nie die voltyds werk nie en sal soms afgeskakel moet word. As dit afgeskakel word, kan die slik in die pyp ophoop en daarom word 'n tweede pyplyn parallel aan die stygleiding geplaas, wat gebruik sal word om die slik in die pyplyn te verwyder. Die moontlike derde pyp word slegs van toepassing wanneer die ontwikkeling in Lephalale in die toekoms toeneem, en daar word besluit om die grootte van die skema te vergroot.		
7.12	J. Coetzee het gesê dat waar die drukkreservoir beplan word in die hoek van sy eiendom, is daar dolomiet. D. Henning het gesê dat geotegniese studies uitgevoer was. F. Vogel het gesê dat gebiede wat dolomiet bevat, nie goeie fondasies is nie en as dolomiet op die terrein is, dan sal 'n alternatiewe posisie vereis word.	-	-
7.13	H. Pieters het verduidelik dat wanneer jy in Thabazimbi arriveer sal jy sien dat daar 'n vloedlyn naby die pad is, wat die watervlak was toe die gebied oorstroom het voordat die stuwal ingestel is. Water moontlike oorstromingsrisiko word veroorsaak wanneer die stuwal gebou word, hoe sal jy die veiligheid van die omliggende grondeienaars verseker, en hoe ver stroomop sal die water terugstuur. J. Kroon het verduidelik dat die stuwal 'n sentrale deel het, en dan is die pompstasie en Ontslikkingswerke aan die regterkant. Die sentrale deel van die stuwal sal die water laat oorloop stroomaf, en neem die 1: 100 jaar vloedlyn in ag. D. Henning het verduidelik dat die stuwal nie gebou word om as 'n dam te dien nie, maar verhoog die voorsiening vlak tot 'n sekere mate stroomop. Die ingenieurs het modellering gedoen om te bepaal wat die volle toevoer vlak voor en na die implementering van die stuwal sal wees. Toe die volle toevoervlak bepaal is, is dit ondersoek om te bepaal watter moontlike impakte dit sal hê op bestaande infrastruktuur stroomop, waar twee moontlike impakte hoofsaaklik geïdentifiseer was, 'n spoorwagoorgang en 'n lae-vlakbrug wat deur Kumba gebruik word. Daar was al daarvoor gekommunikeer met Kumba aangesien daar die moontlikheid bestaan dat die laevlakbrug oorstroom kan word.	-	-
7.14	B. Enslin het gesê dat daar situasies langs die roete sal wees waar die kennisgewingstydperk van 12 maande te kort sal wees, aangesien die grondeienaar moet soek na 'n nuwe posisie om die teel kampe te skuif en dan die wild daarna te skuif, en die eienaar sal ook die nuwe kampe moet bou. Hy het bygevoeg dat die omgewingsinligting eers in Februarie 2019 toegestaan sal word, en dan sal die span eers kan kyk na wat op die plase is. Hy het aanbeveel dat daar voorsiening gemaak word vir die spesifieke plase waar meer tyd benodig word en die bepalings moet ingesluit word as deel van die konstruksieplan vir die kontrakteur.	-	-
7.15	M. van Zyl het vir B. Orban gevra of grondeienaars vergoed sal word vir die bykomende voer wat hulle sal moet aankoop as gevolg van die teel kampe wat kleiner gemaak moet word. B. Orban het verklaar dat 'n eis vir die kort termyn gemaak kan word. In die wild impakassesseringverslag word dit spesifiek vereis dat die grondeienaar moet kyk na wat die drakrag van die kampe is en of dit die wild in die kamp kan ondersteun. Besluite moet deur die eienaar geneem word om te bepaal wat optimaal is vir die bestuur van die plaas, en as daar geen ander opsie is nie, en op kort termyn moet u addisionele voer verskaf, dan kan 'n gekwantifiseerde eis gemaak word.	-	-

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
7.16	<p>A. Botha het gevra oor die kommer van veiligheid en vuur gedurende die konstruksie periode, sal die polisie betrokke wees, watter proses sal geïmplementeer word?</p> <p>D. Henning het gesê dat die omgewingsbestuurprogram baie voorsiening en versagtingsmaatreëls het om die impak van sekuriteit en vure tydens die konstruksie- en bedryfsfases te versag.</p> <p>A. Nelwamondo verklaar dat ten opsigte van sekuriteit, die hele konstruksie serwituut ten alle tye met beheerde toegang tot die serwituut afgesluit word, wat deur die kontrakteurder bestuur sal word tot bevrediging van die ingenieur. Met betrekking tot die kwessie van vure moet daar 'n vuurbestuurplan wees voordat konstruksie kan begin, wat voorsorgmaatreëls bevat en 'n protokol wat op die terrein gevolg moet word, insluitende vuur verhinderende masjiene. As deel van die gesondheid- en veiligheidsplan vir die projek, is een van die voorwaardes dat die kontrakteur ook deel van die plaaslike brandweerdienst word. Daar sal nie arbeiders wees wat werk soek by die konstruksie serwituut nie, maar sal plaasvind by die aangewese arbeidslessenaar in die nabygeleë dorpe.</p> <p>D. Henning het ook bygevoeg dat, indien die omgewingsmagtiging toegestaan word, die voorwaardes soos uiteengesit in die omgewingsbestuurprogram en Omgewingsimpakbepalingsverslag 'n wettige verpligting word, wat tydens konstruksie en bedryfsfases gevolg moet word. Die nakoming word dan deur die omgewingsbestuurder, omgewingsbeampte, 'n onafhanklike omgewingsbeheerbeampte en gemeenskapsbeheerbeampte gemoniteer.</p>		
7.17	<p>H. Pieters het vir 'n afskrif van al die notules van al die vergaderings wat tydens die omgewingsimpakbepaling-proses gehou is versoek.</p> <p>D. Henning het verduidelik dat sodra die notule gefinaliseer is, sal die aanbiedings aangeheg word aan die notule en sal na hom gestuur word.</p>	<i>Nemai</i>	
8.	Afsluiting		
8.1	<p>F Vogel het almal teenwoordig bedank vir hul positiewe deelname en waardevolle insette.</p> <p>Die vergadering het om 16:00 verdaag.</p>	-	-

Bylae
Bylaag A – Teenwoordigheidslys
Bylaag B – Aanbiedings

BYLAAG A

TEENWOORDIGHEIDSLYS

	ATTENDANCE REGISTER – EIA Phase Public Meeting	Queries:	Donavan Henning ☎ 011 781 1730 ✉ 011 781 1731 ✉ donavanh@nema.co.za
Clients:	 water & sanitation Department Water and Sanitation REPUBLIC OF SOUTH AFRICA	 TCTA A new word for water	Project Name: Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)
Date:	10 October 2018	Project No.:	10580
Chairperson:	F. Vogel	Time:	13:00 – 17:00
		Place:	Kumba Bioscope Hall, Thabazimbi

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
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Petrus Venter	DWS	Deputy Regional Director: North West	☎ 012 253 1026 ☎ 082 807 6098 ✉ VenterP@dws.gov.za		
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Daniel Ramosa	Nemai Consulting	EIA Public Participation	☎ 011 781 1730 ✉		
Donavan Henning	Nemai Consulting	EIA Project Leader	☎ 011 781 1730 ☎ 082 891 0604 ✉ donavanh@nemai.co.za		
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Ankeferi Phamph A Gouws	Nemai Index	Ecologist EIA	☎ 011 781 1730 ✉ AnkeferiPhamph@nemai.co.za		

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Gerhard HAAS	"	"	079 455 5423		
ALLAN JORDAN	SANDSPR	"	083 514 9689		
MICHEL ERITSEN	METKUNISED	"	083 253 7581		
Mathes van Zyl	KarooBult	Farmer	083 268 9551		
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Karel Mogofoa	RBC		kimogopodi@gmail.com		
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Hanna Pretus	"	"	ansabothak@gmail.com 071 9938382		

BYLAAG B

AANBIEDINGS

water & sanitation
Department: Water and Sanitation
REPUBLIC OF SOUTH AFRICA

TCTA
A new word for water

Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

Public Meetings

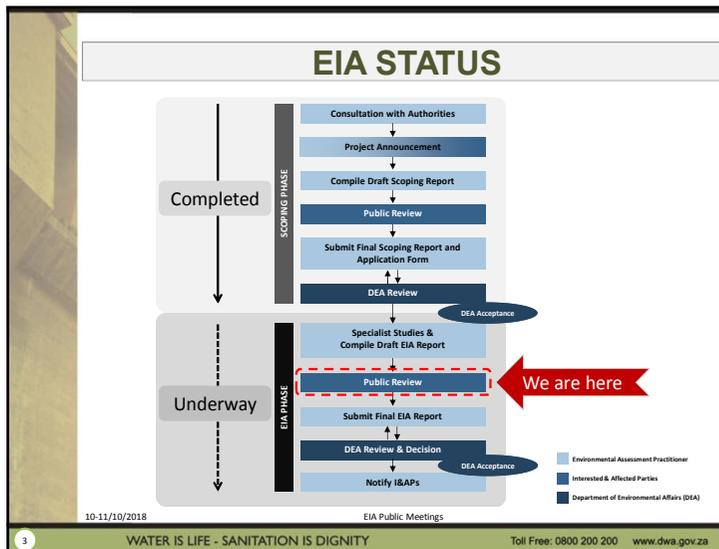
October 2018

WATER IS LIFE. SANITATION IS DIGNITY

1) OPENING AND WELCOME

10-11/10/2018 EIA Public Meetings

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AGENDA

	Agenda Items	Speaker
1	OPENING AND WELCOME	
2	ATTENDANCE AND APOLOGIES	Chairperson
3	PURPOSE & RULES OF THE MEETING	
4	PROJECT OVERVIEW	J. Kroon
5	WATER TRANSFER INFRASTRUCTURE - EIA REPORT	
5.1	Overview of the Draft EIA Report	D. Henning
5.2	Specialist Studies	Specialists
5.3	Impact Assessment & Mitigation Measures	
5.4	Alternatives	
5.5	Public Participation	D. Henning
5.6	Conclusions & Recommendations	
6	BORROW PITS - SCOPING REPORT	
7	DISCUSSION	ALL
8	WAY FORWARD & CLOSURE	Chairperson

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2) ATTENDANCE AND APOLOGIES



Please complete & sign the Attendance Register (provide email address)

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2.1) PROJECT TEAM

	ROLE IN PROJECT	PROJECT TEAM MEMBERS
DWS	Applicant	➤ R. Gillmer 
TCTA	Implementing Agent	➤ A. Nelwamondo ➤ K. Mabitsela ➤ T. Mashiane ➤ A. Thebe ➤ S. Keleletswe ➤ T. Shale 
MCC	Technical Team	➤ J. Kroon ➤ J. Pienaar 
Nemai Consulting	EIA Practitioner	➤ D. Henning ➤ C. van der Hoven ➤ D. Ramosa 
	Specialists	➤ A Gouws (Agriculture) ➤ A Phamphe (Ecology) ➤ B Orban (Wildlife) ➤ C Chidley (Socio-economic) ➤ M Howard (HBP Dam)

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3.1) PURPOSE OF THE MEETING

- ❖ To provide an overview of the proposed MCWAP-2A.
- ❖ To present the status of the Environmental Impact Assessment (EIA).
- ❖ To provide an overview of the Draft EIA Report for the proposed MCWAP-2A: Water Transfer Infrastructure.
- ❖ To provide an overview of the Draft Scoping Report for the proposed Borrow Pits.
- ❖ To provide a platform for project-related discussions.



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3.2) RULES OF THE MEETING

- ❖ Questions to relate to project at hand
- ❖ Opportunities for seeking clarification at end of presentations
- ❖ Address project team through facilitator
- ❖ Identify yourself before asking a question
- ❖ Meeting closing time
- ❖ Cell phones off, please

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4.1) UNDERSTANDING RSA'S WATER SCARCITY

- Southern Africa is **semi-arid** for the most part – **30th driest country** in the world
- Spatial distribution of run-off uneven
- Need **dams** to store water to carry over from wet years to dry years **but we are reaching our limits**
- Require **complex infrastructure** to convey water to demand centres
- Going further a field to meet the growing demand
- Improved evaluation of options to reconcile demand and supply, e.g. **Reconciliation Strategies**

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4.2) NATIONAL RAINFALL AND POTENTIAL EVAPORATION

Note: Skewed distribution of rainfall which decrease westwards whilst evaporation rates increase westwards

With Climate Change it is highly probable that this distribution will intensify, the east will get wetter and west drier.

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Inter basin NWRI needed to balance supply and demand; and
Many rivers used for conveyances, e.g. Ash, Nuwejaarspruit, Sundays, Little Fish, Lions, etc.

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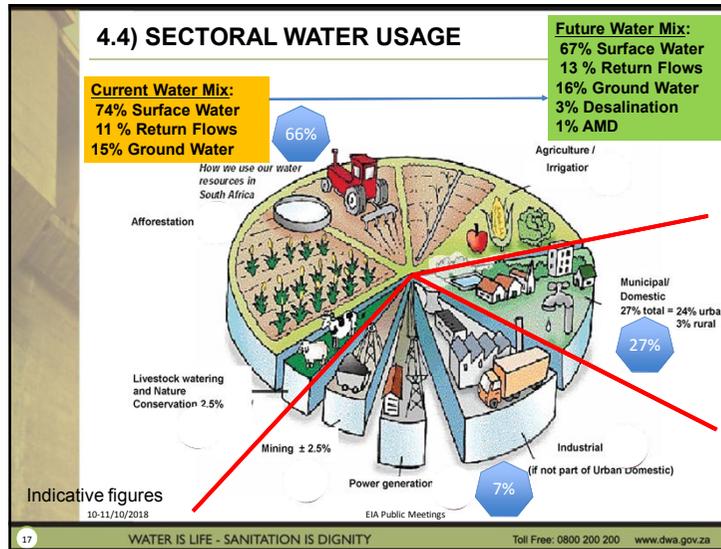
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4.3) INTERNATIONALLY SHARED BASINS

- 4 rivers shared with 6 neighbouring countries
- basins cover 60 % of SA land area
- Contribute 45% of country's total river flow
- support ± 70% of gross domestic product
- Un Convention on Non-Navigable Rivers
- SADC Protocol on Shared Water Courses – Reference in EIA

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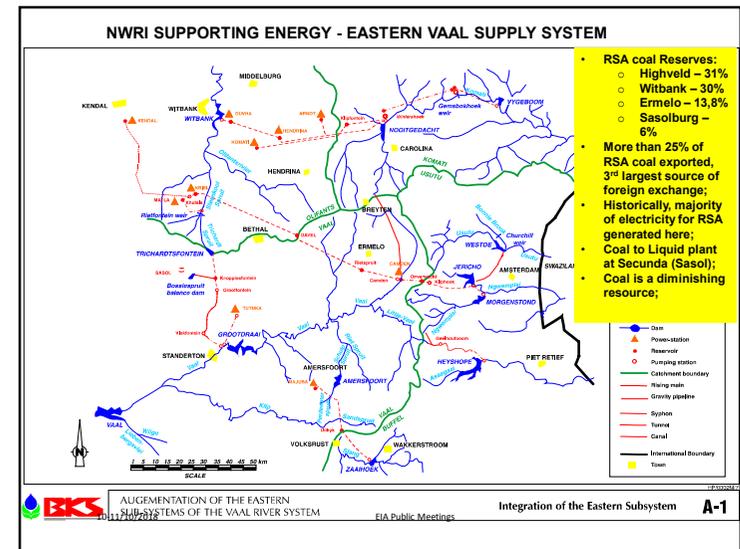


- ### 4.5) RECONCILIATION STRATEGY STUDIES
- Develop future water requirement scenarios in consultation with users (2008, 2012 and 2015) – During the previous Public Meetings Mr. van Rooyen presented the 2015 Recon demonstrating the availability of water for the proposed MCWAP-2A. Presentations are included in EIA. Refer to DWS website for 2015 Recon.
 - Investigate all possible water resources and other interventions
 - Investigate all possible methods for reconciling the requirements with the available resources
 - Make recommendations for development and implementation of interventions
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4.6) ENERGY AND WATER FOR ENERGY

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WATERBERG COAL FIELDS (11% OF RESERVES)

“Driver for increased Need for Water in the Lephalale Area”

- **Matimba Power Station:**
 - Started in 1981
 - 4 000 MW
 - Mokolo Dam
 - Largest direct dry-cooled station in the world
 - FGD to be retrofitted – water requirements to be sourced from Crocodile (West)
- **Medupi Power Station:**
 - Under construction
 - 4 800 MW
 - Mokolo Dam
 - MCWAP-1 commissioned in 2015
 - FGD to be retrofitted – water requirements to be sourced from Crocodile (West)

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INTEGRATED RESOURCE PLAN (IRP)

- The **Integrated Resource Plan** in the RSA context is not the Energy Plan - it is a **National Electricity Plan**. It 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**;
- DWS follows the latest approved IRP issued in 2010;
- New draft IRP issued on 27 Aug 2018, 60 days for comments. It includes inter alia renewables, coal and nuclear as part of the electricity mix over the given period.
- 6 Sept 2018 Eskom received Authorisation for FGD for Medupi.

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4.7) NATIONAL DEVELOPMENT IMPERATIVES

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PLANS AND ACTS

- **National Development Plan**
- **Infrastructure Development Act, No. 23 of 2014 (GN No. 37712)**
 - To provide for the facilitation and **co-ordination** of public infrastructure development which is of significant economic or social importance to the Republic;
 - To ensure that infrastructure development in the Republic is given **priority in planning, approval and implementation**;
 - To ensure that the **development goals of the state are promoted** through infrastructure development;
 - To **improve the management** of such infrastructure during all life-cycle phases, including planning; and
 - Approval, implementation and operations; and to provide for matters incidental thereto.
 - **Part 3** covers Strategic Integrated Projects (**SIPs**);
 - **Section 5** empowers the PICC to **expropriate** land i.t.o. the Expropriation Act;
 - **Section 18** dealing with **environmental assessments**; and
 - **Schedule 3** containing a list of the **18 SIPs** which existed when the Act commences (2 June 2014).

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SIP 1: Unlocking the Northern Mineral Belt with Waterberg as the Catalyst

Unlocking SA's northern mineral belt in one of the poorest provinces (Limpopo) through key infrastructure provision in the Waterberg and Steelpoort districts, initiating new energy and industrial development, shifting coal from road to rail in Mpumalanga and increasing rail capacity to Richards Bay whilst supporting regional integration

Proposal

Investment in rail, water pipelines, energy generation and transmission infrastructure will catalyse unlocking of rich mineral resources in Limpopo resulting in up to 98 000 direct jobs across the areas covered. Urban development in the Waterberg will be the first major post-apartheid new urban centre and will be a "green" development project.

Mining includes coal, platinum and other minerals for local use and export, hence the rail capacity is being extended to Mpumalanga power stations and for export, principally via Richards Bay and in future Maputo (via Swaziland link).

The additional rail capacity will shift coal from road to rail in Mpumalanga with positive environmental and social benefits. Supportive logistics corridors will help to strengthen Mpumalanga's economic development.

Primary Mineral Reserves

Coal: 18bn tons	Platinum: 6323 tons
Chromium: 5.6 bn tons	Palladium: 3 611 tons



Components

- Rail and road:**
 - Waterberg - 600km rail (increase capacity to 112Mtpa)
 - Mpumalanga - 140km rail (increase capacity to 32Mtpa)
 - Swazi link - 163km (increase capacity from 16Mtpa to 33Mtpa)
 - Export link - upgrade Ermelo to Richards Bay
 - Rolling stock: 14000 wagons, 1000 locomotives
 - Road: national, provincial and municipal roads
 - Moloto corridor centered around deeper economic linkages with Gauteng
- Water:**
 - Mokolo Phase 2 - 170km water pipeline providing potentially 150Mm³ per annum
 - De Hoop Dam (80Mm³ per annum) and distribution system (260km pipeline)
- Electricity:**
 - New Coal fired power station (Coal 3) 4800MW, and transmission lines
- Urban development, including human settlement, energy, roads, etc.:**
 - Housing, community centers, public transport, green urban development and roads
- Port:**
 - Richards Bay capacity from 14.2Mtpa to 23.7Mtpa
- Industrial Development:**
 - 80 000 barrels/day Coal-to-liquid plant (Mafulha)
 - Coal Mines: 3 mines 5-10 Mtpa per mine

Project location



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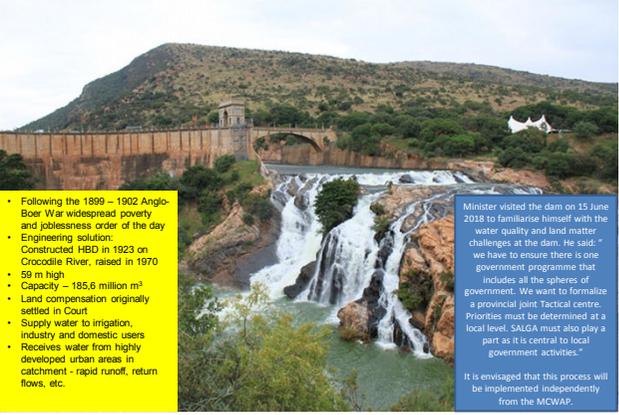
4.8) ROLE AND FUNCTION OF EXISTING NWRI TO SUPPORT MCWAP

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1. HARTBESPOORT DAM



Following the 1899 – 1902 Anglo-Boer War widespread poverty and joblessness order of the day

- Engineering solution
- Constructed HBD in 1923 on Crocodile River, raised in 1970
- 59 m high
- Capacity – 185.6 million m³
- Land compensation originally settled in Court
- Supply water to irrigation, industry and domestic users
- Receives water from highly developed urban areas in catchment - rapid runoff, return flows, etc.

Minister visited the dam on 15 June 2018 to familiarise himself with the water quality and land matter challenges at the dam. He said: "we have to ensure there is one government programme that includes all the spheres of government. We want to formalize a provincial joint tactical centre. Priorities must be determined at a local level. SALGA must also play a part as it is central to local government activities."

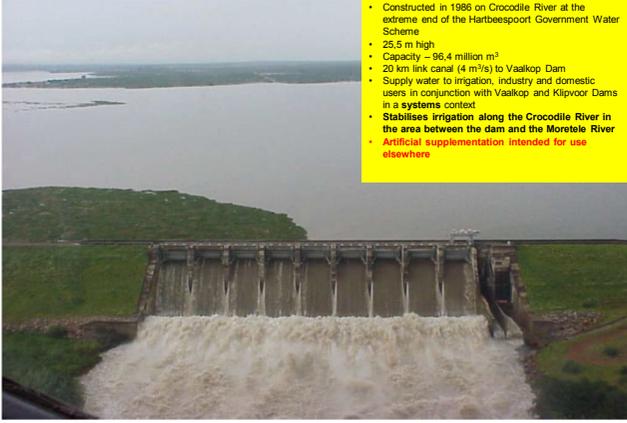
It is envisaged that this process will be implemented independently from the MCWAP.

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2. ROODEKOPJES DAM



- Constructed in 1986 on Crocodile River at the extreme end of the Hartbeespoort Government Water Scheme
- 25.5 m high
- Capacity – 96.4 million m³
- 20 km link canal (4 m³/s) to Vaalkop Dam
- Supply water to irrigation, industry and domestic users in conjunction with Vaalkop and Klipvoor Dams in a systems context
- Stabilises irrigation along the Crocodile River in the area between the dam and the Moretele River
- Artificial supplementation intended for use elsewhere

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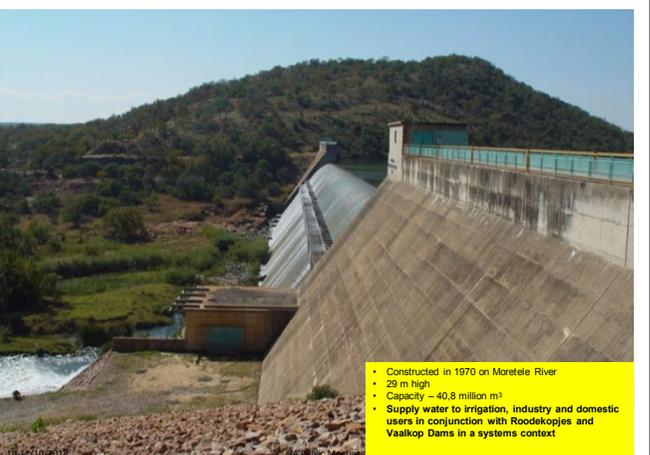
3. VAALKOP DAM



- Constructed in 1972 on Elands River
- 32 m high
- Capacity – 51,4 million m³
- Supply water to irrigation, industry and domestic users in conjunction with Roodekopjes and Klipvoor Dams in a systems context

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4. KLIPVOOR DAM



- Constructed in 1970 on Moretele River
- 29 m high
- Capacity – 40,8 million m³
- Supply water to irrigation, industry and domestic users in conjunction with Roodekopjes and Vaalkop Dams in a systems context

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5. MOKOLO DAM AND PUMPING STATION



- Constructed in 1980 on Mokolo River
- 55 m high
- Capacity – 145,8 million m³
- Supply water to irrigation, industry (mining and energy) and domestic (Lephalale and Maropong) users
- Provide water for MCWAP-1 since June 2015

Mokolo Pumping Station

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4.9) PROPOSED MCWAP (NEW NWRI)

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OBJECTIVE OF MCWAP

TO AUGMENT THE WATER SUPPLY TO THE LEPHALALE AREA TO MEET INCREASING DOMESTIC (LEPHALALE AND MAROPONG) AND INDUSTRIAL (ENERGY AND MINING) NEEDS UTILISING THE AVAILABLE YIELD OF THE EXISTING MOKOLO DAM (MCWAP-1) AND SURPLUS RETURN FLOWS FROM GAUTENG BEING DISCHARGED IN THE CROCODILE RIVER (WEST) CATCHMENT (MCWAP-2A)

M MOKOLO AND
C CROCODILE RIVER (WEST)
WAP WATER AUGMENTATION PROJECT

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WATER TRANSFER INFRASTRUCTURE

1. EIA alternatives evaluated for MCWAP-2A

No.	Components of Water Transfer Infrastructure
1	Vlieëpoort Weir and Abstraction Works
2	Balancing Reservoir, Desalting Woks, High Lift Pump Station
3	Transfer & Delivery Systems
4	Break Pressure Reservoir
5	Operational Reservoir
6	Roads

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4.10 KEY TECHNICAL EIA ISSUES

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A. ALTERNATIVES TO & LOCALITY OF VLIEËPOORT WEIR OPTION

- THE TECHNICAL REPORTS ARE AVAILABLE ON THE DWS WEBSITE
- SECTION 10 OF THE EIA PROVIDES THE MODUS OPERANDI FOLLOWED TO SELECT THE PREFERRED SOLUTION
- THE COMMENTS AND RESPONSE REPORT WAS UPDATED TO RESPOND TO COMMENTS SINCE THE PREVIOUS PUBLIC MEETINGS

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B. IMPACTS TO EXISTING WATER USERS

- NO IMPACT ON ENTITLEMENTS OF HARTBESPOORT AND CROCODILE RIVER (WEST) IRRIGATION BOARDS, BASED ON NATURAL YIELD OF RESPECTIVE DAMS
- VERIFICATION AND VALIDATION OF EXISTING LAWFUL WATER USE (ELWU) IN LOWER CROCODILE AREA (A24J) (MAKOPPA) NEARING COMPLETION. EIA CONFIRMED RELEASE OF THE ELWU. MEASURES (OUTLETS AND FLOW GAUGING) INTRODUCED TO ENABLE THE RELEASE OF THE ELWU, IF AVAILABLE

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C. LAND ACQUISITION AND LOSSES

- TCTA PREPARED APPENDIX 1 TO THE EIA DESCRIBING THE METHODOLOGY THAT WILL BE FOLLOWED TO ACQUIRE THE RIGHTS NEEDED FOR THE MCWAP-2A
- PREVAILING LEGISLATION WILL BE FOLLOWED, AT THE MOMENT IT MEANS THE FOLLOWING:
 - Constitution;
 - Promotion of Administrative Justice Act;
 - National Water Act (Section 64(1) and Part 2 of Chapter 13); and
 - Expropriation Act

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INDICATIVE IMPLEMENTATION PROGRAMME

❖ Indicative implementation dates for the construction phase:

Commencement of construction	: Fourth Quarter 2019
Construction duration	: 42 months
Commissioning	: Third Quarter 2023
Site Closure & Rehabilitation	: Fourth Quarter 2025

❖ Working hours: Sun-rise to sun-set

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4.11) INSTITUTIONAL ARRANGEMENTS FOLLOWING IMPLEMENTATION

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“SYSTEM OPERATING FORUM”

“A MCWAP system operating forum will be established by DWS before Operational Declaration, comprising relevant senior stakeholders from various water use sectors (municipal, agriculture and industrial) within the MCWAP water supply system, including TCTA, to provide a consultative platform for implementation, monitoring, auditing, reviewing and updating of system operating rules and/or restrictions”

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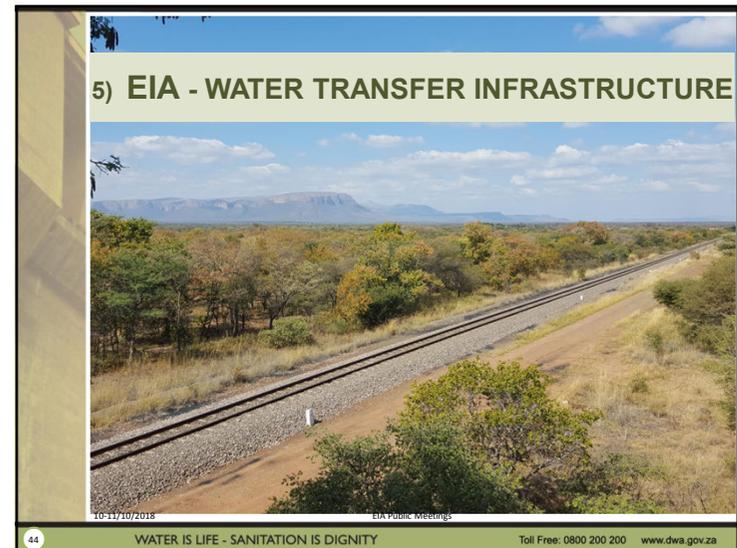
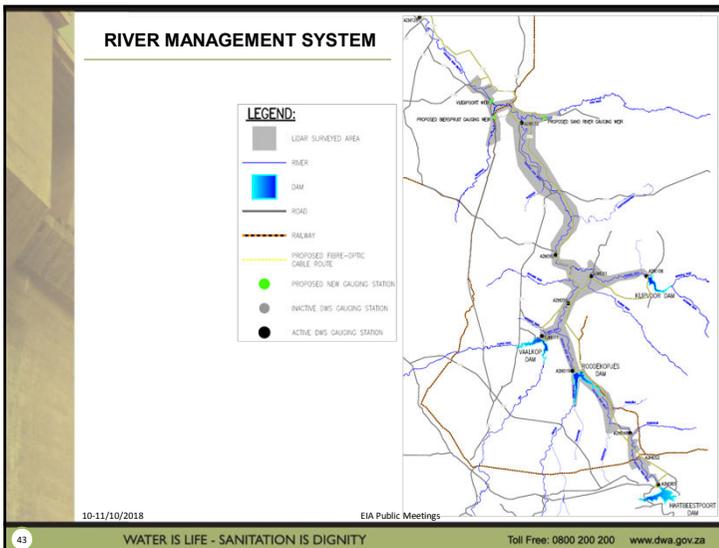
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RIVER MANAGEMENT SYSTEM

“A RIVER ABSTRACTION AND MANAGEMENT SYSTEM TO MANAGE ABSTRACTIONS FROM, AND THE RIVER FLOW IN, THE CROCODILE RIVER (WEST) BETWEEN HARTBEEAPOORT DAM AND VLIEËPOORT ABSTRACTION WORKS INCLUDING THE RELEASES AND SPILLS FROM SUCH WORKS AS WELL AS THE MORETELE RIVER FROM KLIPVOOR DAM TO THE CONFLUENCE WITH CROCODILE RIVER (WEST) AND THE ELANDS RIVER FROM VAALKOP DAM TO THE CONFLUENCE WITH THE CROCODILE RIVER (WEST). IT INCLUDES THE CONSTRUCTION OF NEW AND REHABILITATION OF EXISTING FLOW GAUGING STATIONS TO BE USED AS PART OF THE RIVER MANAGEMENT SYSTEM AS THE CASE MAY BE. IT ALSO INCLUDES A SERVITUDE OF AQUEDUCT ACQUIRED IN TERMS OF THE NWA OVER SUCH STRETCHES OF THE SAID RIVERS”

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

MCWAP-2A COMPONENTS

1 Water Transfer Infrastructure Scoping & EIA ➔

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

OUTLINE OF EIA PROCESS

SCOPING PHASE

Consultation with Authorities

Project Announcement

Compile Draft Scoping Report

Public Review

Submit Final Scoping Report and Application Form

DEA Review

Specialist Studies & Compile Draft EIA Report

Public Review ➔ We are here

Submit Final EIA Report

DEA Review & Decision

Notify ISAPs

EIA PHASE

DEA Acceptance

DEA Acceptance

■ Environmental Assessment Practitioner

■ Interested & Affected Parties

■ Department of Environmental Affairs (DEA)

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

PROPOSED MOKOLO AND CROCODILE RIVER (WEST) WATER AUGMENTATION PROJECT (PHASE 2A) (MCWAP-2A): WATER TRANSFER INFRASTRUCTURE

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

DRAFT

September 2018

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

Content of EIAR

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

ENVIRONMENTAL LEGAL FRAMEWORK

<input checked="" type="checkbox"/>	Constitution of the Republic of South Africa, (No. 108 of 1996)	
<input checked="" type="checkbox"/>	National Environmental Management Act (No. 107 of 1998)	DEA
	EIA Regulations (as amended):	
✓	• GN No. 982 of 4 December 2014	
✓	• GN No. 983 of 4 December 2014	
✓	• GN No. 984 of 4 December 2014	
✓	• GN No. 985 of 4 December 2014	
<input checked="" type="checkbox"/>	Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)	DMR
<input checked="" type="checkbox"/>	National Water Act (Act No. 36 of 1998)	DWS
	National Environmental Management: Air Quality Act (Act No. 39 of 2004)	
	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	
	National Environmental Management: Waste Act (Act No. 59 of 2008)	
	National Forests Act (No. 84 of 1998)	
	Occupational Health & Safety Act (Act No. 85 of 1993)	
	National Heritage Resources Act (Act No. 25 of 1999)	
	Limpopo Environmental Management Act (Act No. 7 of 2003)	
	Other...	

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

ENVIRONMENTAL LEGAL FRAMEWORK

MCWAP-2A Component	Legislation	Process	Authority
Water Transfer Infrastructure	NEMA ¹	Scoping & EIA	DEA
Borrow Pits	NEMA & MPRDA ²	Scoping & EIA	DMR
Water Use	NWA ³	Water Use Licence Applications	DWS

1) NEMA = National Environmental Management Act (No. 107 of 1998)
 2) MPRDA = Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)
 3) NWA = National Water Act (Act No. 36 of 1998)

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

PROJECT DESCRIPTION

Vlieëpoort Abstraction Weir
Low-lift Pumping Station
Low-lift Rising Main (2 pipes)
Sedimentation Works
Balancing Reservoir
High-lift Pumping Station
High-lift Rising Main to BPR
BPR
Gravity Pipeline from BPR to OR
OR
Gravity pipeline from OR to Tee-off
Ancillary infrastructure

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

PROJECT DESCRIPTION

Typical Pipeline Servitude

Construction servitude (40 m)
 Permanent pipe servitude (25 m)

Temporary fencing during construction for game / access control
 Excavated material
 Topsoil
 Side boom
 Access road
 Pipe class

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

ALTERNATIVES

- ❖ **Alternative Water Resources –**
 - Ground Water
 - Re-use of Effluent in the Project Area
 - Mokolo Dam
 - Crocodile Water
 - Return Flows in Crocodile River (West) and Vaal River Catchments
 - Creating More Storage by Raising of Existing Dams and/or Building New Dams
 - Abstraction Point at Faure Weir
 - Water Transfer from Rivers beyond the Borders of South Africa
- ❖ **MCWAP-2A Layout Alternatives –**
 - Pre-feasibility Study Options
 - Feasibility Options
 - EIA Options (pipeline route options and “no go” option)

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5.1) OVERVIEW OF THE DRAFT EIA REPORT

PROFILE OF RECEIVING ENVIRONMENT

1. Land Use & Land Cover
2. Climate
3. Geology
4. Geohydrology
5. Soils
6. Topography
7. Surface Water
8. Flora
9. Fauna
10. Socio-Economic Environment
11. Agriculture
12. Air quality
13. Noise
14. Historical and Cultural Features
15. Planning
16. Existing Structures & Infrastructure
17. Transportation
18. Waste Disposal Facilities
19. Aesthetic Qualities
20. Tourism

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5.2) SPECIALIST STUDIES

- ❖ Baseline Aquatic and Impact Study
- ❖ Terrestrial Ecological Impact Assessment
- ❖ Heritage Impact Assessment
- ❖ Agricultural Impact Assessment
- ❖ Socio-Economic Impact Assessment
- ❖ Wildlife Impact Assessment
- ❖ Hartbeespoort Dam Specialist Opinion

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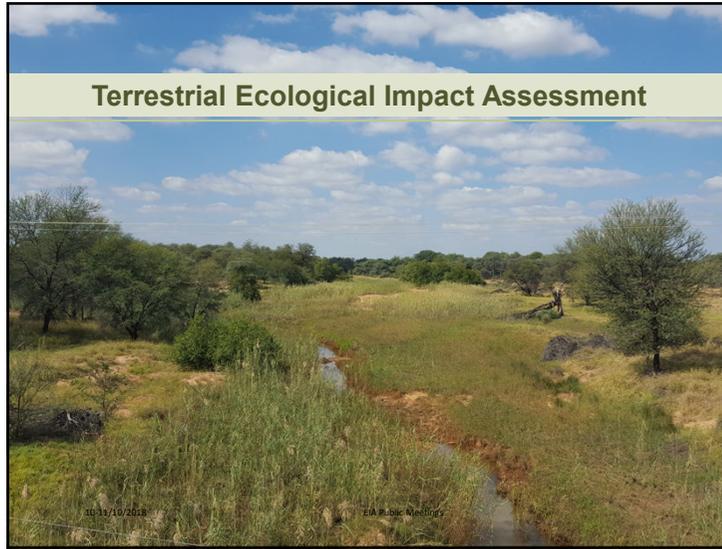
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5.2) SPECIALIST STUDIES

- ❖ **Information incorporated into the EIAR:**
 - Assumptions and limitations
 - Description of the receiving environment in a more detailed and site-specific manner
 - Summary of each specialist study, focusing on the approach to the study, key findings and conclusions drawn
 - Impacts assessment and the identified mitigation measures
 - Evaluations of the alternatives included in comparative analysis to identify the most favourable option
 - Address comments made by I&APs that related to specific environmental features
 - Salient recommendations made by the specialists were taken forward to the final EIA Conclusions and Recommendations

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5.2) SPECIALIST STUDIES

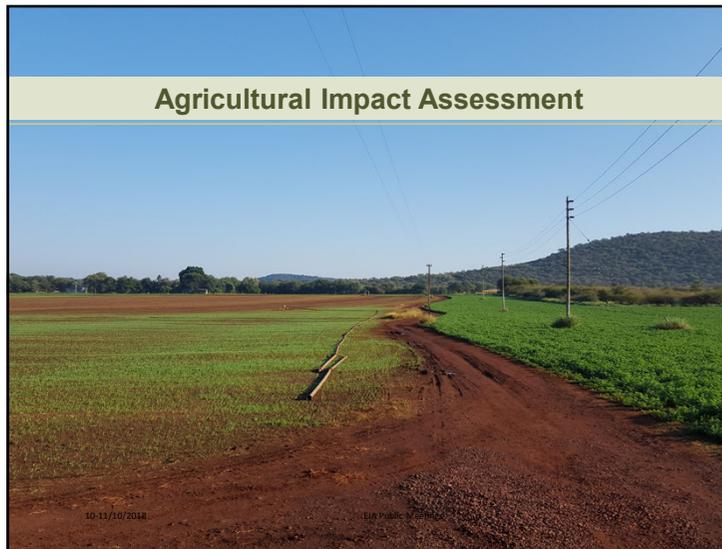
TERRESTRIAL ECOLOGICAL IMPACT ASSESSMENT

- ❖ **Flora:**
 - Encroachment into Limpopo Conservation Plan
 - Protected trees
- ❖ **Fauna:**
 - Mooivallei bat cave
 - Protected species (Python and Bullfrog)
- ➔ **Mitigation measures, e.g.:**
 - Permits from DAFF and LEDET
 - Environmental sensitivity walk down survey



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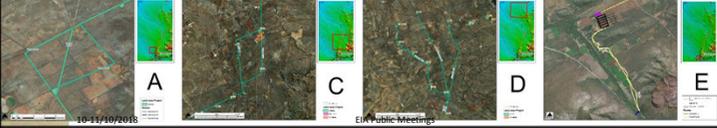


5.2) SPECIALIST STUDIES

AGRICULTURAL IMPACT ASSESSMENT

Land Use:

Route	Fallow	Grazing	Irrigated	Old lands	Orchards	TOTAL
A1		104,6				104,6
A2		11,9				116,9
Central A		62,2				62,2
C		172,0			1,3	173,3
Central C		141,1				141,1
D1		196,9				196,9
D2		198,9		22,2		221,1
D3		253,2		8,7		261,9
E	3,3	38,7	11,5		0,7	54,2
Central E	1,8	40,5	9,0		1,4	52,7
Central		680,7	17,8	17,8		716,3
TOTAL		2 005,7	38,3	48,7	3,4	2 101,2



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5.2) SPECIALIST STUDIES

AGRICULTURAL IMPACT ASSESSMENT

❖ **Key findings:**

- Approximately 95% of the land is grazing.
- Irrigated land only along the Crocodile River.
- Permanent loss of irrigated land – Balancing Dams, Desilting Works & Pump Station.
- Animal watering or handling facilities to be moved or replaced.
- A temporary loss for grazing land within construction servitude.
- Access to houses in proximity of the routes will impact on the farming operations.
- Borrow pits: land only used as grazing or browsing for animals .

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5.2) SPECIALIST STUDIES

WILDLIFE IMPACT ASSESSMENT

❖ **Potential impacts:**

- Habitat loss
- Habitat fragmentation
- Wildlife dispersal and migration
- Wildlife diversity
- Land-use
- Noise
- Dust
- Environmental pollution
- Veld fires
- Security

➔ MCWAP-2A is considered viable and all wildlife associated concerns can be mitigated to reduce potential impacts

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5.2) SPECIALIST STUDIES

SOCIO-ECONOMIC IMPACT ASSESSMENT

- ❖ Situation analysis describing the socio-economic status of the study area
- ❖ Targeted engagement with stakeholders
- ❖ Impact assessment and recommended mitigation measures
- ❖ Potential impacts –
 - ❑ **Health and socio-economic well-being impacts** – annoyance due to dust and noise, security/Increase in crime, increased risk of HIV and AIDS, personal safety and increased hazard exposure;
 - ❑ **Quality of the living environment (liveability) impacts** - Disruption of daily living activities including aspects such as damage to property, access to land and livelihoods during construction; perceived quality of life;
 - ❑ **Economic and material well-being impacts (positive)** – the economic benefits of increased water supply, the social benefits of reduced air pollution, increase in employment opportunities, increased opportunities for SMMEs and indirect employment impacts;
 - ❑ **Economic and material well-being impacts (negative)** – loss of productive land, servitudes being registered over land, impacts on game farming income, loss of land for productive agriculture and loss of property value;
 - ❑ **Cultural impacts** – possible heritage impacts;
 - ❑ **Institutional, legal, political and equity impacts** - Effect on existing infrastructure facilities and socio-economic services, attitude formation towards project, decreased level of community participation in decision making, loss of empowerment, compliance with municipal by-laws; and
 - ❑ **Gender relations impacts** - cultural resistance towards women, division of labour.

➔ The negative impacts can be successfully mitigated.

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5.2) SPECIALIST STUDIES

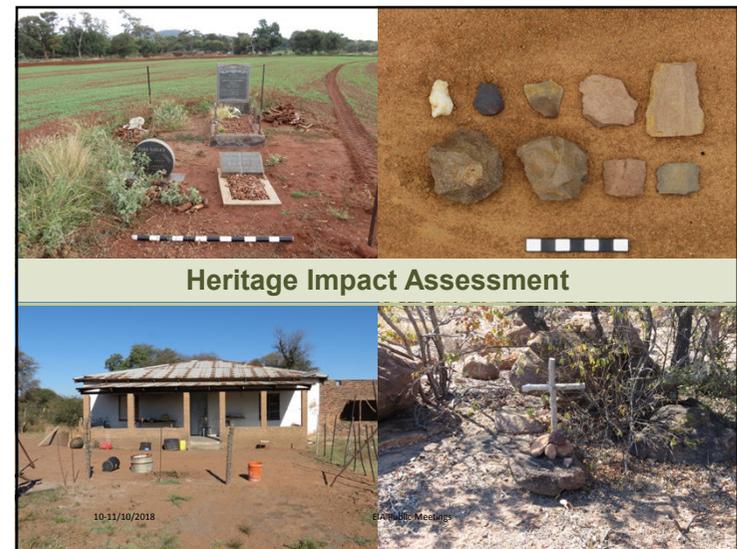
AQUATIC IMPACT ASSESSMENT

- ❖ Present Ecological State –
 - ❑ Crocodile River Reach EcoStatus = C
 - ❑ Matlabas River Reach EcoStatus = C
- ❖ Single Species of conservational concern = *Oreochromis mossambicus*. No threat posed by proposed project.
- ❖ Riparian delineation.
- ❖ Impacts.
- ❖ Mitigation measures.
- ❖ No fatal flaws identified.




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5.2) SPECIALIST STUDIES

HERITAGE IMPACT ASSESSMENT

❖ **Key findings:**

- ❑ A total of 18 heritage sites were identified, including:
 - Five black homesteads where the risk of unmarked stillborn graves exist.
 - Five sites containing confirmed graves and possible graves.
 - Two Stone Age sites.
 - Three historic farmsteads.
 - Two metalworking sites associated with the Iron Age.
 - Memorial where cremated ash may have been placed.

➔ On the condition that the general recommendations are adhered to, no heritage reasons can be given for the development not to continue.

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5.3) IMPACT ASSESSMENT & MITIGATION MEASURES

❖ **Identification of Impacts –**

- ❑ An appraisal of the project activities and components
- ❑ Impacts associated with listed activities contained in GN No. R. 983, R. 984 and R. 985 of 4 December 2014, as amended
- ❑ An assessment of the receiving biophysical, social, economic and built environment
- ❑ Findings from specialist studies
- ❑ Issues highlighted by environmental authorities
- ❑ Comments received during public participation from IAPs.

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5.3) IMPACT ASSESSMENT & MITIGATION MEASURES

1. Land Use & Land Cover
2. Climate
3. Geology
4. Geohydrology
5. Soils
6. Topography
7. Surface Water
8. Flora
9. Fauna
10. Socio-Economic Environment
11. Agriculture
12. Air quality
13. Noise
14. Historical and Cultural Features
15. Planning
16. Existing Structures & Infrastructure
17. Transportation
18. Waste Disposal Facilities
19. Aesthetic Qualities
20. Tourism

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5.3) IMPACT ASSESSMENT & MITIGATION MEASURES

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5.3) IMPACT ASSESSMENT & MITIGATION MEASURES

Examples of Potential Impacts & Mitigation Measures follow

Note the following:

- ❑ Details of assessed impacts included in the EIAR
- ❑ Comprehensive list of mitigation measures included in the EMPr

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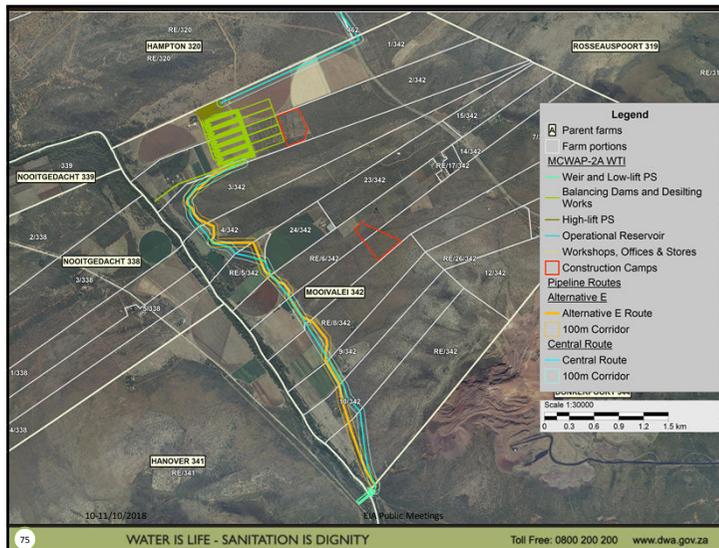
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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Land Use	<ul style="list-style-type: none"> Temporary loss of land used for agriculture and game farming within pipeline servitude. Permanent loss of land at abstraction works, low-lift pumping station, balancing dam, desilting works, high-lift pumping station, BPR, OR and chambers. Servitude restrictions. Disturbances on game farms. 	<ul style="list-style-type: none"> Permanent loss of land at abstraction works, low-lift pumping station, balancing dam, desilting works, high-lift pumping station, BPR, OR and chambers. Servitude restrictions and inspections. Operation and maintenance functions. Impacts to land use surrounding Hartbeespoort Dam due to fluctuating water levels. 	<ul style="list-style-type: none"> Compensation to be determined by an independent valuer, in accordance with prevailing legislation. Optimisation of final pipeline route to be considered in the design phase to avoid existing structures and buildings, as well as other sensitive features (where possible). EMPr




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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Geology	<ul style="list-style-type: none"> Potential disturbance of the aquifer from blasting. Contamination of groundwater primary aquifer with water from more saline secondary aquifer as a result of blasting. Potential contamination of groundwater during the construction stage. Possible influence to groundwater flow as a result of trenching during construction. 	<ul style="list-style-type: none"> Possible pollution of the aquifer with water during the maintenance of the infrastructure. Impacts to the recharge of the alluvial aquifer downstream of the abstraction weir, due to surface water and groundwater interactions. 	<ul style="list-style-type: none"> Suitable protection of groundwater during excavations and blasting. Implement mitigation measures suggested as part of the geotechnical investigations. Reduce sediment loads in water from dewatering operations. Monitoring of ground- and surface water levels, as well as chemistry, to confirm the link between surface and groundwater. Appropriate measures to be identified to address disturbances, as necessary. EMPr.





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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction & Operational Phase Potential Issues / Impacts	Mitigation
Water Use	<ul style="list-style-type: none"> Impacts to Existing Lawful Water Users 	<ul style="list-style-type: none"> Manage water quality during construction. Establish <u>operating rules</u> with MCWAP-2A releases to make provision for (amongst others) multiple users along the river stretch (irrigation, transfer and Ecological Reserve), with varying assurance of supply criteria. Implement and sustain the <u>River Management System</u> to monitor, control and manage the releases into the river, the flows in the river and abstractions from the river.

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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Hydrology	<ul style="list-style-type: none"> Temporary impacts to flow during the instream works associated with the construction of the weir and pipeline crossings. 	<ul style="list-style-type: none"> Alteration of flow regime by the weir structure. Impact of the proposed Abstraction Works on <u>flood levels</u> and on infrastructure up- and downstream of the weir. Reduction in the average levels of the upstream impoundments during the operation of the scheme. 	<ul style="list-style-type: none"> Minimise influence to downstream flow regime during construction. Consider further as part of land acquisition process for the abstraction weir's impoundment up to the 1:100 year flood level and buffer zone
Water Quality	<ul style="list-style-type: none"> Sedimentation from instream works. Water quality impacts due to spillages and poor construction practices. 	<ul style="list-style-type: none"> During the maintenance of the pipeline and reservoirs the raw water conveyed and stored within this system, which is water of poor quality from the Crocodile River, will be <u>released into the Matieland River</u> and other watercourses from scour valves. 	<ul style="list-style-type: none"> Conduct water quality monitoring (baseline and during construction) at suitable up- and downstream sites. Where necessary, install in-stream silt traps. EMPr.

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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Terrestrial Ecology	<ul style="list-style-type: none"> Encroachment into CBAs and ESAs, which are important in terms of biodiversity, ecosystem functionality and ecological processes. Vegetation will primarily be lost in areas that are to be cleared for the project infrastructure. The potential loss of significant flora species may occur. Fauna could be <u>adversely affected through construction-related activities</u> (noise, dust, light pollution, illegal poaching, and habitat loss). This is especially relevant to sensitive game species (including exotic game). 	<ul style="list-style-type: none"> The establishment of trees within the pipeline servitude will not be allowed as roots may compromise the stability of the pipeline. Disruptions to game farms during operation and maintenance activities. 	<ul style="list-style-type: none"> Search, rescue and relocation be conducted taking into consideration red data, protected and endangered flora and fauna species. Rehabilitation of areas affected by construction activities. Mitigation measures recommended as part of Wildlife Impact Assessment. EMPr.

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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Socio-economic Environment	<ul style="list-style-type: none"> Loss of land (including structures and cultivated areas) through project infrastructure. Loss of agricultural production. Risk to game and livestock as a result of construction related hazards. Loss of income in eco-tourism sector (hunting and game farming). Potential damage to property (e.g. gates, fences, structures). Servitude restrictions; Use of local road network. Safety and security. Impact to visual quality and sense of place. Nuisance from dust and noise. Light pollution. Influx of people seeking employment and associated impacts (e.g. foreign workforce, cultural conflicts, squatting, demographic changes, anti-social behaviour, and incidence of HIV/AIDS). Reduction in property value. If the projected development materialise the population and specifically the urban population of Lephalale will grow substantially. 	<ul style="list-style-type: none"> Use of local road network for operation and maintenance purposes. Impact to visual quality and sense of place. Provision of light at infrastructure may cause light pollution. Inundation of a low level bridge due to the weir's backwater effect. The pumping stations will be operating continuously and may cause noise pollution. Cumulative impacts to properties that are already affected by existing linear infrastructure. Impacts to smaller properties, where the servitude may affect the critical mass required to continue with the current land use. The operating level of the Hartbeespoort Dam will fluctuate as per seasonal rains, with associated impacts to the surrounding recreational water users (active and passive). 	<ul style="list-style-type: none"> Mitigation measures recommended as part of the SEIA. EMPr.

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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Agriculture	<ul style="list-style-type: none"> Loss of cultivated land within construction domain. Loss of grazing land within construction domain. Loss of stock watering points within construction domain. Disruptions to farming operations as a result of construction-related use of existing access roads. Loss of fertile soil through land clearance. 	<ul style="list-style-type: none"> Potential impacts to water users (and associated agro-economic impact from reduced crop and food production) downstream of the abstraction works on the Crocodile River. Permanent loss of cultivated land due to physical infrastructure. 	<ul style="list-style-type: none"> Mitigation measures recommended as part of the SEIA. EMPr.



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Examples of Potential Impacts & Mitigation

Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Existing Structures & Infrastructure	<ul style="list-style-type: none"> Risk of damaging existing services, infrastructure and structures during construction. Disruptions to traffic on local road network during construction. This is associated with road crossings, where the pipeline route follows existing road alignments and as a result of general use of the roads by construction vehicles. 	<ul style="list-style-type: none"> Impact of the proposed Abstraction Works on flood levels and on infrastructure up- and downstream of the weir. Servitude restrictions. 	<ul style="list-style-type: none"> Identify and record existing services and infrastructure. Conform to requirements of relevant service providers and infrastructure. Notify landowners of any disruptions to essential services. Deviate landowners' existing services (e.g. reticulation, irrigation lines), where possible, to accommodate construction activities. Adequate reinstatement and rehabilitation of affected environment. EMPr.



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Examples of Potential Impacts & Mitigation

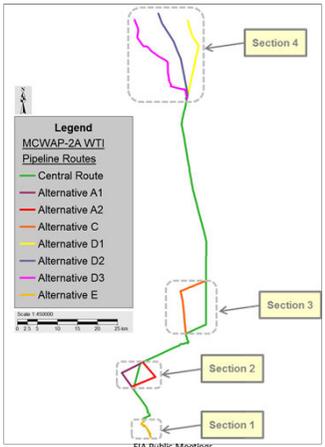
Environmental Factor	Construction Phase Potential Issues / Impacts	Operational Phase Potential Issues / Impacts	Mitigation
Transportation	<ul style="list-style-type: none"> Increase in traffic on the local road networks. Develop temporary access and haul roads. Risks to road users. 	<ul style="list-style-type: none"> Permanent access along the pipeline servitude will be required after construction. 	<ul style="list-style-type: none"> Determine and document the road conditions of the D1649, D3677, R510 and D175 (and all other public roads), as well as all private access roads that will be affected by construction traffic, as relevant. Maintain adequate road conditions. Selective upgrade of the relevant access roads to ensure that they are capable of accommodating the type of vehicles and/or mechanical plant using these roads. Obtain the necessary approval for road upgrades, pipe-jacking and wayleave for road construction from the relevant authorities Make provision for community members to access their properties safely. EMPr.



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5.4) ALTERNATIVES



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5.4) ALTERNATIVES

❖ Summary of Preferred Options:

Project Area	Alternatives	Terrestrial Ecology	Aquatic	Agriculture	Heritage	Socio-Economic	Wildlife	Wetlands	Technical
Section 1	Central Route		-						✓
	Alternative E	✓		✓	✓	✓			
Section 2	Central Route	✓					✓		✓
	Alternative A1		-	-	-	-			
	Alternative A2								
Section 3	Central Route		-	-		✓	✓		✓
	Alternative C	✓			✓				
Section 4	Alternative D1				✓	✓	✓		
	Alternative D2		-	-				✓	
	Alternative D3	✓							✓

❖ Comparative Impacts of Alternatives →

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5.4) ALTERNATIVES

Best Practicable Environmental Options

- ✓ Section 1 – Central Route
- ✓ Section 2 – Central Route
- ✓ Section 3 – Central Route
- ✓ Section 4 – Alternative D1

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✓ Section 1 – Central Route

Legend

- MCWAP-2A/WTI Pipeline Routes
- Central Route
- Alternative A1
- Alternative A2
- Alternative C
- Alternative D1
- Alternative D2
- Alternative D3
- Alternative E

Legend

- Parent farms
- Farm portions
- MCWAP-2A/WTI
- Weir and Low lift PS
- Balancing Dams and Desilting Works
- High lift PS
- Workshops, Offices & Stores
- Construction Camps
- Pipeline Routes
- Central Route
- Alternative A1
- Alternative A2

Scale 1:30000

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✓ Section 2 – Central Route

Legend

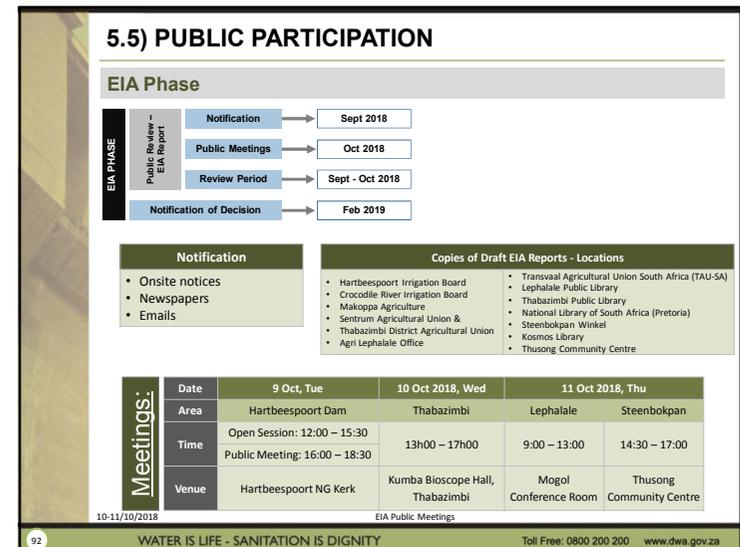
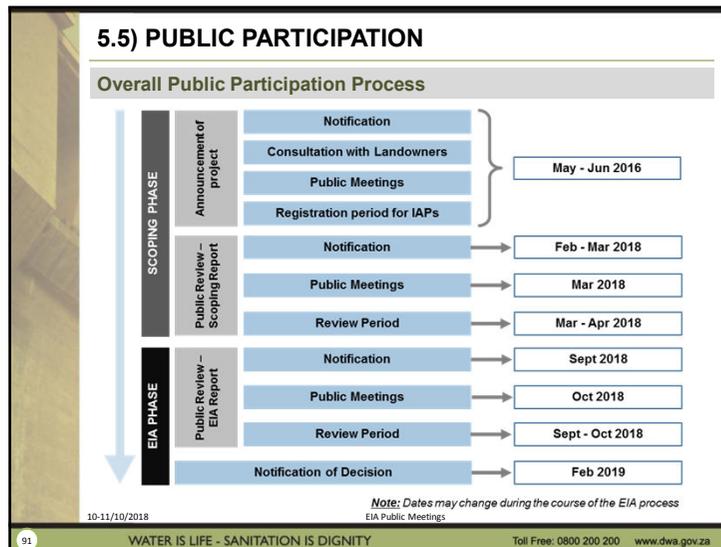
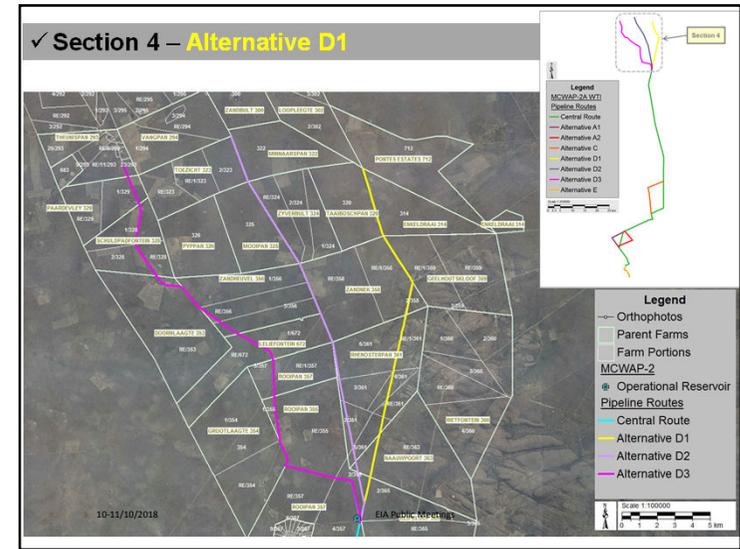
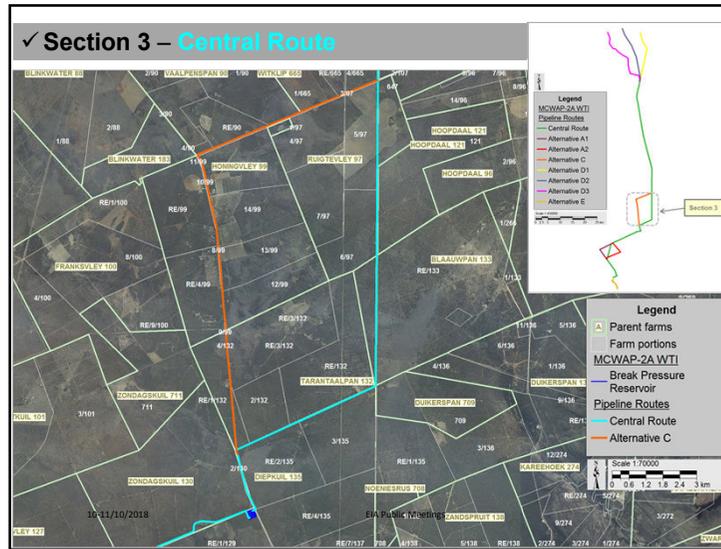
- MCWAP-2A/WTI Pipeline Routes
- Central Route
- Alternative A1
- Alternative A2
- Alternative C
- Alternative D1
- Alternative D2
- Alternative D3
- Alternative E

Legend

- Parent farms
- Farm portions
- MCWAP-2A/WTI
- Pipeline Routes
- Central Route
- Alternative A1
- Alternative A2

Scale 1:70000

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5.5) PUBLIC PARTICIPATION

EIA Phase

Websites:



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MokoloMokolo and Crocodile River (West): Water Augmentation Project (MCWAP)



<http://www.dwa.gov.za/Projects/MCWAP/> or
<http://www.nemai.co.za/environmental.html>

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5.5) PUBLIC PARTICIPATION

Focus Group Meetings

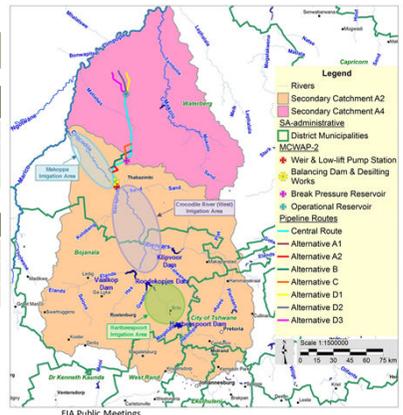
Irrigators

Crocodile-West Irrigation Board & Hartbeespoort Irrigation Board

02 October 2018
13:00 – 17:00
Koedoeskop Agricultural Union Hall

Makoppa Ad Hoc Committee

03 October 2018
09h00 – 12h30
Kumba Bioscope Hall, Thabazimbi



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5.5) PUBLIC PARTICIPATION

Focus Group Meetings



Mooivallei Landowners

03 October 2018
14:00 – 17:00
Kumba Bioscope Hall, Thabazimbi

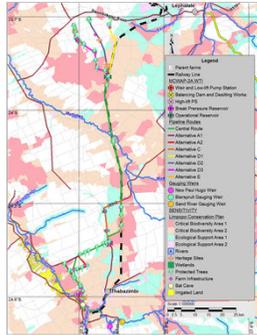
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5.6) CONCLUSIONS & RECOMMENDATIONS

❖ Sensitive environmental features –

- ❑ Watercourses
- ❑ Heritage and archaeological sites
- ❑ Flora and fauna of conservation concern
- ❑ Game farming
- ❑ Dolomitic conditions
- ❑ Aquifer
- ❑ Existing agricultural water users
- ❑ River Management System
- ❑ Safety and security
- ❑ HBP Dam limnological & socio-economic
- ❑ Traffic on the public roads
- ❑ Existing infrastructure and structures
- ❑ Construction-related nuisance to sensitive socio-economic receptors



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5.6) CONCLUSIONS & RECOMMENDATIONS

- ❖ Sensitive environmental features
- ❖ Environmental Impact Statement:
 - ❑ Key mitigation measures
 - ❑ Water-related concerns
 - ❑ HBP Dam - government waterwork
 - ❑ Options assessed
 - ❑ Engagement with I&APs
 - ❑ Critical environmental activities - project life-cycle

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5.6) CONCLUSIONS & RECOMMENDATIONS

- ❖ Sensitive environmental features
- ❖ Environmental Impact Statement
- ❖ Recommendations:
 - ❑ Environmental sensitivity walk through survey
 - ❑ Roads (D1649, D3677, R510 and D175) & private roads
 - ❑ Land acquisition and compensation process
 - ❑ Biosecurity protocols
 - ❑ Management of impacts associated with the scouring of sediment
 - ❑ Environmental Monitoring Committee
 - ❑ Rehabilitation Management Plan
 - ❑ Specialists' recommendations
 - ❑ Monitoring –
 - Baseline Monitoring
 - Environmental Monitoring
 - Compliance Monitoring and Auditing

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6) EIA – BORROW PITS

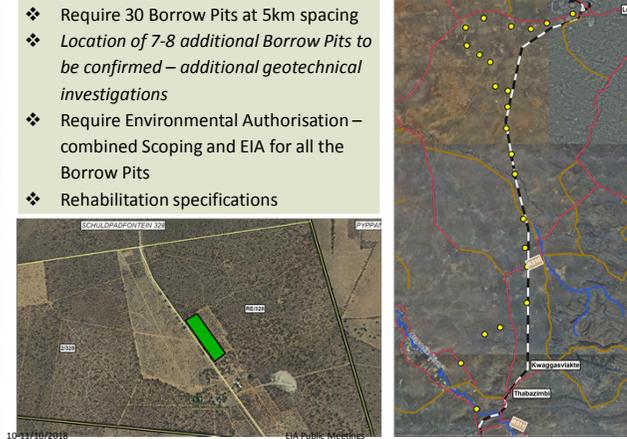


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6.1) Overview of Draft Scoping Report

- ❖ Require 30 Borrow Pits at 5km spacing
- ❖ *Location of 7-8 additional Borrow Pits to be confirmed – additional geotechnical investigations*
- ❖ Require Environmental Authorisation – combined Scoping and EIA for all the Borrow Pits
- ❖ Rehabilitation specifications



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6.1) Overview of Draft Scoping Report

Content of Scoping Report

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6.1) Overview of Draft Scoping Report

Programme

No.	Task Name	Start	Finish
1	IAPs Review of Draft Scoping Report	Sep 2018	Oct 2018
2	Submit Final Scoping Report to DMR		Oct 2018
3	DMR Review and Acceptance	Oct 2018	Dec 2018
4	Compile Draft EIA Report	Oct 2018	Jan 2019
5	IAPs Review of Draft EIA Report	Feb 2019	Mar 2019
6	Submit Final EIA Report to DMR		Mar 2019
7	DMR Review and Decision	Apr 2019	Jul 2019
8	IAP Notification		Jul 2019

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7) DISCUSSION

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water & sanitation
Department: Water and Sanitation
REPUBLIC OF SOUTH AFRICA

TCTA
A new word for water

Thank you

Please visit the project website for further information:
<https://www.dwa.gov.za/projects/mcwap/>

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	<u>DRAFT MINUTES</u> EIA Phase: Authorities Meeting	Queries:	Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nemai.co.za
Clients:	 	Project Name:	Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)
Date:	10 October 2018	Project No.:	10580
Date:	10 October 2018	Time:	09:30 – 12:00
Chairperson:	D. Henning	Place:	Kumba Bioscope Hall, Thabazimbi

LW: These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.

Attendance
Refer to the completed Attendance Register contained in Appendix A.

NO.	DESCRIPTION	ACTION	TARGET DATE																		
1.	Opening and Welcome																				
1.1	D Henning opened the meeting and welcomed everyone present to the Authorities Meeting that forms part of the Environmental Impact Assessment (EIA) process for the proposed Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A).	-	-																		
2.	Attendance and Apologies																				
2.1	<p>No apologies were noted at the meeting.</p> <p>D. Henning introduced the following members of the project team:</p> <table border="1"> <thead> <tr> <th>Organisation</th> <th>Role</th> <th>Representatives</th> </tr> </thead> <tbody> <tr> <td>DWS</td> <td>Applicant</td> <td>R. Gillmer</td> </tr> <tr> <td>TCTA</td> <td>Implementing Agent</td> <td>K. Mabitsela A. Nelwamondo T. Shale M. Luthuli</td> </tr> <tr> <td>MCC</td> <td>Technical Team</td> <td>J. Kroon</td> </tr> <tr> <td>Nemai Consulting</td> <td>Environmental Assessment Practitioner</td> <td>D. Henning C. van der Hoven</td> </tr> <tr> <td></td> <td>Specialists</td> <td>A Gouws (Agriculture) A Phamphe (Ecology) B Orban (Wildlife) C Chidley (Socio-economic) M Howard (HBP Dam)</td> </tr> </tbody> </table>	Organisation	Role	Representatives	DWS	Applicant	R. Gillmer	TCTA	Implementing Agent	K. Mabitsela A. Nelwamondo T. Shale M. Luthuli	MCC	Technical Team	J. Kroon	Nemai Consulting	Environmental Assessment Practitioner	D. Henning C. van der Hoven		Specialists	A Gouws (Agriculture) A Phamphe (Ecology) B Orban (Wildlife) C Chidley (Socio-economic) M Howard (HBP Dam)	-	-
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	Specialists	A Gouws (Agriculture) A Phamphe (Ecology) B Orban (Wildlife) C Chidley (Socio-economic) M Howard (HBP Dam)																			
3.	Purpose of the Meeting																				
3.1	<p>D. Henning indicated that the purpose of the meeting included the following</p> <ul style="list-style-type: none"> To provide an overview of the proposed MCWAP-2A; To present the status of the EIA; 	-	-																		

NO.	DESCRIPTION	ACTION	TARGET DATE
	<ul style="list-style-type: none"> To provide an overview of the draft EIA Report for the proposed MCWAP-2A: Water Transfer Infrastructure; To provide an overview of the draft Scoping Report for the proposed MCWAP-2A: Borrow Pits; and To provide a platform for project-related discussions. 		
4	Project Overview		
J. Kroon stated that the content of the draft EIA Report and prevailing Republic of South Africa (RSA) legislation takes preference over any of the presentations or answers provided during the meeting, should any conflict arise.			
4.1	<u>Context</u>		
4.1.1	<p>J. Kroon presented the following:</p> <ul style="list-style-type: none"> Understanding RSA's water scarcity; National rainfall and potential evaporation; Internationally shared basins; Sectoral water usage; Reconciliation strategy studies; Energy and water for energy; National development imperatives; Role and function of existing NWRI to support MCWAP; Proposed MCWAP (New NWRI); Key technical EIA issues; and Institutional arrangements following implementation 	-	-
5	EIA – Water Transfer Infrastructure		
5.1	<u>Overview of the Draft EIA Report</u>	-	-
5.1.1	<p>D. Henning presented the following:</p> <ul style="list-style-type: none"> MCWAP-2A components – <ul style="list-style-type: none"> Water Transfer Scheme Infrastructure; Borrow Pits; Outline of the EIA process; Content of the EIA Report; Environmental Legal Framework; Project Description; Alternatives; Profile of the receiving environment; Specialist studies; Impact assessment and mitigation measures; Public participation; and Conclusions and recommendations. 	-	-
6	EIA – Borrow Pits		
6.1	<u>Overview of the Draft Scoping Report</u>	-	-
6.1.1	<p>D. Henning presented the following:</p> <ul style="list-style-type: none"> Content of the draft Scoping Report; and EIA Programme. 	-	-
7.	Discussion		
7.1	M. Foletji asked what the total size of the affected land in the Mooivallei area where the desilting works and pump station is situated. D. Henning	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
	stated that the total footprint is approximately 640 X 440m, which is situated on Portions 1 and 2 of the Farm Mooivalei.		
7.2	M. Foletji asked whether there is an alternative site for the desilting works. D. Henning explained that as part of the technical investigations the engineers considered two alternative sites, which included the current proposed site and another site closer to the abstraction weir. He noted that the site closer to the weir was not chosen due to geotechnical constraints associated with dolomitic conditions. M. Foletji asked whether the site cannot be moved further down the route. J. Kroon stated that this will have a greater cost on pumping, as it will be further away from the weir. D. Henning stated that a write up on the project infrastructure is provided in the draft EIA Report.	-	-
7.3	M. Foletji asked whether the pipeline will be fenced off. D. Henning stated that the construction servitude will be fenced off, and during operational phase the intention is to drop the fence in order for land use to continue in the permanent servitude, with certain restrictions.	-	-
7.4	M. Foletji asked whether cultivation can still happen within the servitude. D. Henning stated that it is possible, however in the Mooivalei area it will be different as the servitude will be used for access between the weir and the desilting works during the operational phase. He noted that in this instance cultivation will not be possible. He indicated that cultivation is permitted on most of DWS' pipelines after construction.	-	-
7.5	M. Foletji stated that before closure of the borrow pits occurs, the Department of Agriculture, Forestry and Fisheries (DAFF) must be consulted by the Department of Mineral Rights (DMR) in order to conduct an inspection on whether the agricultural land can still be used post rehabilitation. D. Henning stated that the borrow pits mainly affect grazing and fallow land, and no cultivation is affected. A. Nelwamondo added that for all the borrow pits, the closure plans are submitted to DMR and this department then distributes the plans to the relevant authorities. These authorities then attend the final closure inspection. On MCWAP Phase 1 inspection was done by DAFF and DWS, who provided their independent comments and reports to DMR. If satisfied, DMR provides a closure certificate. D. Henning also stated that this process will give the landowner confidence that the closure process will be done properly.	-	-
7.6	R. Botha asked whether there are any water uses associated with the pipeline. D. Henning stated that the water uses to be included in the Integrated Water Use Licence Application for the project are Section 21(b), (c), (i) and (f). He indicated that all wetlands, pans and riparian areas have been delineated. He noted that the end users will apply independently for the Section 21(a) Water Use Licences.	-	-
7.7	M. Foletji stated that he does not normally have issues with linear infrastructure as the impacts are minimal and most are of national importance, unlike mining. D. Henning stated that recently it came to their attention that there is a proposed mine just outside Thabazimbi, which affects many of the farms where the proposed MCWAP-2A footprint occurs. M. Foletji requested that the information about the proposed mining project be forwarded to him. D. Henning added that no formal engagement or application for water has been received from this proposed mine.	Nemai	TBC
7.8	D. Henning mentioned that the MCWAP-2A project makes provision for off-takes, but only for stock/game watering which will be metered. He noted that there will be restrictions to the usage and it can't be used for irrigation. M. Foletji asked what the size is of the off-take pipeline to the landowners. J. Kroon stated that the off-take pipeline for stock or game is a 19 mm pipe with a valve, and will be metered and the person will have to formally apply for it and will have to pay a water tariff.	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
7.9	A. Nelwamondo stated that with regards to the borrow pits, many landowners request that as part of closure, space must be kept open as a watering hole for their animals, or for storage during the dry period. Depending on the volumes, the landowner might require a Water Use Licence Application. However, DMR requires that the land be rehabilitated to a similar state than what existed before. Engagement is thus undertaken with authorities and the landowners.	-	-
7.10	M. Foletji asked what is the depth of the borrow pits. D. Henning stated that the depths and sizes vary. He mentioned that the proposed dimensions of all 23 borrow pits are outlined in the Draft Scoping Report, and locality maps are also provided.	-	-
8.	Closure		
8.1	D. Henning thanked all the attendees for their participation and valuable input. The meeting adjourned at 11:00.	-	-

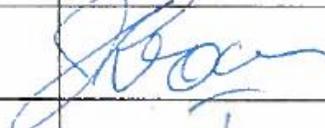
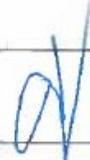
Appendices
Appendix A – Attendance Register
Appendix B – Presentations

APPENDIX A

ATTENDANCE REGISTER

	ATTENDANCE REGISTER – EIA Phase Authorities Meeting	Queries: Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nema.co.za
Clients:	 water & sanitation Department Water and Sanitation REPUBLIC OF SOUTH AFRICA  TCTA A new word for water	Project Name: Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A) Project No.: 10580
Date:	10 October 2018	Time: 09.30 – 11.30
Chairperson:	D. Henning	Place: Kumba Bioscope Hall, Thabazimbi

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Fanie Vogel		Meeting Chairman	☎ 082 325 3519 ✉ Fanie.vogel@gmail.com		
Ronald Gillmer	DWS	Chief Engineer. Options Analysis	☎ 012 336 6933 ☎ 082 791 0833 ✉ GillmerR@dws.gov.za		
Hannes Pretorius	DWS	Area Manager. Hartbeespoort	☎ 012 253 1093 ☎ 082 806 3681 ✉ PretoriH@dws.gov.za		
Petrus Venter	DWS	Deputy Regional Director: North West	☎ 012 253 1026 ☎ 082 807 6098 ✉ VenterP@dws.gov.za		
Rens Botha	DWS Limpopo-North West Proj. CMA Pro. Ops.	Chief Engineer: Water Resources Management	☎ 012 392 1308 ☎ 082 808 9560 ✉ BothaR@dws.gov.za		
Azwianewi Nelwamondo	TCTA	Environmental Manager	☎ 012 683 1200 ☎ 082 809 5101 ✉ ANelwamondo@tcta.co.za		
Kgopotso Mabitsela	TCTA	Project Manager	☎ 012 683 1200 ✉ kmabitsela@tcta.co.za		
Them bani Mashiane	TCTA	Project Coordinator	☎ 012 683 1223 ☎ 078 696 2564 ✉ tmashiane@tcta.co.za		

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Andries Thebe	TCTA	Land Acquisition Manager	☎ 012 683 1200 📞 ✉ athebe@tcta.co.za		
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Thato Shale	TCTA	Social Specialist	☎ 012 683 1229 📞 ✉ tshale@tcta.co.za		
Minenthle Luthuli	TCTA		☎ 012 683 1226 📞 ✉ mluthuli@tcta.co.za		
Jaap Kroon	TCTA/Aurecon	MCC	☎ 083 627 5911 📞 ✉ jaap@kroon.co.za		
Johan Pienaar	MCC	Project Manager	☎ 012 643 0670 📞 082 808 7166 ✉ johanpie@mcwap.co.za		
Christian Van Der Hoven	Nemai Consulting	EIA Assistant	☎ 011 781 1730 📞 ✉ ChristianVdH@nemai.co.za		
Daniel Ramosa	Nemai Consulting	EIA Public Participation	☎ 011 781 1730 📞 ✉		
Donavan Henning	Nemai Consulting	EIA Project Leader	☎ 011 781 1730 📞 082 891 0604 ✉ donavanh@nemai.co.za		
			☎ 📞 ✉		
			☎ 📞 ✉		

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Mahlalasa Foleji	DAFF: LUSH	CRA	0152879944 0722276271 Foleji.M@d-agov-za		
PIETER WELLENHOED	TLU SA THARA DLU	VOORSITTER			
Conel Vos	THU	lid	0823609464		

APPENDIX B

PRESENTATIONS

	DRAFT MINUTES EIA Phase Public Meeting - Lephalale	Queries:	Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nemai.co.za
Clients:	 	Project Name:	Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)
Date:	11 October 2018	Project No.:	10580
Date:	11 October 2018	Time:	9:00 – 13:00
Chairperson:	D. Henning	Place:	Grootgeluk Conference Room, Mogol Club, Lephalale

LW: These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.

Attendance
<i>Refer to the completed Attendance Register contained in Appendix A.</i>

NO.	DESCRIPTION	ACTION	TARGET DATE																		
1.	Opening and Welcome																				
1.1	D Henning opened the meeting and welcomed everyone present. He emphasised the following: <ul style="list-style-type: none"> The public meeting will be primarily be conducted in Afrikaans but the text in the presentations will be in English. Attendees may use their language of preference. The public meeting forms part of the Environmental Impact Assessment (EIA) process for the proposed Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A); and Matters raised will be incorporated into the EIA's Comments and Responses Report. 	-	-																		
2.	Attendance and Apologies																				
2.1	No apologies were noted at the meeting. D. Henning introduced the following members of the project team: <table border="1"> <thead> <tr> <th>Organisation</th> <th>Role</th> <th>Representatives</th> </tr> </thead> <tbody> <tr> <td>DWS</td> <td>Applicant</td> <td>R. Gillmer</td> </tr> <tr> <td>TCTA</td> <td>Implementing Agent</td> <td>K. Mabitsela A. Nelwamondo T. Shale M. Luthuli</td> </tr> <tr> <td>MCC</td> <td>Technical Team</td> <td>J. Kroon</td> </tr> <tr> <td>Nemai Consulting</td> <td>Environmental Assessment Practitioner</td> <td>D. Henning C. van der Hoven</td> </tr> <tr> <td></td> <td>Specialists</td> <td>A Gouws (Agriculture) A Phamphe (Ecology) B Orban (Wildlife)</td> </tr> </tbody> </table>	Organisation	Role	Representatives	DWS	Applicant	R. Gillmer	TCTA	Implementing Agent	K. Mabitsela A. Nelwamondo T. Shale M. Luthuli	MCC	Technical Team	J. Kroon	Nemai Consulting	Environmental Assessment Practitioner	D. Henning C. van der Hoven		Specialists	A Gouws (Agriculture) A Phamphe (Ecology) B Orban (Wildlife)	-	-
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	Specialists	A Gouws (Agriculture) A Phamphe (Ecology) B Orban (Wildlife)																			

NO.	DESCRIPTION	ACTION	TARGET DATE
3.	Purpose of the Meeting		
3.1	D. Henning indicated that the purpose of the meeting included the following <ul style="list-style-type: none"> To provide an overview of the proposed MCWAP-2A; To present the status of the EIA; To provide an overview of the draft EIA Report for the proposed MCWAP-2A: Water Transfer Infrastructure; To provide an overview of the draft Scoping Report for the proposed MCWAP-2A: Borrow Pits; and To provide a platform for project-related discussions. 	-	-
4	Project Overview		
J. Kroon stated that the content of the draft EIA Report and prevailing Republic of South Africa (RSA) legislation takes preference over any of the presentations or answers provided during the meeting, should any conflict arise.			
4.1	<u>Context</u>		
4.1.1	J. Kroon presented the following: <ul style="list-style-type: none"> Understanding RSA's water scarcity; National rainfall and potential evaporation; Internationally shared basins; Sectoral water usage; Reconciliation strategy studies; Energy and water for energy; National development imperatives; Role and function of existing NWRI to support MCWAP; Proposed MCWAP (New NWRI); Key technical EIA issues; and Institutional arrangements following implementation 	-	-
5	EIA – Water Transfer Infrastructure		
5.1	<u>Overview of the Draft EIA Report</u>	-	-
5.1.1	D. Henning presented the following: <ul style="list-style-type: none"> MCWAP-2A components; Outline of the EIA process; Content of the EIA Report; Environmental Legal Framework; Project Description; Alternatives; Profile of the receiving environment; Specialist studies; Impact assessment and mitigation measures; Public participation; and Conclusions and recommendations. 		
5.2	<u>Specialist Studies</u>	-	-
5.2.1	<ul style="list-style-type: none"> A. Phamphe presented a summary of the Terrestrial Ecological Impact Assessment; A. Gouws presented a summary of the Agricultural Impact Assessment and Wetland Impact Assessment; and 		

NO.	DESCRIPTION	ACTION	TARGET DATE
	<ul style="list-style-type: none"> B. Orban presented a summary of the Wildlife Impact Assessment. 		
6	EIA – Borrow Pits		
6.1	<u>Overview of the Draft Scoping Report</u>	-	-
6.1.1	D. Henning presented the following: <ul style="list-style-type: none"> Content of the Draft Scoping Report; and EIA Programme. 		
7.	Discussion		
7.1	<p>P. du Plessis stated that the conditions of the roads are very important and how will they be dealt with during the construction and operational phase.</p> <p>D. Henning indicated that before construction commences, a baseline study will have to be carried out on all roads to determine the current status of the roads. Some roads won't be acceptable for use during construction and will have to be upgraded. It is planned to use only the construction servitude for access, however, public roads will have to be utilised in order to get to certain points along the pipeline. The requirements of the roads' authorities will need to be satisfied. Specific mitigation measures that deal with the use of roads are also included in the Environmental Management Programme (EMPr), which is appended to the Final EIA Report. The EMPr is a living document, which will be implemented during the pre-construction, construction and operational phase of the project.</p>	-	-
7.2	<p>B. Enslin asked whether the current positioning of the construction camps can be shifted on the affected farms.</p> <p>D. Henning stated that the contractor will have to make a decision with regards to the final location and positioning of the laydown areas and construction camps. Final arrangements will have to be discussed and arranged with the affected landowners. The EIA provided indicative locations of the camp sites. No provision is made for accommodating labourers at the camps, only for security personnel.</p> <p>B. Enslin also asked where the accommodation camps will be for the staff.</p> <p>D. Henning stated that in the case of MCWAP Phase 1 accommodation was found in the surrounding towns or areas were leased from private landowners who offered accommodation. TCTA has requirements for the accommodation camps and laydown areas.</p>	-	-
7.3	<p>A. Macheke stated that public participation is very important and everyone in Lephalale needs to know what is happening. He also added that many strikes occur due to poor consultation. As a member of the Environmental Justice Forum his concern is on the environmental side of this project. He has already seen the impact from Medupi and Matimba, and this new project will allow more coal-plants and mines in the future to come to our area. He expressed his concern for future generations. Marapong currently suffers from water shortages in the area, and yet the mines have a constant supply of water. He requested that the community must be more involved in projects that are currently happening in the areas, and the local municipality must be involved in the public participation.</p>	A. Macheke	TBC

NO.	DESCRIPTION	ACTION	TARGET DATE
	<p>D. Henning stated that the current database of Interested and Affected Parties for the EIA also includes NGO's and environmental interest groups who have specific environmental concerns, such as climate change and water. In terms of consultation, the project team attempted to schedule a meeting in Marapong to engage with that community, however, no venue was available. This can be discussed further with you after the meeting to see what options exist. A notice was placed in Marapong and a copy of the Draft EIA Report was also placed at the public library in Marapong.</p> <p>D. Henning noted that this project is regarded as enabling infrastructure, which allows other developments that require water to take place in the Lephalale area. A meeting was held with the Department of Environmental Affairs (DEA) during which the project's potential cumulative impacts in relation to the water users' impacts on climate change was discussed. DEA indicated that the obligation is on the emitter to conduct the climate change study, as this is the source of the impact. D. Henning thanked A. Macheke for his participation and also requested that if he has his own database for the Marapong community, to please share it with the project team to include it in the overall database for the project.</p> <p>A. Nelwamondo added that with regards to water usage, each user, such as the mines and municipalities, have different allocations for water usage and licences. If more water is required for the municipality, then they will have to apply for an increase in their water allocation. MCWAP-2A will ultimately double the water availability for Lephalale.</p>		
7.4	<p>F. Nkosi stated that Medupi and Exxaro are using more water, but the community is using less water. She noted that in Lephalale there is a sewage blockage every day and she asked why sewage can't be used in order to save water. She stated that the sewage water must be re-used, and then water will be available for the municipality to provide to the local communities. The Constitution says that we have a right to water. It was not long ago that in Onverwacht there was a water shortage and alternative plans had to be made. The project states that by implementing the MCWAP-2A it will increase access to water in Lephalale to communities, however, the people in Marapong currently do not have any water and yet Medupi is running. If the communities had a pipeline from Zeeland Water Treatment Plant to Onverwacht and Marapong, then there will be access to water and the communities will benefit. All the new mines and power stations have access to all the water.</p> <p>D. Henning indicated that the matters raised pertain to water supply to local communities, which is a function of the municipality. He noted that the project team is not necessarily best placed to respond. He indicated that one of the water users identified by MCWAP-2A is the Lephalale Local Municipality. He noted that re-use is considered throughout the country.</p> <p>J. Kroon added that MCWAP-2A intends to supply water to different areas. He noted that the quality of water from this proposed scheme is not suitable for human consumption. MCWAP-2A will free up water from the Mokolo system, which can then be used for domestic purposes</p> <p>R. Gillmer also explained that the municipality has plans in the future with Exxaro and mines in order to improve water supply in Lephalale.</p>	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
	The community must liaise with the municipality in order to get feedback on future plans with regards to water supply to communities.		
7.5	<p>E. Greyling thanked the project team for the detailed presentations. She indicated that the problem is that everyone has heard the same and seen the same promises and talks. She added that she hears what is being said, and this project will have a huge negative socio-economic impact for the area of Steenbokpan. Even the people who previously got work from the projects, did not benefit from it and you will see it at the next meeting in Steenbokpan. Eskom is using the FGD, however, what we need to understand is that they had an alternative and plans which could use a lot less water. The water that will be provided to the community from the Mokolo Dam will be at the same tariff as the water from MCWAP, and therefore the community is awaiting huge water price hikes. The community lives with the knowledge that the DEA is not here to defend our environment or our affairs. We all live here and we have all seen it happen. This project is a very well prepared horror story.</p> <p>D. Henning acknowledged the concerns raised, based on adverse impacts experienced by the community. He noted that the impacts that can potentially be caused by the proposed project were identified by the project team and mitigation measures were proposed to address these impacts. He further mentioned that there is recourse if the conditions of an Environmental Authorisation are not adhered to.</p> <p>J. Kroon mentioned that the government sponsors the social use component of the water supply for domestic purposes and it will be different to the tariff of the commercial users.</p>	-	-
7.6	<p>B. Enslin stated that with regards to the “artificial water”, the Johannesburg Mayor made a statement that R380 billion will be set aside in order to improve infrastructure in Johannesburg, as approximately 75% of infrastructure is old and failing. He asked if this had been taken into account for MCWAP-2A.</p> <p>R. Gillmer stated that the water in Johannesburg comes from the Vaal River system, and that their water losses are 30% due to old infrastructure. He noted that the thumb suck rule is that 60% of water used will come out as grey water, and fixing the infrastructure will not influence the flow to the works. He also mentioned that the returns flows in Lephalale will not be able to supply water to Lephalale.</p>	-	-
7.7	<p>J. Kroon asked if there were any suggestions in terms of how the vegetation removed during the construction phase of MCWAP-2A could benefit the town. He mentioned the example of De Hoop Dam, where some of the vegetation from de-bushing in the basin was provided to SANBI to conserve.</p> <p>D. Henning stated that provision has been made for search, rescue and relocation of conservation worthy flora and fauna prior to construction.</p> <p>A. Gouws stated that some trees that were removed could also be used as firewood by the local community.</p>	-	-
7.8	L. Sole stated that his focus was on environmental matters. He indicated that the management of waste and sanitation at construction camps should be of highest priority. He further noted that truck drivers bringing in heavy loads, who cannot drive back and end up staying close by, can cause impacts such as HIV/AIDS. He also mentioned that borrow pits needed to be rehabilitated after construction.	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
	<p>A. Nelwamondo indicated that in the case of MCWAP Phase 1, where they had at most 800 workers on site, 700 were local labourers who resided in the existing residential areas. The skilled and semi-skilled labourers stayed in existing towns or camps provided by farmers. Every week the camp sites were inspected and problems needed to be rectified immediately. The municipality also asked for a list of all labour camps for MCWAP Phase 1 and also undertook inspections, and there were never any issues. The transport of heavy loads will be scheduled to allow sufficient time for the return trip. The contractor has to ensure that the suppliers stick to their schedules. For the borrow pits, there are currently 23 identified sites and during the construction and mining phase, activities will abode by the EMP approved by the Department of Mineral Resources (DMR). Once mining has been completed a closure plan will be compiled and submitted to DMR for authorisation. Landowners will also be consulted. Once the closure plan is approved, the rehabilitation and reinstatement can start and once it is done the site will be inspected by the authorities and the landowner. With regards to sourcing of labour for the borrow pits, the maximum employment will be approximately only 5, who will be required for the operation of the borrow pits and handling of machinery.</p>		
7.9	<p>F. Nkosi stated that Lephalale has experienced an influx of many people. He indicated that there is no skills development taking place as part of the projects in Lephalale. He emphasised that there needs to be a transfer of skills.</p> <p>A. Nelwamondo stated that during the implementation of MCWAP Phase 1 and Medupi, many opportunities were created for local labourers. There was a lot of training, for example MCWAP Phase 1 trained 400 local labourers and it is believed that those skills are still available in the area. When it comes to employment, all job seekers can register at the labour desk with their certain skill sets. The problem arises when importing skilled workers from outside of the local area, it is the last resort only when the skills can't be sourced locally. It is not a definite that semi-skilled or skilled labour will be sourced from Gauteng. The priority for this project is to source locally.</p> <p>T. Shale added that the specifications for the contractors will provide instructions on the sourcing of local labour.</p>	-	-
7.10	<p>A. Macheko stated that the municipality should have assigned a ward councillor or municipal committee to assist with the participation of the project in Lephalale, and to introduce the project to the community. He noted that consultation with the communities is always a challenge.</p> <p>D. Henning noted that as a minimum, the public participation process needs to adhere to the requirements stipulated in the EIA Regulations. In the case of municipalities, representatives from the various municipal units were included in the database and consulted with during the course of the EIA. Copies of the Scoping and EIA Reports were also provided to the municipality. Dedicated authorities meetings were also held with officials from national, provincial and local government. The councillors from Thabazimbi and Lephalale were also identified from the Wards affected by the project.</p> <p>A. Nelwamondo added that the Lephalale Development Forum are given updates on the project to also inform local stakeholders in the area.</p>	-	-
7.11	<p>F. Nkosi stated that the project must do all it can to preserve indigenous trees for future generations.</p>	-	-

NO.	DESCRIPTION	ACTION	TARGET DATE
	D. Henning indicated that mitigation measures related to the safeguarding of flora are provided in the EMPr.		
7.12	L. Sole stated that opportunities needed to be created for local businesses to benefit from the project.	-	-
7.13	B. Enslin requested the details of the landowners from the database that are affected by the Best Practicable Environmental Option (BPEO), as well as a copy of the maps of the final preferred route.	Nemai	TBC
8.	Closure		
8.1	D. Henning thanked everyone for their participation and input. The meeting was concluded at 12:30.	-	-

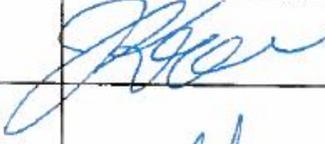
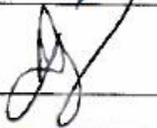
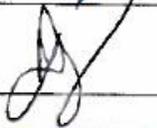
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Date:	11 October 2018	Time: 9:00 – 13:00
Chairperson:	D. Henning	Place: Mogol Club, Grootgeluk Conference Room, Lephalale

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Fanie Vogel		Meeting Chairman	☎ 082 325 3519 ✉ Fanie.vogel@gmail.com		
Ronald Gillmer	DWS	Chief Engineer: Options Analysis	☎ 012 336 6933 ☎ 082 791 0833 ✉ GillmerR@dws.gov.za		
Hannes Pretorius	DWS	Area Manager: Hartbeespoort	☎ 012 253 1093 ☎ 082 806 3681 ✉ PretoriH@dws.gov.za		
Petrus Venter	DWS	Deputy Regional Director: North West	☎ 012 253 1026 ☎ 082 807 6098 ✉ VenterP@dws.gov.za		
Rens Botha	DWS Limpopo-North West Proto CMA	Chief Engineer: Water Resources Management	☎ 012 392 1308 ☎ 082 808 9560 ✉ BothaR@dws.gov.za		
Azwianewi Nelwamondo	TCTA	Environmental Manager	☎ 012 683 1200 ☎ 082 809 5101 ✉ ANelwamondo@tcta.co.za		
Kgopotso Mabitsela	TCTA	Project Manager	☎ 012 683 1200 ✉ kmabitsela@tcta.co.za		
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Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
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APPENDIX B

PRESENTATIONS

	KONSEPNOTULE Omgewingsimpakbepaling: Openbare Vergadering – Lephalale	Navrae:	Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nemai.co.za
Kliënt:	 water & sanitation Department: Water and Sanitation REPUBLIC OF SOUTH AFRICA  A new word for water	Projek Naam:	Mokolo en Krokodilrivier (Wes) Wateraanvullings Projek (Fase 2A) (MKWAP-2A)
Datum:	11 Oktober 2018	Tyd:	09:00 – 13:00
Voorsitter:	D Henning	Plek:	Mogol Klub, Grootgeluk Konferensiesaal, Lephalale

LW: Die notule is nie 'n verbatim weergawe van die besprekings nie maar eerder 'n opsomming van die belangrike besprekings tydens die vergadering.

Teenwoordig

Verwys na die teenwoordigheidslys aangeheg as Bylaag A.

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM															
1.	Opening en Verwelkoming																	
1.1	D. Henning het almal verwelkom en die volgende is beklemtoon: <ul style="list-style-type: none"> Die Openbare vergadering sal in Afrikaans gehou word maar die aanbiedings sal in Engels op die skerm verskyn. Sprekers kan bydraes in Afrikaans of Engels doen; Die vergadering is deel van die Omgewingsimpak Bepaling (OIB) Proses vir die voorgestelde Mokolo en Krokodilrivier (Wes) Wateraanvullings Projek (Fase 2A) (MKWAP-2A); en Belangrike kwessies sal genotuleer word en ingevoer word as deel van die OIB Proses, in die Kommentaar en Terugvoeringsverslag. 	-	-															
2.	Teenwoordigheid en Verskonings																	
2.1	Geen verskonings was opgemerk nie. D. Henning het die lede van die projekspan voorgestel, soos hieronder getabuleer. <table border="1"> <tr> <td>DWS</td> <td>Applikant</td> <td>R. Gillmer</td> </tr> <tr> <td>TCTO</td> <td>Implementeringsagent</td> <td>K. Mabitsela A. Nelwamondo A. Thebe T. Shale</td> </tr> <tr> <td>MCC</td> <td>Tegniese span</td> <td>J. Kroon</td> </tr> <tr> <td>Nemai</td> <td>OIB Praktisyn</td> <td>D. Henning C. van der Hoven</td> </tr> <tr> <td></td> <td>Spesialiste</td> <td>A Gouws (Landbou) A Phamphe (Ekologie) B Orban (Wild)</td> </tr> </table>	DWS	Applikant	R. Gillmer	TCTO	Implementeringsagent	K. Mabitsela A. Nelwamondo A. Thebe T. Shale	MCC	Tegniese span	J. Kroon	Nemai	OIB Praktisyn	D. Henning C. van der Hoven		Spesialiste	A Gouws (Landbou) A Phamphe (Ekologie) B Orban (Wild)	-	-
DWS	Applikant	R. Gillmer																
TCTO	Implementeringsagent	K. Mabitsela A. Nelwamondo A. Thebe T. Shale																
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Nemai	OIB Praktisyn	D. Henning C. van der Hoven																
	Spesialiste	A Gouws (Landbou) A Phamphe (Ekologie) B Orban (Wild)																

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
	C Chidley (Sosio-ekonomies) M Howard (HBPdam)		
3.	Doelwitte van en Reëls vir die Vergadering		
3.1	D. Henning het aangedui dat die doelwitte van die Openbare vergadering die volgende insluit: <ul style="list-style-type: none"> • Om 'n oorsig van die voorgestelde MKWAP-2A te voorsien; • Om die status van die Omgewingsimpakbepaling (OIB) aan te bied; • Om 'n oorsig van die Konsep OIB-verslag vir die voorgestelde MKWAP-2A Wateroordragskema te voorsien; • Om 'n oorsig van die Konsep Omvangsbepalingsverslag vir die voorgestelde Leengroewe te voorsien; en • Om 'n geleentheid vir projekverwante besprekings te bied. 	-	-
4	Projek Oorsig		
J. Kroon meld dat die inhoud van die Konsep Omgewingsimpakbepalingsverslag en voorkomende wetgewing van die Republiek van Suid Afrika (RSA) voorkeur neem oor enige aanbieding of antwoorde verstrekk gedurende die vergadering, sou daar 'n konflik bestaan.			
4.1	<u>Konteks</u>		
4.1.1	Aanbieding is deur J. Kroon gedoen wat die volgende hoofpunte ingesluit het: <ul style="list-style-type: none"> • Verstaan RSA se waterskaarste; • Nasionale reënval en potensiële verdamping; • Internasionale gedeelde watergebiede; • Projek oorsig. • Sektorale watergebruik; • Rekonsiliësie strategie studies; • Energie en water vir energie; • Nasionale ontwikkelingsvereistes; • Rol en funksie van bestaande NWHBI om MKWAP te ondersteun; • Voorgestelde MKWAP (Nuwe NWHBI); • Belangrike tegniese OIB-kwessies; en • Institusionele reëlins na implementering 	-	-
5	Omgewingsimpakbepalingsverslag – Wateroordragskema		
5.1	<u>Oorsig van die konsep OIB verslag</u>	-	-
5.1.1	Aanbieding is deur D Henning gedoen wat die volgende hoofpunte ingesluit het: <ul style="list-style-type: none"> • OIB-Proses – <ul style="list-style-type: none"> ○ Wateroordragskema-infrastruktuur; • Inhoud van die OIB verslag; • Omgewingsregsraamwerk; • Projek Beskrywing; • Alternatiewe; • Profiel van die ontvangsomgewing; • Spesialis studies; • Impakbepaling en versagtingsmaatreëls; • Openbare deelname; en • Gevolgtrekkings en aanbevelings. 		

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
5.2	<u>Spesialis studies</u>	-	-
5.2.1	<ul style="list-style-type: none"> A. Phamphe het 'n opsomming van die Terrestriële Ekologiese Impakstudie aangebied; B. Orban het 'n opsomming van die Wild Impakstudie aangebied; en A. Gouws het 'n opsomming van die Landbou impakstudie en Sosio-ekonomiese Impakstudie aangebied. 		
6	Omvangsbepalingsverslag – Leengroewe		
6.1	<u>Oorsig van die Omvangsbepalingverslag</u>	-	-
6.1.1	D. Henning het die volgende aangebied: <ul style="list-style-type: none"> Inhoud van die Omvangsbepalingverslag; en Program. 	-	-
7.	Bespreking		
7.1	<p>P. du Plessis het gesê dat die toestand van hul paaie baie belangrik is en hoe sal dit tydens die konstruksie- en bedryfsfase hanteer word.</p> <p>D. Henning het aangedui dat 'n basislynstudie op alle paaie gedoen moet word voordat die konstruksie kan begin, om die huidige status van die paaie te bepaal. Sommige paaie sal nie aanvaarbaar wees vir gebruik tydens konstruksie nie en moet dan opgegradeer word. Daar word beplan om slegs die konstruksie serwituu vir toegang te gebruik, maar openbare paaie sal op tye gebruik moet word om by sekere punte langs die pyplyn uit te kom. Die vereistes van die padowerhede sal benodig word. Spesifieke versagtingsmaatreëls wat handel oor die gebruik van paaie, word ook in die Omgewingsbestuursprogram (OBP) ingesluit, wat aangeheg word aan die Finale Omgewingsimpakbepaling (OIB) verslag. Die OBP is 'n lewendige dokument wat tydens die konstruksie en bedryfsfase van die projek geïmplementeer sal word.</p>	-	-
7.2	<p>B. Enslin het gevra of die huidige posisionering van die konstruksiekampe op die geaffekteerde plase geskuif kan word.</p> <p>D. Henning het gesê dat die kontrakteur 'n besluit moet neem ten opsigte van die finale ligging en posisie van die ontspanningsareas en konstruksiekampe. Finale reëlins moet bespreek en gereël word met die geaffekteerde grondeienaars. Die OIB het aanwysings van die konstruksiekampe verskaf. Geen voorsiening word gemaak vir die akkommodering van arbeiders by die kampe nie, slegs vir die sekuriteit personeel.</p> <p>B. Enslin het ook gevra waar die akkommodasie kampe vir die personeel sal wees.</p> <p>D. Henning het gesê dat in die geval van MCWAP Fase 1 akkommodasie gevind is in die omliggende dorpe of areas wat verhuur is van private grondeienaars wat akkommodasie aangebied het. TCTO het vereistes vir die akkommodasie kampe en stoor gebiede.</p>	-	-
7.3	A. Macheko het gesê dat openbare deelname baie belangrik is en dat almal in Lephalale moet weet wat aangaan. Hy het ook bygevoeg dat baie stakings plaasvind weens swak konsultasie met die gemeenskap. As lid van die Omgewingsgeregtighedsforum is sy besorgdheid oor die omgewingsdeel van hierdie projek. Hy het reeds die impak van Medupi en Matimba gesien, en hierdie nuwe projek sal in die toekoms meer	A. Macheko	TBC

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
	<p>steenkool kragstasies en myne toelaat om na ons omgewing te kom. Hy het sy kommer uitgespreek vir toekomstige geslagte. Marapong ly tans aan water tekorte in die gebied, en tog het die myne 'n konstante voorraad water. Hy het versoek dat die gemeenskap meer betrokke moet wees by projekte wat tans in die gebiede plaasvind, en dat die plaaslike munisipaliteit betrokke moet wees by die projek se openbare deelname.</p> <p>D. Henning het gesê dat die huidige databasis van Belanghebbende en Geaffekteerde Partye vir die OIB ook nieregeringsorganisasies (NRO) en omgewingsbelangegroeppe insluit wat spesifieke omgewingsbekommernisse, soos klimaatsverandering en water, het. In terme van konsultasie, het die projekspan probeer om 'n vergadering in Marapong te skeduleer om betrokke te raak met die gemeenskap, maar daar was geen lokaal beskikbaar nie. Dit kan verder met u bespreek word na die vergadering om te bepaal watter opsies daar bestaan. 'n Kennisgewingbord is in Marapong geplaas en 'n afskrif van die Konsep OIB-verslag is ook by die openbare biblioteek in Marapong geplaas.</p> <p>D. Henning het opgemerk dat hierdie projek gesien word as infrastruktuur wat dit moontlik maak vir ontwikkelings wat water kort, om in die Lephale-omgewing plaas te vind. 'n vergadering was gehou met die Departement van Omgewingsake (DOS) waartydens die projek se moontlike kumulatiewe impak ten opsigte van die watergebruikers se impak op klimaatsverandering bespreek is. DOS het aangedui dat die emittor verplig is om die klimaatveranderingstudie te doen, aangesien dit die bron van die impak is. D. Henning bedank A. Macheke vir sy deelname en het ook versoek dat indien hy sy eie databasis vir die Marapong-gemeenskap het, dit asseblief met die projekspan gedeel word om dit in die algehele databasis vir die projek in te sluit.</p> <p>A. Nelwamondo het bygevoeg dat ten opsigte van watergebruik, elke gebruiker soos myne en munisipaliteite, het verskillende toekennings vir watergebruik en lisensies. Indien meer water vir die munisipaliteit benodig word, moet hulle aansoek doen vir 'n toename in hul watertoewysing. MKWAP-2A sal uiteindelik die water beskikbaarheid vir Lephale verdubbel.</p>		
7.4	<p>F. Nkosi het gesê dat Medupi en Exxaro meer water gebruik, maar die gemeenskap gebruik minder water. Sy het opgemerk dat daar elke dag in Lephale 'n rioolblokkering is en sy het gevra waarom riool nie hergebruik kan word om water te bespaar nie. Sy het gesê dat die rioolwater hergebruik moet word, en dan sal daar water beskikbaar wees vir die munisipaliteit om te voorsien aan die plaaslike gemeenskappe. Die Grondwet sê dat ons die reg het vir water. Nie lank gelede was daar in Onverwacht 'n tekort aan water nie en moes alternatiewe planne gemaak word. Die projek verklaar dat deur die implementering van MKWAP-2A dit toegang tot water in Lephale tot gemeenskappe sal verhoog, maar die mense in Marapong het tans geen water nie en Medupi werk nog. As die gemeenskappe 'n pyplyn van die Zeeland-waterbehandeling plant na Onverwacht en Marapong gehad het, sal daar toegang tot water wees en die gemeenskappe sal baat vind. Al die nuwe myne en kragstasies het toegang tot al die water.</p> <p>D. Henning het aangedui dat die kwessies wat geopper is oor watervoorsiening aan plaaslike gemeenskappe, is 'n verantwoordelikheid van die munisipaliteit. Hy het opgemerk dat die projekspan nie noodwendig die beste geplaas is om te reageer daarvoor</p>	-	-

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
	<p>nie. Hy het aangedui dat een van die watergebruikers wat deur MKWAP-2A geïdentifiseer is, die Lephalale Munisipaliteit is. Hy het opgemerk dat hergebruik oor die hele land oorweeg word.</p> <p>J. Kroon het bygevoeg dat MKWAP-2A van voorneme is om water aan verskillende gebiede te voorsien. Hy het opgemerk dat die kwaliteit van water uit hierdie voorgestelde skema nie geskik is vir menslike verbruik nie. MKWAP-2A sal water van die Mokolo-stelsel vrystel, wat dan vir huishoudelike doeleindes gebruik kan word</p> <p>R. Gillmer het ook verduidelik dat die munisipaliteit in die toekoms planne het met Exxaro en myne om die watervoorsiening in Lephalale te verbeter. Die gemeenskap moet met die munisipaliteit praat om terugvoering te kry oor die toekomstige planne met betrekking tot watervoorsiening aan die gemeenskappe.</p>		
7.5	<p>E. Greyling het die projekspan bedank vir die gedetailleerde aanbiedings. Sy het aangedui dat die probleem is dat almal al dieselfde beloftes en gesprekke al gehoor en gesien het. Sy het bygevoeg dat sy hoor wat gesê word, en hierdie projek sal 'n groot negatiewe sosio-ekonomiese impak op die Steenbokpan-gebied hê. Selfs die mense wat voorheen werk van die projekte gehad het, het nie daarby baat gevind nie en jy sal dit by die volgende vergadering in Steenbokpan ook sien. Eskom gebruik die FGD, maar ons moet verstaan dat hulle 'n alternatief en planne gehad het wat baie minder water kon gebruik. Die water wat aan die gemeenskap van die Mokolodam voorsien word, sal teen dieselfde tarief as die water van MCWAP wees, en daarom wag die gemeenskap vir hoër watertariewe. Die gemeenskap leef met die wete dat die DOS nie hier is om ons omgewing of ons sake te verdedig nie. Ons woon almal hier en ons het dit almal gesien. Hierdie projek is 'n baie goeie voorbereide "gruwel verhaal".</p> <p>D. Henning het al die kwessies erken, gebaseer op die negatiewe impakte wat die gemeenskap al ervaar het. Hy het opgemerk dat die impakte wat moontlik deur die voorgestelde projek veroorsaak kan word, deur die projekspan geïdentifiseer is en versagtingsmaatreëls is voorgestel om hierdie impakte sover moontlik aan te spreek. Hy het verder gesê dat daar 'n gevolg is indien die voorwaardes van 'n omgewingsmagtiging nie nagekom word nie.</p> <p>J. Kroon het genoem dat die regering die maatskaplike gebruikerskomponent van die watervoorsiening vir huishoudelike doeleindes borg en dit sal verskil van die kommersiële gebruikers se tarief.</p>	-	-
7.6	<p>B. Enslin het gesê dat die Johannesburg burgemeester met betrekking tot kunsmatige water, verklaar het dat R380 miljard opsy gesit moet word om infrastruktuur in Johannesburg te verbeter, aangesien ongeveer 75% van die infrastruktuur oud en foutief is. Hy het gevra of dit vir MKWAP-2A in ag geneem is.</p> <p>R. Gillmer het gesê dat die water in Johannesburg afkomstig is van die Vaalrivierstelsel en dat hul waterverliese 30% weens ou infrastruktuur is. Hy het opgemerk dat die duim-suig reël is dat 60% van die water wat gebruik word, as grys water sal uitkom. Die vasstelling van die infrastruktuur sal nie die vloei van die werke beïnvloed nie. Hy het ook genoem dat die terugvloei water in Lephalale sal nie water na Lephalale kan voorsien nie.</p>	-	-

NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
7.7	<p>J. Kroon het gevra of daar enige voorstelle is met betrekking tot hoe die plantegroei wat tydens die konstruksiefase van MKWAP -2A verwyder word, die dorp kan bevoordeel. Hy het die voorbeeld van De Hoopdam genoem, waar sommige van die plantegroei uit ontbossing in die damkom aan SANBI voorsien is om te bewaar.</p> <p>D. Henning het gesê dat daar voorsiening gemaak is vir die soektog, redding en verskuiwing van bewaringswaardige flora en fauna voor konstruksie.</p> <p>A. Gouws het gesê dat sommige bome wat verwyder is, ook as brandhout deur die plaaslike gemeenskap gebruik kan word.</p>	-	-
7.8	<p>L. Sole het verklaar dat sy fokus op omgewing-aangeleenthede is. Hy het aangedui dat die bestuur van afval en sanitasie by konstruksiekampe moet van die hoogste prioriteit wees. Hy merk verder op dat vragmotorbestuurders wat swaar vragte inbring, wat nie kan terug ry nie en uiteindelik naby bly, kan nadelige gevolge hê soos MIV en vigs. Hy het ook genoem dat leengroewe na konstruksie gerehabiliteer moet word.</p> <p>A. Nelwamondo het aangedui dat in die geval van MKWAP Fase 1, waar hulle hoogstens 800 werkers op die terrein gehad het, 700 plaaslike arbeiders het in bestaande woongebiede gewoon. Die geskoolde en semi-geskoolde werkers het in bestaande stede gebly of in kampe wat deur boere versorg was. Die kampeerterreine is wekeliks geïnspekteer en as daar probleme gevind was, moes dit onmiddellik herstel word. Die munisipaliteit het ook 'n lys van alle arbeidskampe vir MKWAP-fase 1 gevra en ook inspeksies onderneem en daar was nooit enige probleme nie. Die vervoer van swaar vragte sal beplan moet word om genoeg tyd te gee vir die terugreis. Die kontrakteur moet sorg dat verskaffers hulself by hul skedules hou. Daar is tans 23 geïdentifiseerde leengroewe en gedurende die konstruksie- en myn fase sal aktiwiteite bestuur word in die OBP, wat deur die Departement van Minerale Hulpbronne (DMH) goedgekeur sal word. Sodra die mynbou afgehandel is, sal 'n toesluit plan saamgestel word en aan DMH voorgelê word vir magtiging. Grondeienaars sal ook geraadpleeg word. Sodra die afsluitingsplan goedgekeur is, kan die rehabilitasie en herstellfase begin en sodra dit gedoen is, sal die terrein deur die owerhede en die grondeenaar besigtig word. Met betrekking tot die verkryging van arbeid vir die leengroewe, sal die maksimum werkgeleentheid slegs ongeveer 5 wees, wat sal vereis word vir die bedryf van die leengroewe en masjinerie.</p>	-	-
7.9	<p>F. Nkosi het gesê dat Lephalale 'n instroming van baie mense ervaar het. Hy het aangedui dat daar geen vaardigheidsontwikkeling plaasvind as deel van die projekte in Lephalale nie. Hy het beklemtoon dat daar vaardigheidsoordrag moet wees.</p> <p>A. Nelwamondo het gesê dat tydens die implementering van MKWAP Fase 1 en Medupi, was baie geleenthede geskep vir plaaslike arbeiders. Daar was baie opleiding, byvoorbeeld, MKWAP Fase 1 het 400 plaaslike arbeiders opgelei en daar word geglo dat daardie vaardighede nog steeds in die omgewing beskikbaar is. Met indiensneming, kan alle werksoekers hul spesifieke vaardighede registreer by die arbeidslesenaar. Die probleem ontstaan wanneer geskoolde werkers van buite die plaaslike gebied ingevoer word, dit is die laaste uitweg slegs</p>	-	-

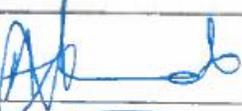
NR.	BESKRYWING	AKSIE	TEIKEN-DATUM
	<p>wanneer die vaardighede nie plaaslik verkry kan word nie. Dit is nie beslis dat semi-geskoolde of geskoolde arbeid van Gauteng afkomstig sal wees nie. Die prioriteit vir hierdie projek is verkryging van plaaslike arbeid.</p> <p>T. Shale het bygevoeg dat dit in die spesifikasies vir die kontrakteurs instruksies sal verskaf met betrekking tot die verkryging van plaaslike arbeid.</p>		
7.10	<p>A. Macheke het verduidelik dat die munisipaliteit 'n raadslid of munisipale komitee moes toegewys het om te help met die openbare deelname van die projek in Lephalale, en om die projek aan die gemeenskap voor te stel. Hy het opgemerk dat konsultasie met die gemeenskappe altyd 'n uitdaging is.</p> <p>D. Henning het opgemerk dat die proses van openbare deelname as 'n minimum moet voldoen aan die vereistes soos uiteengesit in die OIB-regulasies. In die geval van munisipaliteite, is verteenwoordigers van die verskillende munisipale eenhede in die databasis ingesluit en geraadpleeg tydens die OIB. Afskrifte van die Omvangsbepaling- en OIE-verslae is ook aan die munisipaliteite verskaf. Toegewyde owerheidsvergaderings is ook gehou met amptenare van nasionale, provinsiale en plaaslike regering. Die raadslede van Thabazimbi en Lephalale is ook geïdentifiseer uit die wyke wat deur die projek geraak word.</p> <p>A. Nelwamondo het bygevoeg dat die Lephalale ontwikkelingsforum opdaterings van die projek gegee word om ook plaaslike belanghebbendes in die gebied in kennis te stel.</p>	-	-
7.11	<p>F. Nkosi het gesê dat die projek alles in sy vermoë moet doen om inheemse bome vir toekomstige geslagte te bewaar.</p> <p>D. Henning het aangedui dat versagtingsmaatreëls met betrekking tot die beveiliging van flora in die OBP voorsien word.</p>	-	-
7.12	L. Sole het gesê dat geleenthede vir plaaslike besighede geskep moet word om voordeel te trek uit die projek.	-	-
7.13	B. Enslin het die besonderhede van die grondeienaars versoek van die databasis wat geraak word deur die gekose roete, asook 'n afskrif van die kaarte van die finale voorkeuroete.	<i>Nemai</i>	<i>TBC</i>
8.	Afsluiting		
8.1	<p>D. Henning het almal teenwoordig bedank vir hul deelname en insette.</p> <p>Die vergadering het om 12:30 verdaag.</p>	-	-

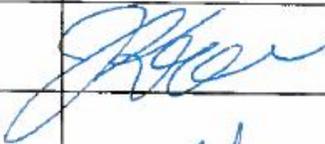
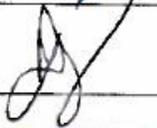
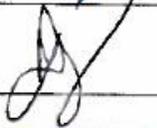
Bylae
Bylaag A – Teenwoordigheidslys
Bylaag B – Aanbiedings

BYLAAG A

TEENWOORDIGHEIDSLYS

	ATTENDANCE REGISTER – EIA Phase Public Meeting	Queries: Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nema.co.za
Clients:	 water & sanitation Department Water and Sanitation REPUBLIC OF SOUTH AFRICA  TCTA A new word for water	Project Name: Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A) Project No.: 10580
Date:	11 October 2018	Time: 9:00 – 13:00
Chairperson:	D. Henning	Place: Mogol Club, Grootgeluk Conference Room, Lephalale

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Fanie Vogel		Meeting Chairman	☎ 082 325 3519 ✉ Fanie.vogel@gmail.com		
Ronald Gillmer	DWS	Chief Engineer: Options Analysis	☎ 012 336 6933 ☎ 082 791 0833 ✉ GillmerR@dws.gov.za		
Hannes Pretorius	DWS	Area Manager: Hartbeespoort	☎ 012 253 1093 ☎ 082 806 3681 ✉ PretoriH@dws.gov.za		
Petrus Venter	DWS	Deputy Regional Director: North West	☎ 012 253 1026 ☎ 082 807 6098 ✉ VenterP@dws.gov.za		
Rens Botha	DWS Limpopo-North West Proto CMA	Chief Engineer: Water Resources Management	☎ 012 392 1308 ☎ 082 808 9560 ✉ BothaR@dws.gov.za		
Azwianewi Nelwamondo	TCTA	Environmental Manager	☎ 012 683 1200 ☎ 082 809 5101 ✉ ANelwamondo@tcta.co.za		
Kgopotso Mabitsela	TCTA	Project Manager	☎ 012 683 1200 ✉ kmabitsela@tcta.co.za		
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Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
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Segomotso Kelefetswe	TCTA		☎ 012 683 1200 ✉ SKelefetswe@tcta.co.za		
Thato Shale	TCTA	Social Specialist	☎ 012 683 1229 ✉ tshale@tcta.co.za		
Minenthle Luthuli	TCTA		☎ 012 683 1226 ✉ mluthuli@tcta.co.za		
Jaap Kroon	TCTA/Aurecon	MCC	☎ 083 627 5911 ✉ jaap@kroon.co.za		
Johan Pienaar	MCC	Project Manager	☎ 012 643 0670 ☎ 082 808 7166 ✉ johanpie@mcwap.co.za		
Christian Van Der Hoven	Nemai Consulting	EIA Assistant	☎ 011 781 1730 ✉ ChristianVdH@nemai.co.za		
Donavan Henning	Nemai Consulting	EIA Project Leader	☎ 011 781 1730 ☎ 082 891 0604 ✉ donavanh@nemai.co.za		
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D. Lauer		Enkeldracci			
Willie de Plessis A. Bouwer	EXXARO	Project Manager	☎ 011 603 8844 ✉ Willie.dePlessis@exxaro.co.za		

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LIZZY MALEMELA	HLAICAKO TRADING ENTERPRISE	DIRECTOR	083 770 5504 081 530 1190 lzmalemela@gmail.com		
BERNARD ENSON	SEWITRUEWICHA	Owner	0828726211 sewitruewicha@gmail.com		

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
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LEONARD SOLE	BRILLIANT TRADING	MANAGING DIRECTOR	082 578 2141 086 2-7 2277 brillianttrading@webmail.co.za		
Leoni Kruger	Mogol Post	Editor Mogol Post	0736204731 sub@mogolpos.co.za		

BYLAAG B

AANBIEDINGS

	DRAFT MINUTES EIA Phase Public Meeting - Steenbokpan	Queries:	Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nemai.co.za
Clients:	 	Project Name:	Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)
Date:	11 October 2018	Project No.:	10580
Date:	11 October 2018	Time:	14:30 – 17:00
Chairperson:	A. Nelwamondo	Place:	Lesedi Thusong Community Centre, Steenbokpan

LW: These minutes are not intended as a verbatim transcript of the meeting, but rather as a summary of the salient discussions which took place.

Attendance
<i>Refer to the completed Attendance Register contained in Appendix A.</i>

NO.	DESCRIPTION	ACTION	TARGET DATE															
1.	Opening and Welcome																	
1.1	A. Nelwamondo welcomed everyone present and emphasised the following: <ul style="list-style-type: none"> The public meeting will be conducted in English and the text in the presentations will be in English. Attendees may use their language of preference. The public meeting forms part of the Environmental Impact Assessment (EIA) process for the proposed Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A); and Matters raised will be incorporated into the EIA's Comments and Responses Report. 	-	-															
2.	Attendance and Apologies																	
2.1	The following members of the project team were present at the meeting: <table border="1"> <thead> <tr> <th>Organisation</th> <th>Role</th> <th>Representatives</th> </tr> </thead> <tbody> <tr> <td>DWS</td> <td>Applicant</td> <td>R. Gillmer</td> </tr> <tr> <td>TCTA</td> <td>Implementing Agent</td> <td>K. Mabitsela A. Nelwamondo T. Shale M. Luthuli</td> </tr> <tr> <td>MCC</td> <td>Technical Team</td> <td>J. Kroon</td> </tr> <tr> <td>Nemai Consulting</td> <td>Environmental Assessment Practitioner</td> <td>D. Henning C. van der Hoven</td> </tr> </tbody> </table>	Organisation	Role	Representatives	DWS	Applicant	R. Gillmer	TCTA	Implementing Agent	K. Mabitsela A. Nelwamondo T. Shale M. Luthuli	MCC	Technical Team	J. Kroon	Nemai Consulting	Environmental Assessment Practitioner	D. Henning C. van der Hoven	-	-
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MCC	Technical Team	J. Kroon																
Nemai Consulting	Environmental Assessment Practitioner	D. Henning C. van der Hoven																
NO.	DESCRIPTION	ACTION	TARGET DATE															
3.	Purpose of the Meeting																	

NO.	DESCRIPTION	ACTION	TARGET DATE
3.1	<p>A. Nelwamondo indicated that the purpose of the meeting included the following</p> <ul style="list-style-type: none"> • To provide an overview of the proposed MCWAP-2A; • To present the status of the EIA; • To provide an overview of the draft EIA Report for the proposed MCWAP-2A: Water Transfer Infrastructure; • To provide an overview of the draft Scoping Report for the proposed MCWAP-2A: Borrow Pits; and • To provide a platform for project-related discussions. 	-	-
4	Project Overview		
<p>J. Kroon stated that the content of the draft EIA Report and appendices and prevailing Republic of South Africa (RSA) legislation takes preference over any of the presentations or answers provided during the meeting, should any conflict arise.</p>			
4.1	<u>Context</u>		
4.1.1	<p>J. Kroon presented the following:</p> <ul style="list-style-type: none"> • Understanding RSA's water scarcity; • National rainfall and potential evaporation; • Internationally shared basins; • Sectoral water usage; • Reconciliation strategy studies; • Energy and water for energy; • National development imperatives; • Role and function of existing NWRI to support MCWAP; • Proposed MCWAP (New NWRI); • Key technical EIA issues; and • Institutional arrangements following implementation 	-	-
5	EIA – Water Transfer Infrastructure		
5.1	<u>Overview of the Draft EIA Report</u>		
5.1.1	<p>D. Henning presented the following:</p> <ul style="list-style-type: none"> • MCWAP-2A components – <ul style="list-style-type: none"> ◦ Water Transfer Scheme Infrastructure; • Outline of the EIA process; • Content of the EIA Report; • Environmental Legal Framework; • Project Description; • Alternatives; • Profile of the receiving environment; • Specialist studies; • Impact assessment and mitigation measures; • Public participation; and • Conclusions and recommendations. 		
6	EIA – Borrow Pits		
6.1	<u>Overview of the Draft Scoping Report</u>		
6.1.1	<p>D. Henning presented the following:</p> <ul style="list-style-type: none"> • Content of the scoping report; and • Programme. 		
7.	Discussion		

NO.	DESCRIPTION	ACTION	TARGET DATE
7.1	<p>A question was asked about what the current allocation of water is for Medupi and for the town of Lephalale that will be supplied from MCWAP-2A.</p> <p>A. Nelwamondo stated that currently MCWAP-2A will provide Lephalale with 7 million m³/annum, whereas the allocation for Medupi will be approximately 23 million m³/annum.</p>	-	-
7.2	<p>The concern was raised that in the presentation, climate change and the drought that the Eastern Cape and Cape Town have been experiencing was mentioned, therefore South Africa must prioritise water. South Africa signed the Paris Agreement in order to ensure that the country will reduce its air emissions, especially coal-fired plants. We need to ask ourselves is this water for industry or for the country, and does this project support polluters by providing industries with water and ultimately neglecting food production by taking the farmers' water?</p> <p>A. Nelwamondo explained that Medupi will be one of the first power stations that will implement the Flu-Gas Desulphurisation process, which was granted Environmental Authorisation on 6 September 2018, and the FGD technology is designed in order for Medupi to lower emissions.</p>	-	-
7.3	<p>An attendee raised the concern that with regards to the promises of local employment that was presented earlier, they should not just be empty promises, but actually needs to happen.</p> <p>A. Nelwamondo stated that they will require approximately 500 local labourers, which will have to be split between Thabazimbi and Lephalale due to the project area falling within both municipalities. Skills will also be transferred to the local community during the construction phase, in order to provide skills that can be used even when the project is complete.</p> <p>Another attendee raised a concern with regards to jobs, stating that according to the maps in the presentation, majority of the project occurs within the Lephalale local municipality, and therefore the majority of the local jobs should be given to the communities of Lephalale, it will be impossible for someone to travel from Lephalale all the way to work in Thabazimbi, and vice versa. It was added that with regards to the transfer of skills from the project, it has to be done properly so that the local people can benefit, and instead of only providing skills during construction, they must start transferring skills before the recruitment of local labour starts for the project.</p> <p>A. Nelwamondo stated that the training and skill transfer will be planned and provided by the contractor, and TCTA will manage the contractor to ensure that skills are transferred to the local community. Skills can't be transferred now as the contractor still needs to be appointed, which will be during procurement which is only after environmental authorisation is granted and the final design phase is complete.</p>	-	-
7.4	<p>It was asked whether the project team will come back on 29 October 2018.</p> <p>D. Henning stated that the 29 October 2018 is the last day of the public review period of the Draft EIA Report (Water Transfer Infrastructure) and Draft Scoping Report (Borrow Pits) and will be the last day to provide comments. Hardcopies of the draft reports are available in the front of the Thusong Centre at reception to provide comments. If Environmental Authorisation is issued, and after the EIA process, other processes will</p>	-	-

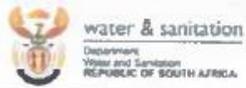
NO.	DESCRIPTION	ACTION	TARGET DATE
	<p>start like the implementation of the project, there will be labour desks to assist with local employment and a community liaison officer (CLO).</p> <p>An attendee added that the municipality must be present at these meetings in order to ensure that commitments made with regards to local employment are kept.</p> <p>D. Henning stated as part of the EIA process, there has to be engagement with the local municipalities that have jurisdiction in the project area. Therefore for this project, the Thabazimbi and Lephalale local municipalities were engaged with from the start of the project. With regards to the employment process of local labour, there is a protocol and municipal processes that must be followed by the contractor and in the implementation phase.</p>		
7.5	<p>J. Motlogelo stated that he was concerned about the pipeline route traversing the farms, because they stay on farms and have graves of their families on the farm. Previous projects affected their graves and the area was cleared and graded without their consent. Were heritage resources taken into account by the project?</p> <p>D. Henning stated that as part of the EIA phase, specialist studies were conducted along the pipeline route in order to assess any sensitive environmental features that could possibly be impacted by the project infrastructure. There was a heritage impact assessment, where the specialist reviewed all possible heritage resources on-site (graves, structures etc.). All graves are protected, and if any heritage resources have to be moved, there is a specific process prescribed by legislation that will have to be followed. Mitigation measures are also provided in the specialists report in order to mitigate the impact on heritage resources that could occur on site, and if relocation is necessary, then a process is provided in order to relocate the graves. Before construction commences, a walk-down survey will commence within the planned construction servitude, in order to identify and demarcate all heritage resources, existing structures and sensitive environmental features (fauna/flora/wetlands/pans) that will have to be protected during the construction period.</p>	-	-
7.6	<p>An attendee stated that their ward councillor is N. Pienaar, and when we start with the implementation of MWAP-2A, the ward committee should be the first point of contact in order to ensure construction goes ahead smoothly with no issues.</p> <p>D. Henning stated when we identified councillors and ward committee members, engagement is made with the office of the speaker of the local municipalities.</p>	-	-
7.7	<p>An attendee had the concern that the local community is still informal, there is no development in this area, and the many projects just come and go without improving the lives of the community. There are no secondary schools or crèches in the community. It was recommended that the CSI of the MCWAP-2A should be different from the past projects and needs to be in the community.</p>	-	-
7.8	<p>P. Mogwai asked about the CLO. A. Nelwamondo explained that the CLO will be part of the construction phase, and will be local who will work closely with ward committee members during construction to assist with engagement with the local communities with addressing concerns and issues.</p>	-	-
7.9	<p>J. Motshegoa stated that approximately 2 km from the Thusong Centre, there is an old facility which was used as a school but is no longer in</p>	-	-

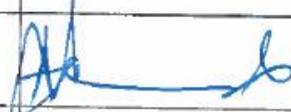
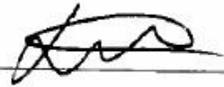
NO.	DESCRIPTION	ACTION	TARGET DATE
	use. There is a possibility of using that facility in Steenbokpan as a training centre for the local labourers of Steenbokpan during the construction period.		
7.10	J. Moatshe asked that more information on the project needs to be accessible to the community. A. Nelwamondo stated that a copy of the Draft EIA and Draft Scoping Report has been made available to the community and is situated at the reception area of the Lesedi Thusong Centre.	-	-
7.11	The concern was raised that landowners affected by the pipeline are not present at the meeting in Steenbokpan, and whether another meeting will be held with them. D. Henning stated that a number of meetings were held with the landowners, and landowners were present at the public meetings held in Thabazimbi and in Lephalale. As part of the EIA process, it is an obligation to have engagement and meetings with the directly and adjacently affected landowners, which has been done.	-	-
8.	Closure		
8.1	A. Nelwamondo thanked everyone for their positive participation and valuable input. The meeting adjourned at 17:00.	-	-

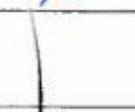
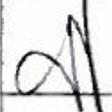
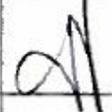
Appendices
Appendix A – Attendance Register
Appendix B – Presentation

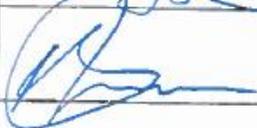
APPENDIX A

ATTENDANCE REGISTER

	ATTENDANCE REGISTER – EIA Phase Public Meeting	Queries:	Donavan Henning ☎ 011 781 1730 ☎ 011 781 1731 ✉ donavanh@nema.co.za
Clients:	 water & sanitation Department Water and Sanitation REPUBLIC OF SOUTH AFRICA	 TCTA A new word for water	Project Name: Mokolo and Crocodile River (West) Water Augmentation Project (Phase 2A) (MCWAP-2A)
Date:	11 October 2018	Project No.:	10580
Chairperson:	D. Henning	Time:	14:30 – 17:00
		Place:	Lesedi Thusong Community Centre, Steenbokpan

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Fanie Vogel		Meeting Chairman	☎ 082 325 3519 ✉ Fanie.vogel@gmail.com		
Ronald Gillmer	DWS	Chief Engineer: Options Analysis	☎ 012 336 6933 ☎ 082 791 0833 ✉ GillmerR@dws.gov.za		
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Petrus Venter	DWS	Deputy Regional Director: North West	☎ 012 253 1026 ☎ 082 807 6098 ✉ VenterP@dws.gov.za		
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Segomotso Kelelefswe	TCTA		☎ 012 683 1200 ✉ SKelelefswe@tcta.co.za		
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Johan Pienaar	MCC	Project Manager	☎ 012 643 0670 ☎ 082 808 7166 ✉ johanpie@mcwap.co.za		
Christian Van Der Hoven	Nemai Consulting	EIA Assistant	☎ 011 781 1730 ✉ ChristianVdH@nemai.co.za		
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Donavan Henning	Nemai Consulting	EIA Project Leader	☎ 011 781 1730 ☎ 082 891 0604 ✉ donavanh@nemai.co.za		
			☎ ✉		
			☎ ✉		

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Jacob Mookya	Lesedi		0606516921		
Lea Mokwena	" "		0196612121		
Motshegoa Hendrick	Lesedi		0128334180		
John Motshagole	Lesedi		0765080263		
Fuki Molešina	Lesedi		0792797841		
JOSEPH Mkwati	LESEDI		0638315994		
Uthmanang Ramoo	Lesedi		081 818 2367		
Christina Ramoo	LESEDI		0711492830		
Ditiro Majaphalo	Steenbokpan Community Forum		076 512 6963		
Jaco Mbathe	STEENBOKPAN Community		073 0925 138		

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
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Mdesia J.M.			0712001672		
Masala ME			0716325779		
LESENYA M.P					
MOSIPIDI O.J	WARD	MEMBER	0833 609234		
KBAGENG K.J	ward	Member	0663388212		
MNANG S.J	ward	member	076756 5530		
Petrus Magwai	ward to	Member	0729719510		
Esa Moleketa			019 655 0563		
DRUZD M.J	17	7	0728507507		
Pasina Leseny	"	"	081 039 2915		

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Rtsgang Rebecca	Lesedi		0711746147	DRkgang	
Rebecca Leude	Lesedi		x	P. L.	
David Magwai	Lesedi		0608029370	David	
Lacey Molwente	LESEDI		0639617706	Lacey	
George Mashobane	Lesedi		0607786899	George	
David Lebudi	Lesedi		0603110487	DLbudi	
EDWARD LEBUDI	LESEDI		063 280 0915	ALeb	
Tsholapelo Seibeane	Lesedi		0736492615	T. Seibeane	
Simon Mwanang	Lesedi		0734296364	SMwanang	
Letlora Sokoane (Lesedi)			0731094886	LSokoane	
Isaac Makhaga	Lesedi		0766534203	IMakhaga	

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
Sello Maluma	PHOMatong		0797273698	Maluma	
Rosinele Makoto	Lesedi		0764575165	KE	
Kshotofelo Leseng	Lesedi		066 255 4738	Eti Leseng	
Paulus Tsipane	Lesedi		0723662012	Paul	
Kleinboopla	Lesedi		=	Kleinboopla	
Anna Moatshe	Lesedi		072 666 9160	A.M. Moatshe	
Silas Tlakala	Lesedi		081 8548996	Silas	
Felicie Magosi	Lesedi		082 951 7947	Felicie	
Annemarie Mause	Lesedi		0728166615	Annemarie	
Elizabeth h. Maropeng	Lesedi		0762580960	KE. Maropeng	
Letsoang Mondlane	Lesedi		0784395530	L.M. Mondlane	

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
DRON MUNTJAI	Lesedi		0782337129		
SK MOATSEWE	Lesedi		0731107327		
DS MBEWANTWA	LESEDI		0786250927		
TM MAROPENG	Lesedi		0738718262	Tom	
J.D. Molepe	Lesedi		0608849290		
TW MOATSEWE	LESEDI		0769297402		
TM MAROPENG	Lesedi		0738718262	Tom	
LM. Malabe	lesedi		0765078312		
DR. Moya	Lesedi		0818980707		
IT Fanyana	Lesedi		0734489456		
A Malesina	=		0710342848		

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
THABO MOKWANE			0794691514		
Daniel Molele			0765062835		
DIPOTLE MOKWANE			0786250927		
JANUARY MOKWANE			0713399448		
James Molele			0608949290		
William Molele			0769297402		
Phyllis Molele			0783245832		

Representative Name and Surname	Name of Organisation	Designation	Contact Details	Sign	Apologies
SOLOMON PIIZE			0717679491	P.S. PIIZE	
Klaas Linkes				<i>[Signature]</i>	
Jurach Mollana			0634 558 225	<i>[Signature]</i>	
PETRUS Obifant			67040456220802	<i>[Signature]</i>	

APPENDIX B

PRESENTATIONS