

## PROPOSED TOWNSHIP DEVELOPMENT ON ERF 2642 AND PORTION 14 OF FARM 48, OPWAG, !KHEIS LOCAL MUNICIPALITY

**APPLICANT: !Kheis Local Municipality** 

## **COMMENT AND RESPONSE REPORT**

(DENC Ref. No: NC/EIA/11/ZFM/!KHE/OPW1/2020)

No.	Comment Date, Comment Format, Organisation/I&AP	Comment	Response from EAP/Applicant/Specialist/Project Manager Please note: All registered I&APs will be given the opportunity to comment on the draft EIR.
Com	ments Received on Initial	Public Participation	
	Gariep Watch is a control the lower Orange R improved communic participation.  We noted your ab	We noted your abovementioned NEMA Public Participation Process (Ref. 0512) for a new township development at Topline, with much	Respondent: EAP  Noted. Thanks for your comment.
1	Format: Email Letter I&AP: Gariep Watch (Chairman: Mr Ferdie Botha/ Technical Advisor: Mr Fritz Bekker)	Gariep Watch performs quarterly water quality studies and a risk assessment procedure at various localities in the lower Orange River including the river reach flowing through the !Kheis Local Municipalities jurisdiction. Our water quality results show that a number of point and diffuse sources of sewerage pollution may be affecting the surface and ground water resources in the vicinity of these townships and beyond. Furthermore, recent site visits to sewerage water infrastructure at these !Kheis townships showed that much of the sewerage water infrastructure is not being maintained or used for it intended purpose. Pump stations to the oxidation dam systems are not working, sewerage infrastructure is being vandalized, oxidation dam linings are damaged or removed and raw sewerage is being disposed into the veld or towards dry water courses.	Respondent: EAP  Noted. Current water supply, sewage and solid waste management issues have been identified and detailed in the Engineer's Services Report (Appendix 4B). Construction and upgrades to existing sewage management infrastructure has been recommended by the Engineer to service the proposed development.

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		The photographs in Figure 1 show some of the oxidation dam systems encountered at !Kheis Local Municipality during 2019.  Figure 1: Oxidation dam systems at !Kheis Local Municipality (2019)  The extension of existing townships that already have inadequate, unmaintained or unused sewerage infrastructure will only aggravate their pollution risk towards the downstream environment.  We therefore object to any new township development in the !Kheis Local Municipality and request the following information:  1. A list of all new proposed township developments in the !Kheis Local Municipality where EnviroAfrica CC is the appointed environmental practitioner.  2. Details pertaining to new sewerage infrastructure that are planned for these developments.	<ol> <li>Requested information has been sent to the I&amp;AP.</li> <li>Noted. Please refer to the Engineer's Services Report (Appendix 4B) regarding recommended construction / upgrade to existing sewage infrastructure. Houses in the existing Opwag Settlement currently consist of Pour Toilets with a Leach Pit. There is no sewer bulk infrastructure which is recommended by the Engineer's as per the Engineer's Services Report (Appendix 4B) as the total, expected sewer flow would be 365 000l/day. Recommended sewage infrastructure as per the Engineer's Services Report for the proposed development includes;</li> </ol>	

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	Organisation/luxi	Please also register Gariep Watch as an I&AP for these new township developments.	<ul> <li>Construction of a new 25l/s canal pump station with a duty and standby pump.</li> <li>New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.</li> <li>Water Treatment Works to be re-allocated to proposed site and upgraded to deliver 24m3/h potable water to the potable storage reservoirs.</li> <li>A new 848m³ sectional steel reservoir in the proposed site.</li> <li>One (1) new 355 m³ sectional steel pressure tower on the highest point in the village.</li> <li>A new 52l/s lifting pump station at the treatment works.</li> <li>A new 250mm pipeline between the lifting pump station and the pressure tower.</li> <li>More details are included in the Engineer's Services Report.</li> <li>Noted, Gariep Watch has been registered as an I&amp;AP.</li> </ul>
2	Date: 16/06/2020 Format: Email Letter I&AP: Schalk and Marike van der Merwe (smvdmhome@gmail.c om) (074 366 2276)	We have received a publication regarding the proposed project for extending the current housing in this location with a further 730 low income erven.  We live in the Opwag area and are daily in the Township as our permanent and temporary workers live there. We also have participated in outreaches and have a close relationship with some of the people currently living there.  Our concerns are:	Respondent: EAP  Noted, thank you for your comments.  Please note that the existing and future services (relative to water supply, sewage management, solid waste management, electricity supply, stormwater management, and roads) recommended for the proposed development have been included in the Engineer's Services Report (Appendix 4B). Mitigation measures, as per the Specialist Reports, have been included in the Draft EIR and EMPr.
		Water	Water Supply

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		During winter the canal that provides water for this section also have 4 dry periods of 14 days each. The dry periods are in sections of mostly 2 weeks and sometimes there is an interval of three weeks. Almost every time after the first weekend of the 2 week interval, the people that works with us ask if they can borrow our water tanks (which are on wheels), fill up the water tank from our borehole, because there is no water. We provide that, but the situation is that the management of water in the township currently is a big concern. The Municipal supply of water via their water truck is not consistent and it cost them allot of money.	Recommendations, regarding the Water Supply, has been incorporated into the Engineer's Services Report (Appendix 4B) and Draft EIR. Existing Average Annual Daily Demand (AADD) was calculated at 106m³/ day whereas the expected AADD relative to the proposed development is 488m³/day. Upgrading of the entire bulk water supply system is required. Proposed water supply recommendations include;  • Construction of a new 25l/s canal pump station with a duty and standby pump.  • New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.  • Water Treatment Works to be re-allocated to proposed site and upgraded to deliver 24m³/h potable water to the potable storage reservoirs.  • A new 848m³ sectional steel reservoir in the proposed site.  • One (1) new 355m³ sectional steel pressure tower on the highest point in the village.  • A new 52l/s lifting pump station at the treatment works.  • A new 250mm pipeline between the lifting pump station and the pressure tower.
		Medical The clinic is in Groblershoop which is around 8km from the township. Most of the residents of the Township do not have vehicles and there are also not regular trips to town via taxis. The people then must walk to the clinic. Medical service currently does not exist in the Township, and I cannot foresee that n clinic will be stationed in the township, within the near future. (Areas outside Groblershoop, like Wegdraai and Boegoeberg, do not have sufficient medical care, and they have so-called clinics)	Noted. Please refer to Appendix 3E.28
		School At the moment the nearest school is around 3km far. Most of the children walk to school and is a big concern for the vehicle drivers, as they use the same road to walk to and from school which the vehicles use. The school is already full and if more children attend the school then new classrooms needs to be build.	Noted. Two (2) Institutional Zone I land use units have been applied for (Appendix 2D). Institutional Zone I includes places of instruction / education.

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		Theft We live and farm about 3km from the township. When the crops are almost ready for harvest, people stealing the crops are a real concern. Crops include grapes, pecan nuts, maize, Lucerne etc. Sheep farming is extremely high risk as people take the sheep out of a secure location and slaughter the animal for his own purpose. Sometimes even the people that are working with us, they get death threats if they try to stop the stealing of the crops. Most of the people that do work, work on the farms as general workers. If people steal the crops, then eventually there will not be any work for the people that want to work which just creates an more negative cycle. Stealing of poles inside the vineyard is also a big concern. The people come and steal the poles which are used for the vineyard. They use the poles to build their houses. All vacant houses on the Opwag road have been demolished, for building parts in the township.	Noted. Please refer to Appendix 3E.28. Moreover, 23 x Open Space II units (public open space to be utilized by the public as an open space, park, garden, playground, or recreational sites) have been proposed. This may include opportunities for small-scale gardening which can be fenced off.
		Here is already not enough work for the people staying in this township, with even more houses and occupancy the problem of theft will only escalate.	Noted, employment opportunities should be created during the construction phase. Moreover, <b>10 x Business Zone I units</b> : business building / premises which will be used as shops and/or offices (e.g. professional offices, places of assembly, doctors consulting rooms) have been proposed as per Appendix 2D – presenting potential employment opportunities during the Operational Phase.
		Safety As previously mentioned, stealing of the crops and poles, but also the safety of general workers living and working on the farm premises are a concern. Homeowners are also making sure that their security around their premises is right.	Noted. Please see responses above.
		!Kheis Municipality This township will resort under this municipality. We as farm is busy for the last 8 years to try and buy erven in town for our workers for the day they retire. The municipality have appointment more than one consultancy to help them to do the sub-division of this land. This process has not been finished. We also do not get any regular bills as a farm community from the municipality. I can send proof of both these statements. My concern is, how the municipality that is already under constrain and cannot deliver basic services in there current surrounding,	Noted. Existing and future services (relative to water supply, sewage management, solid waste management, roads, electricity supply, and stormwater management) have been included, and recommendations made, in the Engineer's Services Report (Appendix 4B).  As part of the !Kheis Local Municipality's strategy to eradicate poverty and service backlogs within the Municipality, a funding proposal was submitted to the Department of Cooperative Governance, Human

	Comment Date,		Decrease from EAD/Applicant/Chasicalist/Drainet Manager
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140.	Organisation/I&AP	Comment	comment on the draft EIR.
	Organisationnazi	Last month we had to lend them a tipper so they can remove the house-rubbish. Up to this stage, we do not even have a fenced rubbish-hole in town, because the costs are too high. For this development so far from town, they will need to set up a second rubbish-hole. So how will a development of this extend be funded? My parents stay in town, and sometimes they need to wait for weeks for sewerage-removal, again, how will this municipality be able to service and development of this extend so far from town. My question, then, how did they appoint a new consultancy to start this development, if they do not have money to cover basic services, and current town-expansions.	Settlements and Traditional Affairs (GOGHSTA) for town planning and servicing of the proposed development. As per the SPLUMA Report (Appendix 4A), funding for recommended services can be applied for through the Municipal Infrastructure Grant (MIG) and Regional Bulk Infrastructure Grant (RBIG), whereas funding for repair work (for the nonfunctioning wastewater treatment works) can be applied for through the Water and Sanitation Grant (WSIG).
		The people currently staying in this township, are extremely excited about this development, because they have been promised that they will get free of charge new brick homes, with this new expansion. Some of our workers, staying in this township has stopped building their current houses, because they will get a brick house from the developers.	Noted.
		We also want to register as an interested and affected party to this development.	Please note that you have been registered as an I&AP.
	Date: 26/06/2020 Format: Email Letter I&AP: Elize Joseph (060 673 5261)	Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon. Kontak my asseblief in die vervolg op my selfoon.	Respondent: EAP  Noted, you have been registered as an I&AP.
3		Ek wil graag die volgende punte onder julle aandag bring:	
		Hiermee verklaar ek Elize Joseph dat ek bevoreg is dat hier nog weer velle hyse bevoer reg is in Opwag om te bou word ek gee die toe stemming.	
4	Date: 26/06/2020 Format: Email Letter I&AP: Jo-Anne Joseph (063 421 9594)	Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon.	Respondent: EAP
		Kontak my asseblief in die vervolg op my selfoon.  Ek wil graag die volgende punte onder julle aandag bring: Hiermee verklaar ek Jo-Anne Joseph dat ek geen swaar het oor hyse of enige iets het nie, maar ons het regtig n behoefte dat Uitkoms Zuma Valley moet vele meer huise moet kry want ons is almal familie hier. As ons moet bousteens moet kry is ons bevoorreg. Dankie.	Noted, you have been registered as an I&AP.  Noted. The proposed Opwag Development consists of approximately 730 erven for development (please refer to Appendix 2D).

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5	Date: 26/06/2020 Format: Email Letter I&AP: Suzy Leani Niewoudt (060 673 5261)	Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon. Kontak my asseblief in die vervolg op my selfoon.  Ek wil graag die volgende punte onder julle aandag bring:  Hiermee verklaar ek Suzy Nieuwoudt dat hier meer velle hyse moet kom sodat ons in ag kan neem volgens ons om gewing dat ons n beter toekoms in ons omgewing kan he volgens klinieke sped teryne vir ons kiners env.	Respondent: EAP  Noted, you have been registered as an I&AP.  Noted. Please refer to Appendix 3E.28. Moreover, 23 x Open Space II units (public open space to be utilized by the public as an open space, park, garden, playground, or recreational sites) have been proposed (Appendix 2D).
6	Date: 26/06/2020 Format: Email Letter I&AP: Rebekka Boer (073 857 0895)	Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon. Kontak my asseblief in die vervolg op my selfoon.  Ek wil graag die volgende punte onder julle aandag bring:	Respondent: EAP  Noted, you have been registered as an I&AP.  Please refer to Appendix 4B for information on electricity supply.
7	Benoidig beligting vir strate ligpalle.  Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon. Kontak my asseblief in die vervolg op my selfoon.  Ek wil graag die volgende punte onder julle aandag bring:  (1) Dat hier nog baie huise is wat nie toilete het nie en veroosak dat meer as een huis gesin dieselfde toilet gebruik wat n gesondheids wisiko is.		Respondent: EAP  Noted, you have been registered as an I&AP.  (1) Noted. As per the Engineer's Services Report (Appendix 4B), houses in the existing Opwag Settlement currently consist of Pour Toilets with a Leach Pit. There is no sewer bulk infrastructure which is recommended by the Engineer's as per the Engineer's Services Report as the total, expected sewer flow would be 365 000l/day. Recommended sewage infrastructure as per the Engineer's Services Report for the proposed development includes;  Construction of a new 25l/s canal pump station with a duty and standby pump.  New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.

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		(2) Kanaal opblok wat aaneenlopede water toevoer voorsien aan buurt wanner kanaal staan	(2) Water supply, required to service the proposed development, have been recommended by the Engineer and included in the Engineer's Services Report. Mitigation measures, to avoid / reduce impacts on the canal have been included in the Draft EMPr and must be complied with during the construction and operational phases of the proposed development.
			Respondent: EAP
		Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon. Kontak my asseblief in die vervolg op my selfoon.	Noted, you have been registered as an I&AP.
	Data: 20/00/2020	Ek wil graag die volgende punte onder julle aandag bring:	Noted, please see responses below addressing the following;  1. Water supply
8	Date: 26/06/2020 Format: Email Letter I&AP: Stoffel Eksteen (106 Witblok)	Tekort aan water, huise met toilets en lopende krane by elke huis soek ook ons kaart en transport van ons huise. Uitkoms se mense sien ons nie as bejaardes nie. As die bejaardes voucers kry kry ons in die witblok nie. Onse weet nie eers hoe om vir Johannes van der Merwe te bedank vir water wat hy vir ons vernuut gee nie. Motor wat baie lelik deur die straat ook ry dis nie mooi nie ons se kinders. ASB Dankie.	<ul> <li>Existing Average Annual Daily Demand (AADD) was calculated at 106m³/ day whereas the expected AADD relative to the proposed development is 488m³/day. Upgrading of the entire bulk water supply system is required. The recommended upgrades, as per the Engineer's Services Report (Appendix 4B) includes;</li> <li>Construction of a new 25l/s canal pump station with a duty and standby pump.</li> <li>New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.</li> </ul>

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		<ul> <li>2. Sewage management Houses in the existing Opwag Settlement currently consist of Pour Toilets with a Leach Pit. There is no sewer bulk infrastructure which is recommended by the Engineer's as per the Engineer's Services Report (Appendix 4B) as the total, expected sewer flow would be 365 000l/day. Proposed upgrades include; <ul> <li>Construction of a new 25l/s canal pump station with a duty and standby pump.</li> <li>New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.</li> <li>Water Treatment Works to be re-allocated to proposed site and upgraded to deliver 24m3/h potable water to the potable storage reservoirs.</li> <li>A new 848m³ sectional steel reservoir in the proposed site.</li> <li>One (1) new 355 m³ sectional steel pressure tower on the highest point in the village.</li> <li>A new 52l/s lifting pump station at the treatment works.</li> <li>A new 250mm pipeline between the lifting pump station and the pressure tower.</li> </ul> </li> <li>Road safety <ul> <li>Access to the development will be from the existing Residential Collector Streets (Class 4b). As per the Engineer's Services Report, no problems are foreseen regarding roads and access. Mitigation measures regarding</li> </ul> </li> </ul>

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			construction and operation have been included in the Draft EMPr (Appendix H).
		Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon. Kontak my asseblief in die vervolg op my selfoon.	Respondent: EAP  Noted, you have been registered as an I&AP.
9	Date: 26/06/2020 Format: Email Letter I&AP: Katriena Tieties (106 Witblok)	Ek wil graag die volgende punte onder julle aandag bring:  Ek wil ook he Keis moet ons kaart en transpoort gee. Huise in die Uitkoms kom bou en gereelde water wat loop met buite kranne. Die soed wat die motors deur die witblok ry op die pad is on aanvaar baar ons kinder in die paaie. Sentrums bou wat kinder naweke weg van dronk en dwelems af hou. Dankie.	Noted. Please see response above (Comment No. 8). Moreover, please refer to the preferred design layout (Appendix 2D). Although not yet confirmed, these land uses may incorporate activities for children.
10	Date: 26/06/2020 Format: Email Letter I&AP: Willem Eksteen (104 Witblok)	Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon. Kontak my asseblief in die vervolg op my selfoon.  Ek wil graag die volgende punte onder julle aandag bring:  Soek die huise se kaart and transpoort. Behuising met toilete en lopende water met elke huis se buite krane. Sentrums met buite mier se aktieviteite wat kinders weg van dwelems en dronk hou. Vervoer vir die kinder wat met die voet loop. Dankie.	Respondent: EAP  Noted, you have been registered as an I&AP.  Noted. Please see response for Comment No. 8 above. Moreover, please refer to the preferred design layout (Appendix 2D). Although not yet confirmed, these land uses may incorporate activities for children.
11	Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon. Kontak my asseblief in die vervolg op my selfoon.  Ek wil graag die volgende punte onder julle aandag bring:  Ek wil graag die volgende punte onder julle aandag bring:  - Krag sowel as water en toilets - Vervoer vir kinders wat met voet loop Kerke en sportgeleenhede - Werkskepping vir werklose persone - Saamstemming van mense om - Misdaad en dwelms hok teslaan		Respondent: EAP  Noted, you have been registered as an I&AP.  Noted. As per the Engineer's Services Report, please see response below regarding:  Electricity supply: The existing feeder can easily handle the future additional 876 kVA load only after the upgraded Eskom Opwag sub-station is brought online as indicated by Eskom's network planning department. The internal

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			electrical network extension in the Opwag community will only be done by Eskom after the formulation processes are completed as this area falls under the Eskom Distribution.
			<ul> <li>Water and Sanitation:         <ul> <li>Existing Average Annual Daily Demand (AADD) was calculated at 106m³/ day whereas the expected AADD relative to the proposed development is 488m³/day. Upgrading of the entire bulk water supply system is required. The recommended upgrades, as per the Engineer's Services Report (Appendix 4B), includes;</li> <li>Construction of a new 25l/s canal pump station with a duty and standby pump.</li> <li>New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.</li> <li>Water Treatment Works to be re-allocated to proposed site and upgraded to deliver 24m³/h potable water to the potable storage reservoirs.</li> <li>A new 848m³ sectional steel reservoir in the proposed site.</li> <li>One (1) new 355m³ sectional steel pressure tower on the highest point in the village.</li> <li>A new 52l/s lifting pump station at the treatment works.</li> <li>A new 250mm pipeline between the lifting pump station and the pressure tower.</li> </ul> </li> </ul>
			Houses in the existing Opwag Settlement currently consist of Pour Toilets with a Leach Pit. There is no sewer bulk infrastructure which is recommended by the Engineer's as per the Engineer's Services Report (Appendix 4B) as the total, expected sewer flow would be 365 000l/day. Proposed upgrades, as per the recommendations of the Engineer, include;  • Construction of a new 25l/s canal pump station with a duty and standby pump.  • New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.

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			<ul> <li>Churches and Sports events: As per the Preferred Design Layout (Appendix 2D), the proposed zoning land uses include; <ul> <li>2 x Institutional Zone I units: Place of Instruction / Education</li> <li>4 x Institutional Zone II units: place of worship (e.g. places for practising religion);</li> <li>23 x Open Space II units: public open space to be utilized by the public as an open space, park, garden, playground, or recreational site;</li> <li>These zoning land use units are in line with the proposed comment raised.</li> </ul> </li> </ul>
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12	Format: Email Letter I&AP: Willem Eksteen (060 845 1213) (105 Witblok)	<ul> <li>Keis moet asb n plan maak so gou as moontlik om witblok se mense se huise se kaar en transpoort te gee</li> <li>Is enige uitbreidings in Uitkoms plaasvind bv kraag toe is witblok nie deel van die plan van Uitkoms nie. Ons wil weet, want ons wil vergadring hou.</li> <li>Keis het van die begin van 2020 nooit meer water gesorg vir witblok want die werkers wat by Kies werk se witblok is nie deel van Uitkoms nie. Hulle se waar die inwoners werk moet vir hulle vir water sorg.</li> </ul>	Noted. This project is for the proposed development of the Opwag Housing Development, located adjacent to the existing Opwag (Uitkoms) Settlement. As such, recommendations regarding services of the proposed development are detailed in the Engineer's Services Report (Appendix 4B).

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13	Date: 26/06/2020 Format: Email Letter I&AP: Elsie Steenkamp (107 Witblok)	Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon. Kontak my asseblief in die vervolg op my selfoon.  Ek wil graag die volgende punte onder julle aandag bring:  - Water en toilet by Witblok - Vervoer vir die kinders wat met die voet skool toe gaan Werkskepping vir die wat werklosos is - Kliniek vir die wat nie geld het om taxi te ry nie - Sentrum vir jongmense om naweke besig te wees sodat misdaad bekamp kan word.	Respondent: EAP  Noted, you have been registered as an I&AP.  Noted. Please refer to response to Comment No. 11. Moreover, please refer to the preferred design layout (Appendix 2D). As per the SPLUMA Application (Appendix 4A), the erven are broken down as follows:  • 731 x Residential Zone I units: dwelling house/ residential house containing one residential unit - a self-contained interlinking group of rooms for the accommodation and housing of a single family, or a maximum of four persons;  • 10 x Business Zone I units: business building / premises which will be used as shops and/or offices (e.g. professional offices, places of assembly, doctors consulting rooms);  • 2 x Institutional Zone I units: Place of Instruction / Education  • 4 x Institutional Zone II units: place of worship (e.g. places for practising religion);  • 23 x Open Space II units: public open space to be utilized by the public as an open space, park, garden, playground, or recreational site;  • 1 x Transport Zone I unit: public street reserved for street purposes and includes facilities for public transport;  • 1 x Authority Zone I unit: land/ erven and buildings utilized by local and district municipality to carry out mandatory functions.  Although not yet confirmed, these land uses (e.g. Open Space II units) may incorporate activities for children.
14	Date: 26/06/2020 Format: Email Letter I&AP: Anna Steenkamp (109 Witblok)	Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon. Kontak my asseblief in die vervolg op my selfoon.  Ek wil graag die volgende punte onder julle aandag bring:	Respondent: EAP  Noted, you have been registered as an I&AP.

No.	Comment Date, Comment Format, Organisation/I&AP	Comment	Response from EAP/Applicant/Specialist/Project Manager Please note: All registered I&APs will be given the opportunity to comment on the draft EIR.
		<ul> <li>Krag by ons se huise</li> <li>Water en spoel toilets</li> <li>Skool tot en met graad 9 aanbou</li> <li>Steenhuise bou en werkskeping vir mense wat werkloos is</li> <li>Strate teer en netjies maak</li> <li>Vervoer vir kinders vir skool, want die kinders verdrink</li> <li>Ek gaan dit baie waardeel. Dankie. Dankie Dankie.</li> </ul>	Noted. Please refer to response to Comment No. 11.  Electricity supply: The existing feeder can easily handle the future additional 876 kVA load only after the upgraded Eskom Opwag sub-station is brought online as indicated by Eskom's network planning department. The internal electrical network extension in the Opwag community will only be done by Eskom after the formulation processes are completed as this area falls under the Eskom Distribution.
			<ul> <li>Water and Sanitation: Existing Average Annual Daily Demand (AADD) was calculated at 106m³/ day whereas the expected AADD relative to the proposed development is 488m³/day. Upgrading of the entire bulk water supply system is required. The recommended upgrades, as per the Engineer's Services Report (Appendix 4B), includes;</li> <li>Construction of a new 25l/s canal pump station with a duty and standby pump.</li> <li>New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.</li> <li>Water Treatment Works to be re-allocated to proposed site and upgraded to deliver 24m³/h potable water to the potable storage reservoirs.</li> <li>A new 848m³ sectional steel reservoir in the proposed site.</li> <li>One (1) new 355m³ sectional steel pressure tower on the highest point in the village.</li> <li>A new 52l/s lifting pump station at the treatment works.</li> <li>A new 250mm pipeline between the lifting pump station and the pressure tower.</li> </ul>
			Houses in the existing Opwag Settlement currently consist of Pour Toilets with a Leach Pit. There is no sewer bulk infrastructure which is recommended by the Engineer's as per the Engineer's Services Report

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			<ul> <li>(Appendix 4B) as the total, expected sewer flow would be 365 000l/day. Proposed upgrades, as per the recommendations of the Engineer, include;</li> <li>Construction of a new 25l/s canal pump station with a duty and standby pump.</li> <li>New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.</li> <li>Water Treatment Works to be re-allocated to proposed site and upgraded to deliver 24m3/h potable water to the potable storage reservoirs.</li> <li>A new 848m³ sectional steel reservoir in the proposed site.</li> <li>One (1) new 355 m³ sectional steel pressure tower on the highest point in the village.</li> <li>A new 52l/s lifting pump station at the treatment works.</li> <li>A new 250mm pipeline between the lifting pump station and the pressure tower.</li> <li>Schooling: As per the SPLUMA Application, land use zoning 2 x Institutional Zone I units are proposed. Institutional Zoning I includes places of Instruction / Education.</li> <li>Employment opportunities: Should be created during the construction phase. Moreover, 10 x Business Zone I units: business building / premises which will be used as shops and/or offices (e.g. professional offices, places of assembly, doctors consulting rooms) have been proposed as per Appendix 2D – presenting potential employment opportunities during the Operational Phase.</li> </ul>
15	Date: 26/06/2020 Format: Email Letter I&AP: Els Eksteen (079 122 0311)	Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon. Kontak my asseblief in die vervolg op my selfoon.  Ek wil graag die volgende punte onder julle aandag bring:	Respondent: EAP  Noted, you have been registered as an I&AP.

No.	Comment Date, Comment Format, Organisation/I&AP	Comment	Response from EAP/Applicant/Specialist/Project Manager Please note: All registered I&APs will be given the opportunity to comment on the draft EIR.
		Water en krag en toilets  Gaan die waardeer as Keis ons witblok se mense wat hier bly ons kaart en transpoort kan gee sodat ons n voet kan het waar op ons kan staan.  Sentrums bou wat on sgemeenskap naweke kan besig hou en weg hou van dwelems grebruik.  Vervoer vir ons uitsig skool se kinder wat met die voet staap skool toe. Dankie.	<ul> <li>Noted. Please refer to Comment No. 14. Moreover, as per the SPLUMA Application, it is proposed that</li> <li>2 x Institutional Zone I units: Place of Instruction / Education</li> <li>4 x Institutional Zone II units: place of worship (e.g. places for practising religion);</li> <li>23 x Open Space II units: public open space to be utilized by the public as an open space, park, garden, playground, or recreational site;</li> <li>These zoning land use units are in line with the proposed comment raised regarding potential centres for the community to keep busy over the weekends.</li> </ul>
16	Date: 26/06/2020 Format: Email Letter I&AP: Dexter Eksteen (082 216 7378)	Ek wil graag met hierdie brief registreer om verdere nuus van hierdie ontwikkeling to ontvang, en om verdere vergaderings te kan bywoon. Kontak my asseblief in die vervolg op my selfoon.  Ek wil graag die volgende punte onder julle aandag bring:  - Steen huise met badkamers - Loopende krane - Die skool tot met graad 9 aanbou - Kerke bou in Uitkoms wat elke Sondag gebruik word Vervoer vir die skoolkinders wat skool toe staap met die voet - Sentrum wat kinders besig ou naweke wat kinders weghou van dwelems en alkohol.  Asb. Dankie.	Respondent: EAP  Noted, you have been registered as an I&AP.  Noted. Please refer to responses to Comment No. 14 and Comment No. 15.
17	Date: 27/06/2020 Format: Email Letter I&AP: Lentelie Fourie (lentelie.fourie@gmail.c om) (082 703 1015)	We have received a publication regarding the proposed project for extending the current housing in this location with a further 730 low income erven.  We live just across the Uitkoms Township and are there on a daily basis. I do work with the Children in the township during holiday times and we have started a soup kitchen in this area.	Respondent: EAP  Noted. Thank you for the information.

Na	Comment Date,	Commont	Response from EAP/Applicant/Specialist/Project Manager
No.	Comment Format, Organisation/I&AP	Comment	Please note: All registered I&APs will be given the opportunity to comment on the draft EIR.
	<b>3</b>	We are very positive regarding the upliftment of the town as it is.	Noted.
		We are aware of unhappiness regarding the start of this project, there have been a lot of misinformation doing the rounds in Uitkoms.  1. Someone told the people they will receive brick houses.	Noted. The !Kheis Local Municipality has been made aware of this issue.
		2. Someone informed all, not to sign any paper and not to register as an affected party because their land will be taken away from them. Regarding this, I feel it is the project managers duty to inform ALL members from Uitkoms of a meeting to properly inform all living there, what will happen and why/how they should register as an affected party. A lot of people cannot read English.	2. Noted. The aim of the public participation process is to inform as many potential interested and affected parties regarding the proposed development as possible and respond to any comments which the I&APs have. Once registered, the Registered I&APs are notified about the availability of reports for comments and any additional information received.
		The Schools for the children are between 3-12km far on a very bad tar road. In this township I know of 2 people that own vehicles and they rarely use them, because of the bad road and because of no maintenance shops/companies nearby and cost of maintenance on this bad road. With the development of Uitkoms, new schools should be built with the capacity to give education to ALL the children, because the current school capacity will not be able to help, they are already on full capacity.	Noted. Where possible, communication with I&AP in Afrikaans can be requested by the I&AP. Please note that only reports, written in English, are accepted by the Department of Environment: Nature Conservation (DENC). Therefore, responses to comments raised by I&APs must be addressed in English. Please note that Roads have been addressed in the SPLUMA Application (Appendix 4A) and the Engineer's Services Report (Appendix 4B). As per the SPLUMA Application, land use zoning 2 x Institutional Zone I units are proposed. Institutional Zoning I includes places of Instruction / Education.
		We would also like to emphasize water availability. Our friends are struggling with water, for many years now. They borrow water tanks from the nearby farmers to provide water for their families, there is no help from the !Kheis municipality regarding water provision for the people of Uitkoms. They have also been struggling with toilets.	Noted. Existing Average Annual Daily Demand (AADD) was calculated at 106m³/ day whereas the expected AADD relative to the proposed development is 488m³/day. Upgrading of the entire bulk water supply system was recommended by the Engineer (Appendix 4B). The recommended upgrades, as per the Engineer's Services Report, includes;  • Construction of a new 25l/s canal pump station with a duty and standby pump.
			New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.

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			<ul> <li>Water Treatment Works to be re-allocated to proposed site and upgraded to deliver 24m³/h potable water to the potable storage reservoirs.</li> <li>A new 848m³ sectional steel reservoir in the proposed site.</li> <li>One (1) new 355m³ sectional steel pressure tower on the highest point in the village.</li> <li>A new 52l/s lifting pump station at the treatment works.</li> <li>A new 250mm pipeline between the lifting pump station and the pressure tower.</li> </ul>
			With regards to sewage management, houses in the existing Opwag Settlement currently consist of Pour Toilets with a Leach Pit. There is no sewer bulk infrastructure which is recommended by the Engineer's as per the Engineer's Services Report (Appendix 4B) as the total, expected sewer flow would be 365 000l/day. Proposed upgrades, as per the recommendations of the Engineer, include;  Construction of a new 25l/s canal pump station with a duty and standby pump.  New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.  Water Treatment Works to be re-allocated to proposed site and upgraded to deliver 24m3/h potable water to the potable storage
			<ul> <li>reservoirs.</li> <li>A new 848m³ sectional steel reservoir in the proposed site.</li> <li>One (1) new 355 m³ sectional steel pressure tower on the highest point in the village.</li> <li>A new 52l/s lifting pump station at the treatment works.</li> <li>A new 250mm pipeline between the lifting pump station and the pressure tower.</li> </ul>
		My concern is with little work opportunities as in our current situation, to open housing here, we would like to add that there should also then, be made provision for work opportunities? There are no big towns nearby,	Employment opportunities: Should be created during the construction phase. Moreover, 10 x Business Zone I units: business building / premises which will be used

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	Organisation/IdA	this also means, many people would be given a piece of land, but they would have nowhere to go to sustain themselves here in the middle of nowhere.	as shops and/or offices (e.g. professional offices, places of assembly, doctors consulting rooms) have been proposed as per Appendix 2D – presenting potential employment opportunities during the Operational Phase.
		The clinic is in Groblershoop which is far from township. Most residents do not have vehicles. Those with vehicles charge R100 a trip to town and back for a 20km journey. This will kill the economic wellfare of the people. Most people walk to clinic, most suffer because of that great distance, but they have no choice.	Noted. The preferred layout includes the provision of 1 x Transport Zone I unit - public street reserved for street purposes and includes facilities for public transport. This may provide more accessible and efficient transport opportunities.
		BeAs previously mentioned, stealing of the crops and poles, but also the safety of general workers living and working on the farm premises are a concern. Homeowners are also making sure that their security around their premises is right.	Noted. Please refer to response from the Municipality (appended as Appendix 3E.28).
		We also want to register as an interested and affected party to this development.	Noted. You have been registered as an I&AP.
		Thank you for your reply on this letter, so that we can know that you have received the letter and that we are registered?  Regards	Thank you for your comment. Please see responses to your comments above.
		Lentelie Fourie 8508100004088	
		(I will also copy 3 letters from my community friends that do not have email or data available. The live in UITKOMS.	
	Date: 27/06/2020	Hiermee meld ek aan en wil asseblief deel wees van die ontwikkeling en besprekings asook vergaderings wat gehou gaan word rakende die ontwikkeling in Uitkoms te Groblershoop.	Respondent: EAP
18	Format: Email Letter I&AP: Mieta Jacqueline Block (078 058 4838)	Hiermee is ek instaat en gee ek die toestemming. Dat ek wil deel wees van die uitbrieding en vergaderings van Uitkoms. En dan voeg ek by vir meer huise en toilets en meerwater.	Noted. Please refer to responses to Comment No. 11 and Appendix 4B (Engineer's Services Report) regarding recommended services for the proposed Opwag Housing Development.

	Comment Date,		Response from EAP/Applicant/Specialist/Project Manager
No.	Comment Format,	Comment	Please note: All registered I&APs will be given the opportunity to
110.	Organisation/I&AP		comment on the draft EIR.
19	Date: 27/06/2020 Format: Email Letter I&AP: Mietjie Vries (078 058 4838)	Hiermee meld ek aan en wil asseblief deel wees van die ontwikkeling en besprekings asook vergaderings wat gehou gaan word rakende die ontwikkeling in Uitkoms te Groblershoop.  Hiermee stem ek saam dat daar n ontwikkeling in ons gemeenskap plassvind. Dit sal groot verandering maak. Ek will deel wees van die uitbereinding van Uitkoms vir kliniek, kerke en water.	Respondent: EAP  Noted, you have been registered as an I&AP. Please note that as a Registered I&AP you will be notified about the availability of the Draft EIR and opportunity to comment.
20	Date: 27/06/2020 Format: Email Letter	Hiermee meld ek aan en wil asseblief deel wees van die ontwikkeling en besprekings asook vergaderings wat gehou gaan word rakende die ontwikkeling in Uitkoms te Groblershoop.	Respondent: EAP
20	<b>I&amp;AP:</b> Melony Lucklick (076 779 9182)	Hiermee stem ek Melony Lucklick saam dat daar meer ontwikkeling is in Uitkoms en lopende water. Ek verwag dat daar groot verandering plassvind. Ek wil deel wees van die uitbruidings en vergaarderings.	Noted with thanks. As a registered I&AP you will be notified of the release of reports for comment. Please refer to response to Comment No. 11 above regarding services (water and sanitation) recommended by the Engineer as per the Engineer's Services Report (Appendix 4B).
21	Date: 01/06/2020 Format: Email Letter I&AP: CG Buys (076 887 8284)	I live on plot 538, Wegdraai, just down the road towards Wegdraai from Opwag. My wife and I are both teachers at the schools in Groblershoop.  I am grateful for the concern to develop land for people to have their own place to live.	Respondent: EAP  Noted, thank you for your comment.
		<ul> <li>However, I am concerned with the quality of life in specifically the area where you plan the development, for the following reasons:</li> <li>The farming community around Uitkoms already do not provide enough job opportunities for the people living in Uitkoms. It just doesn't make sense to develop land without the prospects of jobs.</li> </ul>	Noted. Noted, employment opportunities should be created during the construction phase. Moreover, <b>10 x Business Zone I units</b> [business building / premises which will be used as shops and/or offices (e.g. professional offices, places of assembly, doctors consulting rooms)] have been proposed as per the preferred design layout (Appendix 2D) – presenting potential employment opportunities during the Operational Phase.
		<ul> <li>If people living there find jobs elsewhere, transport is a problem.         A gravel road serves the community to town which makes transport difficult for ordinary taxis. At the moment the community is served by private bakkies, because taxis do not want to travel on the gravel road.     </li> </ul>	The preferred layout includes the provision of 1 x Transport Zone I unit - public street reserved for street purposes and includes facilities for public transport. This may provide more accessible and efficient transport opportunities.

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		Where unemployment thrives, theft, burglaries and many other socio economic problems arise. Is that what we want to create? Surely we want to ensure that communities are developed in areas where there are potential for job opportunities, etc.  As teachers, my wife and I wish for the development of our area, but in a responsible way, keeping factors that can be detrimental to the long term wellbeing of all stakeholders in mind. Since you do not live here, I hope you listen to all parties involved that make a life and living here.	Noted. Please refer to response from the !Kheis Local Municipality (Appendix 3E.28). Please refer to response above regarding potential employment opportunities related to the proposed development.  Noted. Please note that as Registered I&APs, you will be notified regarding the availability of the Draft Environmental Impact Report (EIR) for comment. Thank you for your relevant input and comments raised. This application for Environmental Authorisation is in line with the National Environmental Management Act (NEMA). Proposed mitigation measures, and recommendations provided by Specialists (Appendix 6A-D) have been included in the Draft EMPr and must be complied with.
22	Date: 21/05/2020 Format: Email Letter I&AP: Deon Rossouw (0798816459) (drossouw7@gmail.com )	I am a plot owner next to Plot 2642, Opwag Groblershoop, and received and Nema PPR information letter yesterday.  I would like to register as and Interested and Effected party, since I lay right next to the above mentioned Plot.  My details are: Stands 584, 585, 2067,porion 27 and 1621. The owner is my wife Wanda Rossouw My telephone number is 079 8816 459.  Can you please sent me all relative info?  Regards, Deon Rossouw	Respondent: EAP  Noted. You have been registered as an I&AP.  Noted. As a Registered I&AP, you will be notified regarding the availability of the Draft Environmental Impact Report (EIR) for comment. Thank you for your relevant input and comments raised.
23	Date: 29 <sup>th</sup> June 2020 Format: Email Letter I&AP: Maryna Heese	We Daniel, Friedrich Johan Heese of ID 5804195040084 and Maryna Heese of ID 5910030127083 owners of Lot 586 and 1464, part of Lot 1028 of the Boegoeberg Settlement, would like to register as Interested &Affected Parties regarding the proposed Township Development.  We would like to affirm our personal and financial interest in the development.	Respondent: EAP  Noted. You have been registered as an I&AP.

No.	Comment Date, Comment Format, Organisation/I&AP	Comment	Response from EAP/Applicant/Specialist/Project Manager Please note: All registered I&APs will be given the opportunity to comment on the draft EIR.
		Kindly contact us on the following e-mail addresses: <u>marynaheese@gmail.com</u> and <u>dh58zar@gmail.com</u> . This is our preferred avenue of communication.	Noted. As a Registered I&AP, you will be notified regarding the availability of the Draft Environmental Impact Report (EIR) for comment. Thank you for your relevant input and comments raised.
		As Interested and Affected individuals we like to comment on the new Township referenced above.	Respondent: EAP
		Your company name allowed me to have hope that behind this new development we might find a group of people that earnestly are interested in developing a sustainable environment. The words in quotation marks come from a study of the use of earth-pipes to cool air.	Noted with thanks. This application for Environmental Authorisation is in line with the National Environmental Management Act (NEMA). Mitigation measures have been included in the Draft EIR and Draft EMPr.
		"Rational use of energy and power is a key to the economic development of human society and to achieve sustainable environment." <a href="https://www.sciencedirect.com/science/article/pii/S1876610214032664">https://www.sciencedirect.com/science/article/pii/S1876610214032664</a>	
24		Some areas for consideration is cooling and heating of houses in an area known for very hot summers and very cold winters. If the energy exerted in digging trenches for pipes, that will form part of the water reticulation infrastructure can double up for eco-friendly earth cooling and heating systems as explained in the above link, it can be a worthwhile economic model. I am hoping that an overarching management function will form part of the project and that all these elements of development can be coordinated, overseen and all opportunities to incorporate cost-effective and ecologically sustainable solutions utilized. For example, when the foundations for homes are being dug, the alternative cooling systems installed. Boegoeberg development can become a pilot project for arid community development.	Noted. Please refer to Engineering Services Report (Appendix 4B) and Draft EIR.
		Parks, Sport and recreational space, bigger plots and proper roads are some other concerns. I do not have any experience in the above, but do have experience in waterless sanitation options. I have compiled some thoughts, experience from others and links pertaining to waterless sanitation for your consideration.	Noted. Please refer to Engineering Services Report (Appendix 4B) and Draft EIR.
		Do forgive me if the sanitation document is far too simplistic or lay-men orientated, but I have no idea who will read this letter and the document.	Noted. Thank you for your comments.

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		Interested and Affected Individuals, from lot 586/and 1464 that from part of lot 1018, as part of the Boegoeberg Community, one of the closest lots to the new proposed Township.	
		Kind regards Daniel and Maryna Heese	
	-	Regarded members of the Municipality,	Respondent: EAP
		Re. Toilets  I would like to share some thoughts with you regarding the proposed new development.	
25		1. TOILETS. We live in a water-scarce country and the water-sources needed to have flush toilets is simply not sustainable in the long run. I have been involved with a KZN NGO in a deep rural area of South-Africa in the Umkhanyakude District. We also have severe water challenges. We in collaboration with Oxfam Australia experimented with alternatives to Flush toilets and Long-Drop Pit latrines. That was my first introduction in waterless technology. We tested two models, one a commercial self-contained unit from Enviro-loo (pictured below) that was costly and a combination of a urine-diversion seat with self-constructed chamber options. I am happy to share our limited experience with you, but highly recommend the far superior functioning model for thousands of people, that can be found with Durban Municipality (eThekwini Municipality). They had been busy with waterless sanitation technology for over 12 years. I have supplied links to websites that explain technically on various levels, the challenges faced with introduction, the success and the research done with various options. So I have pasted both the success and failures and the reason for the failures.	Noted with thanks. Please refer to the Engineer's Services Report (Appendix 4B) for existing and future services (water supply, sewage management, solid waste management, roads, electricity supply, and stormwater management) as recommended by the Engineer for the proposed Opwag Housing Development.
		<ul> <li>2. I will attempt to explain in layman's terms the principle behind different sanitation systems.</li> <li>• In pit latrines the urine and faeces are mixed and seepage into the groundwater a reality. Apart from its environmental danger, it is often times not accepted as an option and seen as an insult to a person's humanity. The aspiration of the average person is for a flush toilet as shown in some or the articles in the websites quoted.</li> </ul>	With regards to sewage management, houses in the existing Opwag Settlement currently consist of Pour Toilets with a Leach Pit. There is no sewer bulk infrastructure which is recommended by the Engineer's as per the Engineer's Services Report (Appendix 4B) as the total, expected sewer flow would be 365 000l/day. Proposed upgrades, as per the recommendations of the Engineer, include;

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		<ul> <li>Flush toilets in a water-scares country is not a long term solution in any community and all communities should re-consider the cost of using cleaned water to flush toilets.</li> <li>Ablution blocks for communal use of facilities is not an option. Most people would not feel safe to walk to a communal ablution at night and I personally feels that dealing with your own bodily waste and household waste makes us responsible humans.</li> <li>Urine separating systems. An extract from a document</li> <li>The UDDTs provide the following benefits: (1) waterless operation; (2) no odour when correctly used and maintained; (3) treated faecal matter is dry, odourless and less offensive; (4) does not attract flies or other vectors; (5) treated faecal matter is partially sanitised and safer to handle; (6) aboveground design or use of containers in belowground vaults makes emptying simple; (7) minimal risk of contamination of ground and surface water resources; (8) possibility of aboveground design facilitates construction in close proximity to or inside of the home adds security and convenience for users (Rieck et al. 2012). https://iwaponline.com/washdev/article/7/1/111/30518/Urine-diversion-dry-toilets-in-eThekwin</li> <li>URINE SEPERATING TOILETS. This is the system I would like to propose.</li> <li>Separating urine from faeces allows the faeces to dry out completely, killing pathogens (harmful micro-organisms) and make it manageable. The faeces dries like dog poop in the sun and become small and brittle and whitish. Because it is a waterless system, water is used for household and garden growing.</li> <li>There are various methods to separate urine and faeces to enter the</li> </ul>	<ul> <li>Construction of a new 25l/s canal pump station with a duty and standby pump.</li> <li>New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.</li> <li>Water Treatment Works to be re-allocated to proposed site and upgraded to deliver 24m3/h potable water to the potable storage reservoirs.</li> <li>A new 848m³ sectional steel reservoir in the proposed site.</li> <li>One (1) new 355 m³ sectional steel pressure tower on the highest point in the village.</li> <li>A new 52l/s lifting pump station at the treatment works.</li> <li>A new 250mm pipeline between the lifting pump station and the pressure tower.</li> <li>Thank you for your research conducted. It is greatly appreciated.</li> </ul>

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	o. gameanomen m	surfacea hard plastic sheet with holes at an angle, that allows the urine to seep through the holes into the bottom enclosed chamber, with a pipe that leads to a urine soak-away pit nearby. The faeces then dries out, needs to be raked to the back of the box from time to time and then the hard dry faeces needs to be collected after a year or more to be disposed of. The challenge with this system is that the holes can block and the angle is not steep enough for the faeces to slide down. They remain wetter longer and there is an extraction fan at the top of the chimney to eliminate most smells.  It needs a <b>full sun site</b> , additional <b>power for the extraction fan</b> and people living higher might still get a whiff from the extraction fans, but the biggest deterrent is possibly the <b>cost</b> , <b>it is more expensive</b> . It is the best application for schools and community halls as seen in the photo below. The two glass tops are for the urinals. It is a very good method of coping with the urine. The urine dries into crystals. https://www.greenloo.org/enviro-loo-urinal.php	
		2. URINE SEPERATION TWO CHAMBER SYSTEM	
		a. An attempt is made to separate urine from faeces before the faeces drops down the seat. It is important for the success and acceptance of the systems to buy white high quality urine separation pedestals/seats. As can be seen in the photo below the system can be incorporated into the bathroom. It is advised to incorporation of a urinal against the wall in the blue bathroom picture as well. The urine can be collected in the same container the seat urine is diverted to.	
		b. <b>Build a two chamber system</b> . Faeces are collected in one chamber until it is full, the seat is then removed and placed over the new empty chamber. The seal of the empty chamber is placed over the full chamber. The full chamber is left like it is until the second chamber is almost full. By now the faeces should be dried out. The dried out faeces is accessed through the sealed back wall and either disposed of or ground up and used as fertilizer in agricultural applications. The municipality can collect and dispose of the dried faeces.	

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		c. The selection of the site: It is vital for the optimal drying of the faeces that the back wall of the bathroom <b>unit face North</b> . To increase the absorption of the sun rays the back panel and the chimney should be painted black or be manufactured from hard black plastic. Place a mosquito net above the chimney. The bigger the chimney the greater the up draft and reduced smell.	
		d. The <b>urine can be diverted to a soak away, or a solar evaporation</b> site similar to the environ system or utilized in a diluted form in agriculture. It is important to be aware of the hesitance of local communities to use human waste in any form as part of a greater agricultural system and extensive community awareness activities should accompany such use.	
		e. By placing a <b>bucket of sand, ash or sawdust</b> next to the toilet with a little scoop, visual unpleasantness and smell will be further reduced. In addition, the material like ash or sand can accelerate the drying time.	
		f. Should flies find their way into the system, they would try to get out and the only light will be at the top of the chimney that is sealed with a mosquito net. The <b>flies will then fly up and down the chimney until they die</b> . It is highly unlikely if the seat remains closed.	
		In the image above the toilet stool is a porcelain seat, that can also stand on its own, going straight downward without the u-trap of standard toilet seats. To the right on the photo is a urinal, for the use of men, with an outlet that joins the urine caught with the separate division in the seat. This photo was sourced form	
		https://en.wikipedia.org/wiki/Urine-diverting_dry_toilet an example from Peru. This is what a urine separation seat can look like. The front chamber catches the urine and the dark blue is where the faeces drops down into the chamber. In this photograph there is a division that is not there. It is a pipe that have straight sides.	
		This is local, South-African manufactured urinals on the market. It is advisable that the pipes should take the shortest route out, but protected from sun and damage.	

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		Additional resources:  1.http://www.wrc.org.za/wpcontent/uploads/mdocs/Demonstrating%20N ew%20Sanitation%20Solutions%20through%20the%20Engineering%2 0Field%20Testing%20Platform%20in%20eThekwini.pdf  This is a very comprehensive study for waterless Sanitation options as done in eThekwini (DURBAN)  2. http://www.susana.org/_resources/documents/default/2-874technology-review-of-uddts-18-june-2013.pdf  A comprehensive document filled with options and diagnostic fault finding.  3. https://iwaponline.com/washdev/article/7/1/111/30518/Urinediversion-dry-toilets-in-eThekwini Introduction challenges faced in eThekweni (Durban)  4.http://ccaa.irisyorku.ca/2011/07/flushing-out-the-realities-of-urine-diversion-toilets-in-south-africa%E2%80%99s-ethekwini-municipality/  5. https://researchspace.csir.co.za/dspace/handle/10204/839  6. https://www.fsmtoolbox.com/assets/pdf/269Complete.pdf  7. https://www.greenloo.org/enviro-loo-urinal.php	

## Respondent: !Kheis Local Municipality Response on Initial PP (Appendix 1E.28)

!Kheis Municipality exercises its executive functions within its boundaries in terms of Section 151 of the Constitution of the Republic of South Africa as a local authority. As such the Constitution enjoins the Municipality to adhere to the objectives in accordance with Section 152 and the development within its boundaries in terms of Section 153.

The Municipality must exercise its rights and duties in terms of Section 4 of the Municipal Systems Act 32 of 2000 to ensure that the communities are consulted properly and that the needs are addressed. To fulfil these obligations the Municipality consulted the community annually to compile the master strategic plan (Integrated Development Plan).

The need for housing within the Municipality is currently critical and needs to be addressed. Some of the applicants are on a waiting list for a house since 2013. It is essential to ensure that these people on the backlog list be assisted to restore dignity and fulfil the obligations as a local authority. The consolidated respond of !Kheis Municipality on the comments from various individuals and organizations on the housing projects are as follows:

- 1. The purpose of the whole exercise is to obtain correct information from professionals to address the shortcomings and comply with legislation to render basic services to our communities.
- 2. That this Council adhere to the call of its poor residents to avail land for housing purpose.

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3. The Technical reports will address the needs and will serve as business plans to obtain financial support from Government institutions.					
4. To	obey to the course of resto	ring dignity to poor people and correct the imbalances of the past.			
	Comments Received on Draft Scoping report				
		Interim Comment	Respondent: EAP		
26	Date: 28 <sup>th</sup> August 2020 Format: Email Letter I&AP: SAHRA	SAHRA requires the draft EIA documents before further comments can be issued.  Should you have any further queries, please contact the designated official using the case number quoted above in the case header.	Noted, thank you. The Draft EIR will be made available to SAHRA for comment.		

		Interim Comment	Respondent: EAP
26	Date: 28 <sup>th</sup> August 2020 Format: Email Letter I&AP: SAHRA	SAHRA requires the draft EIA documents before further comments can be issued.  Should you have any further queries, please contact the designated official using the case number quoted above in the case header.	Noted, thank you. The Draft EIR will be made available to SAHRA for comment.
			Respondent: EAP
		The July 2020 EnviroAfrica draft Scoping Report and Plan of Study for the above-mentioned development of 730 erven on 50 ha at Opwag has reference.	Noted, thank you for your comment.
		Thank you for registering Gariep Watch as an Interested and Affected Party and incorporating our correspondence of 17 June 2020 in the draft Scoping Report. This letter highlighted our concerns that pertain to the lack of wastewater infrastructure and maintenance of existing wastewater infrastructure at the !Kheis local municipality.	Noted. Please refer to the Engineer's Services Report (Appendix 4B) stipulating recommendations made by the Engineer regarding sewage infrastructure construction / upgrades to service the proposed development.
27	Date: 22 <sup>nd</sup> September 2020 Format: Email Letter I&AP: Gariep Watch	We agree that housing is necessary to promote socioeconomic development and to provide the basic needs of the Opwag community. However, the process of urbanization and population growth, if not handled carefully, may result in increased surface and ground water pollution towards the Orange River. Intensive urban growth far from job opportunities can also lead to greater poverty with local governments unable to provide services for all people.	Noted. As per the EMPr (Appendix H), the construction of the proposed development must comply with conditions stipulated in the EMPr, Specialist Reports, and the EA (if granted). This aids in avoiding, mitigation, and / or rehabilitating impacts (in accordance with the Mitigation Hierarchy) identified by the Specialists, EAP, and/ or I&APs.
		Our comments pertaining to this application for an extension of the Opwag settlement are as follows:	
		1. The proposed extension of the Opwag settlement will interfere with two	1. Noted. Alternative design layouts, incorporating environmentally
		well-defined drainage lines that flow directly into the Orange River. Although the identification of site alternatives may not be feasible as	sensitive areas (including watercourses and botanical features as identified by the Freshwater Specialist and Botanical Specialist,
		noted in the Scoping Report, layout alternatives should be considered	respectively), have been appended as Appendices 2A-D. Design

	Comment Date,		Doom and a frame EADIA multiport/On a siglict/Dusic of Bit and and
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NO.	1	Comment	Please note: All registered I&APs will be given the opportunity to comment on the draft EIR.
	Organisation/I&AP	especially since the development will be within a Critical Biodiversity Area. The drainage lines to the north-west and west of Portion 14 of Farm 48 could be avoided completely without the loss of much development potential. We therefore believe that the layout could be tailored to exclude sensitive drainage lines, corridors or riparian zones.	Alternative 4 (Appendix 2D) is the preferred layout and incorporates the aforementioned drainage lines – zoning these areas as Open Space II (please refer to Figure 1 below). Therefore, this mitigates impacts associated with the proposed housing development in close proximity to the identified watercourses. As per Figure 1 below, no houses will be constructed within the identified watercourses.
			Preferred Layout with regards to the construction of houses outside of the drainage line situated within the northwestern section of the proposed site for development.
			<b>Figure 1</b> . Preferred layout zoning the identified watercourses as Open Space II (public open space to be utilized by the public as an open space, park, garden, playground, or recreational site;)
		2. No existing wastewater infrastructure was noted at Opwag and it is presumed that each house is equipped with a septic tank that is emptied by the municipality. It is uncertain where the wastewater is disposed of	2. Noted. As per the Engineer's Services Report (Appendix 4B), with regards to sewage management, houses within the existing Opwag Settlement currently consist of Pour Toilets with a Leach Pit. There is no

No.	Comment Date, Comment Format, Organisation/I&AP	Comment	Response from EAP/Applicant/Specialist/Project Manager Please note: All registered I&APs will be given the opportunity to comment on the draft EIR.
		by the municipality but not inconceivable that it is discharged into the veld close by. This aspect should be investigated.	<ul> <li>sewer bulk infrastructure which is recommended by the Engineer's as per the Engineer's Services Report (Appendix 4B) as the total, expected sewer flow would be 365 000l/day. Proposed upgrades, as per the recommendations of the Engineer, include;</li> <li>Construction of a new 25l/s canal pump station with a duty and standby pump.</li> <li>New 160mm diameter Class 9 PVC pipeline between the canal pump station and the water treatment works.</li> <li>Water Treatment Works to be re-allocated to proposed site and upgraded to deliver 24m3/h potable water to the potable storage reservoirs.</li> <li>A new 848m³ sectional steel reservoir in the proposed site.</li> <li>One (1) new 355 m³ sectional steel pressure tower on the highest point in the village.</li> <li>A new 52l/s lifting pump station at the treatment works.</li> <li>A new 250mm pipeline between the lifting pump station and the pressure tower.</li> </ul>
		3. It is recommended that specialist botanical studies should be performed as part of the EIA to delineate the two watercourses and its associated vegetation. A ground water investigation should also be performed as part of the freshwater impact assessment.	3. Noted. A Botanical (Appendix 6A), Freshwater (Appendix 6C), and Heritage Assessment (Appendix 6B) will be included in the Draft EIR. As per the Geotechnical Investigation Report (Appendix 6D), no perched groundwater was encountered on site during the geotechnical investigation (and is not anticipated to be problematic on site). Groundwater is expected to occur at depths less than 15m within compact, argillaceous strata. Successful drilling for water within the proposed site for development is expected to be between 40 – 60% whereas the drilling for a borehole yielding at least 2l/s ranges between 10 – 20%.
		4. River health indices will not be feasible on the ephemeral drainage lines but could be conducted in the Orange River up-stream and downstream from the proposed development.  Aspects pertaining to solid waste, stormwater, groundwater and wastewater management should be key components of the	4. Noted. Watercourses present within the proposed development footprint are non-perennial watercourses which are mostly dry throughout the year. The Freshwater Impact Assessment (Appendix 6C) includes biomonitoring of the Orange River at different sampling points. As per the Freshwater Assessment, biomonitoring was conducted at eleven (11) sampling points along the Lower Orange River, namely Augrabies Lair

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		Environmental Impact Assessment. All necessary measures must be put in place to prevent any pollution from reaching the Orange River.	trust, Groblershoop, Kakamas Triple D, Hopetown Sewer, Hopetown Sewer, Keimoes Housing, Upington Erf 323, Upington Affinity, Styerkraal, Grootdrink Bridge, and Turksvy Dam. These sites were sampled based on elucidating the combined impact of the propose developments on the Orange River. Biomonitoring was carried out according to the description of Dickens and Graham, (2002). Impacts on the Orange River, associated with the proposed development, have been included in the Freshwater Assessment.
28		The final scoping report for the Environmental Impact Assessment which was submitted by you in respect to the above-mentioned application and received by the Department on 16 <sup>th</sup> October 2020 has been accepted by the Department. You may accordingly proceed with the undertaking of the environmental impact assessment in accordance with tasks that are outlined un the plan of study for environmental impact assessment.	It is noted that the Final Scoping Report has been accepted / approved. The next phase is to submit the Draft EIR (this report) and notify the registered I&APs of the availability of this report for comment.
29	Date: 11 <sup>th</sup> December 2020 Format: Email Letter I&AP: DENC (Mr. Olebile Seshupo (Case Officer)	I would like to also highlight two things, one being that a traffic impact assessment be conducted for all the proposed townships that are adjacent to the N10, also liaise with the Traffic Department for any comments or recommendations. Secondly, please include biodiversity impact assessment on all the proposed townships so that both fauna and flora are assessed. The reason for this is because I have noticed that in some instances you have only mentioned botanical impact assessment which will only focus on vegetation/plants.	Noted. Please note that the proposed site for development is located approximately 4.4km north of the N10 and approximately 5km south-east of the N8 (Figure 2 below).  -4.4km  -5km  Google Earth  Groblershoop  Figure 2. Proximity of proposed site to the N10 and N8. Source: Google Earth (2021).

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			A letter was submitted to the Department of Roads & Public Works (DRPW) (Appendix 3E.2.1). The objectives of the letter were to:  1. To notify DRPW of the proposed township establishment project;  2. To obtain a no-objection for the land use changes (subdivision and rezoning), in terms of the Spatial Planning Land  Use Management Act (Act 16 of 2013), that need to be followed for the planned township establishment;  3. To obtain approval in terms of the Advertising on Roads and Ribbon Development Act, 21 of 1940;  4. To obtain approval for the existing access points.
			In response, the DRPW did not object to the rezoning and subdivision.  As per the response letter, a Traffic Impact Assessment was not requested.  Please note that the fauna (and avi-fauna) information has been included
			as part of the Botanical Assessment (Appendix 6A) – detailing the overall biodiversity of the proposed site for development.