




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
Comments Received on Initial Public Participation			
1	<p>Date: 17/06/2020 Format: Email Letter I&AP: Gariiep Watch (Chairman: Mr Ferdie Botha/ Technical Advisor: Mr Fritz Bekker)</p>	<p>Gariiep Watch is a civic society organisation that endeavours to protect the lower Orange River through effective monitoring and data collection, improved communication by role-players and the enhancement of public participation.</p> <p>We noted your abovementioned NEMA Public Participation Process (Ref. 0512) for a new township development at Topline, with much concern.</p>	<p>Respondent: EAP</p> <p>Noted. Thanks for your comment.</p>
		<p>Gariiep 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.</p>	<p>Respondent: EAP</p> <p>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.</p>

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		<p>The photographs in Figure 1 show some of the oxidation dam systems encountered at !Kheis Local Municipality during 2019.</p>  <p>Figure 1: Oxidation dam systems at !Kheis Local Municipality (2019)</p> <p>The extension of existing townships that already have inadequate, unmaintained or unused sewerage infrastructure will only aggravate their pollution risk towards the downstream environment.</p> <p>We therefore object to any new township development in the !Kheis Local Municipality and request the following information:</p> <ol style="list-style-type: none"> 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 style="list-style-type: none"> 1. <i>Requested information has been sent to the I&AP.</i> 2. 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; <ul style="list-style-type: none"> • Construction of a new 25l/s canal pump station with a duty and standby pump.

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		<p>Please also register Gariep Watch as an I&AP for these new township developments.</p>	<ul style="list-style-type: none"> • 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 355 m³ 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. <p>More details are included in the Engineer's Services Report.</p> <p>Noted, Gariep Watch has been registered as an I&AP.</p>
2	<p>Date: 16/06/2020 Format: Email Letter I&AP: Schalk and Marike van der Merwe (smvdmhome@gmail.com) (074 366 2276)</p>	<p>We have received a publication regarding the proposed project for extending the current housing in this location with a further 730 low income erven.</p> <p>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.</p> <p>Our concerns are:</p> <p><u>Water</u> 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</p>	<p>Respondent: EAP</p> <p>Noted, thank you for your comments.</p> <p>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 EMP.</p> <p><u>Water Supply</u></p>

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		<p>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 alot of money.</p> <p><u>Medical</u> 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)</p> <p><u>School</u> 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.</p> <p><u>Theft</u></p>	<p>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;</p> <ul style="list-style-type: none"> • 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. <p>Noted. Please refer to Appendix 3E.28</p> <p>Noted. Two (2) Institutional Zone I land use units have been applied for (Appendix 2D). Institutional Zone I includes places of instruction / education.</p>

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		<p>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.</p> <p>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.</p> <p><u>Safety</u> 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.</p> <p><u>!Kheis Municipality</u> 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, how they want to supply services to a new town-area that is 8 km away. 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.</p>	<p>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.</p> <p>Noted, 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.</p> <p>Noted. Please see responses above.</p> <p>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).</p> <p>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</p>

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		<p>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.</p> <p>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.</p> <p>We also want to register as an interested and affected party to this development.</p>	<p>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 non-functioning wastewater treatment works) can be applied for through the Water and Sanitation Grant (WSIG).</p> <p>Noted.</p> <p>Please note that you have been registered as an I&AP.</p>
3	<p>Date: 26/06/2020 Format: Email Letter I&AP: Elize Joseph (060 673 5261)</p>	<p><i>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.</i></p> <p><i>Ek wil graag die volgende punte onder julle aandag bring:</i></p> <p>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.</p>	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p>
4	<p>Date: 26/06/2020 Format: Email Letter I&AP: Jo-Anne Joseph (063 421 9594)</p>	<p><i>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.</i></p> <p><i>Ek wil graag die volgende punte onder julle aandag bring:</i></p> <p>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 bosteens moet kry is ons bevoorreg. Dankie.</p>	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p> <p>Noted. The proposed Opwag Development consists of approximately 730 erven for development (please refer to Appendix 2D).</p>

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5	<p>Date: 26/06/2020 Format: Email Letter I&AP: Suzy Leani Nieuwoudt (060 673 5261)</p>	<p>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.</p> <p>Ek wil graag die volgende punte onder julle aandag bring:</p> <p>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.</p>	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p> <p>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).</p>
6	<p>Date: 26/06/2020 Format: Email Letter I&AP: Rebekka Boer (073 857 0895)</p>	<p>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.</p> <p>Ek wil graag die volgende punte onder julle aandag bring:</p> <p>Benoidig beligting vir strate ligpalle.</p>	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p> <p>Please refer to Appendix 4B for information on electricity supply.</p>
7	<p>Date: 26/06/2020 Format: Email Letter I&AP: Clive Boer (078 209 7467)</p>	<p>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.</p> <p>Ek wil graag die volgende punte onder julle aandag bring:</p> <p>(1) Dat hier nog baie huise is wat nie toilette het nie en veroosak dat meer as een huis gesin dieselfde toilet gebruik wat n gesondheids wisiko is.</p>	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p> <p>(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;</p> <ul style="list-style-type: none"> • 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.

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		(2) Kanaal opblok wat aaneenlopede water toevoer voorsien aan buurt wanners kanaal staan	<ul style="list-style-type: none"> • A new 848m³ sectional steel reservoir in the proposed site. • One (1) new 355 m³ 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. <p>(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.</p>
8	<p>Date: 26/06/2020 Format: Email Letter I&AP: Stoffel Eksteen (106 Witblok)</p>	<p>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.</p> <p>Ek wil graag die volgende punte onder julle aandag bring:</p> <p>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 vouers 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.</p>	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p> <p>Noted, please see responses below addressing the following;</p> <p>1. Water supply 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;</p> <ul style="list-style-type: none"> • 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.

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			<ul style="list-style-type: none"> • 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. <p>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;</p> <ul style="list-style-type: none"> • 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 355 m³ 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. <p>3. Road safety 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 construction and operation have been included in the Draft EMP (Appendix H).</p>
9	<p>Date: 26/06/2020 Format: Email Letter</p>	<p>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.</p>	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p>

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	I&AP: Katriena Tieties (106 Witblok)	<p>Ek wil graag die volgende punte onder julle aandag bring:</p> <p>Ek wil ook he Keis moet ons kaart en transport 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 onaanvaarbaar ons kinder in die paaie. Sentrums bou wat kinder naweke weg van dronk en dwelems af hou. Dankie.</p>	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	<p>Date: 26/06/2020 Format: Email Letter I&AP: Willem Eksteen (104 Witblok)</p>	<p>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.</p> <p>Ek wil graag die volgende punte onder julle aandag bring:</p> <p>Soek die huise se kaart and transport. Behuising met toilette en lopende water met elke huis se buite krane. Sentrums met buite mier se aktiewiteite wat kinders weg van dwelems en dronk hou. Vervoer vir die kinder wat met die voet loop. Dankie.</p>	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p> <p>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.</p>
11	<p>Date: 26/06/2020 Format: Email Letter I&AP: Bemildo Steenkamp (107 Witblok)</p>	<p>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.</p> <p>Ek wil graag die volgende punte onder julle aandag bring:</p> <ul style="list-style-type: none"> - 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 	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p> <p>Noted. As per the Engineer's Services Report, please see response below regarding:</p> <p>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.</p> <p>Water and Sanitation:</p>

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			<ul style="list-style-type: none"> • One (1) new 355 m³ 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. <p>Churches and Sports events: As per the Preferred Design Layout (Appendix 2D), the proposed zoning land uses include;</p> <ul style="list-style-type: none"> • 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; <p>These zoning land use units are in line with the proposed comment raised.</p>
12	<p>Date: 26/06/2020 Format: Email Letter I&AP: Willem Eksteen (060 845 1213) (105 Witblok)</p>	<p>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.</p> <p>Ek wil graag die volgende punte onder julle aandag bring:</p> <ul style="list-style-type: none"> - Keis moet asb n plan maak so gou as moontlik om witblok se mense se huise se kaar en transport te gee - 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. - 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. 	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p> <p>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).</p>
13	<p>Date: 26/06/2020 Format: Email Letter I&AP: Elsie Steenkamp (107 Witblok)</p>	<p>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.</p>	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p>

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		<p>Ek wil graag die volgende punte onder julle aandag bring:</p> <ul style="list-style-type: none"> - Water en toilet by Witblok - Vervoer vir die kinders wat met die voet skool toe gaan. - Werkskepping vir die wat werkloos 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. 	<p>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:</p> <ul style="list-style-type: none"> • 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. <p>Although not yet confirmed, these land uses (e.g. Open Space II units) may incorporate activities for children.</p>
14	<p>Date: 26/06/2020 Format: Email Letter I&AP: Anna Steenkamp (109 Witblok)</p>	<p>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.</p> <p>Ek wil graag die volgende punte onder julle aandag bring:</p> <ul style="list-style-type: none"> - Krag by ons se huise - Water en spoel toilets - Skool tot en met graad 9 aanbou - Steenhuisse bou en werkskepping vir mense wat werkloos is 	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p> <p>Noted. Please refer to response to Comment No. 11.</p> <p><u>Electricity supply:</u></p>

No.	Comment Date, Comment Format, Organisation/I&AP	Comment	Response from EAP/Applicant/Specialist/Project Manager
		<p>- Strate teer en netjies maak - Vervoer vir kinders vir skool, want die kinders verdrink</p> <p>Ek gaan dit baie waardeer. Dankie. Dankie Dankie.</p>	<p>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.</p> <p><u>Water and Sanitation:</u> 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;</p> <ul style="list-style-type: none"> • 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. <p>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;</p>

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			<ul style="list-style-type: none"> • 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 355 m³ 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. <p>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.</p> <p>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.</p>
15	<p>Date: 26/06/2020 Format: Email Letter I&AP: Els Eksteen (079 122 0311)</p>	<p>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.</p> <p>Ek wil graag die volgende punte onder julle aandag bring:</p> <p>Water en krag en toilets</p>	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p> <p>Noted. Please refer to Comment No. 14. Moreover, as per the SPLUMA Application, it is proposed that</p>

No.	Comment Date, Comment Format, Organisation/I&AP	Comment	Response from EAP/Applicant/Specialist/Project Manager
		<p>Gaan die waardeer as Keis ons witblok se mense wat hier bly ons kaart en transport kan gee sodat ons n voet kan het waar op ons kan staan.</p> <p>Sentrums bou wat on sgemeenskap naweke kan besig hou en weg hou van dwelems grebruik.</p> <p>Vervoer vir ons uitsig skool se kinder wat met die voet staap skool toe.</p> <p>Dankie.</p>	<ul style="list-style-type: none"> • 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; <p>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.</p>
16	<p>Date: 26/06/2020 Format: Email Letter I&AP: Dexter Eksteen (082 216 7378)</p>	<p>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.</p> <p>Ek wil graag die volgende punte onder julle aandag bring:</p> <ul style="list-style-type: none"> - 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. <p>Asb, Dankie.</p>	<p>Respondent: EAP</p> <p>Noted, you have been registered as an I&AP.</p> <p>Noted. Please refer to responses to Comment No. 14 and Comment No. 15.</p>
17	<p>Date: 27/06/2020 Format: Email Letter I&AP: Lentelie Fourie (lentelie.fourie@gmail.com) (082 703 1015)</p>	<p>We have received a publication regarding the proposed project for extending the current housing in this location with a further 730 low income erven.</p> <p>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.</p> <p>We are very positive regarding the upliftment of the town as it is.</p> <p>We are aware of unhappiness regarding the start of this project, there have been a lot of misinformation doing the rounds in Uitkoms.</p>	<p>Respondent: EAP</p> <p>Noted. Thank you for the information.</p> <p>Noted.</p>

No.	Comment Date, Comment Format, Organisation/I&AP	Comment	Response from EAP/Applicant/Specialist/Project Manager
		<p>1. Someone told the people they will receive brick houses.</p> <p>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.</p> <p>A lot of people cannot read English.</p> <p>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.</p> <p>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.</p>	<p>1. Noted. The !Kheis Local Municipality has been made aware of this issue.</p> <p>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.</p> <p>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.</p> <p>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;</p> <ul style="list-style-type: none"> • 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.

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		<p>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, 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.</p>	<ul style="list-style-type: none"> • 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. <p>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;</p> <ul style="list-style-type: none"> • 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 355 m³ 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. <p>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.</p>

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		<p>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 welfare of the people. Most people walk to clinic, most suffer because of that great distance, but they have no choice.</p> <p>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.</p> <p>We also want to register as an interested and affected party to this development.</p> <p>Thank you for your reply on this letter, so that we can know that you have received the letter and that we are registered?</p> <p>Regards</p> <p>Lentelie Fourie 8508100004088</p> <p>(I will also copy 3 letters from my community friends that do not have email or data available. The live in UITKOMS.</p>	<p>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.</p> <p>Noted. Please refer to response from the Municipality (appended as Appendix 3E.28).</p> <p>Noted. You have been registered as an I&AP.</p> <p>Thank you for your comment. Please see responses to your comments above.</p>
18	<p>Date: 27/06/2020 Format: Email Letter I&AP: Mieta Jacqueline Block (078 058 4838)</p>	<p>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.</p> <p>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.</p>	<p>Respondent: EAP</p> <p>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.</p>
19	<p>Date: 27/06/2020 Format: Email Letter I&AP: Mietjie Vries (078 058 4838)</p>	<p>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.</p> <p>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.</p>	<p>Respondent: EAP</p> <p>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.</p>

No.	Comment Date, Comment Format, Organisation/I&AP	Comment	Response from EAP/Applicant/Specialist/Project Manager
20	<p>Date: 27/06/2020 Format: Email Letter I&AP: Melony Lucklick (076 779 9182)</p>	<p>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.</p> <p>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.</p>	<p>Respondent: EAP</p> <p>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).</p>
21	<p>Date: 01/06/2020 Format: Email Letter I&AP: CG Buys (076 887 8284)</p>	<p>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.</p> <p>I am grateful for the concern to develop land for people to have their own place to live.</p> <p>However, I am concerned with the quality of life in specifically the area where you plan the development, for the following reasons:</p> <ul style="list-style-type: none"> • 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. • 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. • Where unemployment thrives, theft, burglaries and many other socio economic problems arise. Is that what we want to create? 	<p>Respondent: EAP</p> <p>Noted, thank you for your comment.</p> <p>Noted. Noted, 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 the preferred design layout (Appendix 2D) – presenting potential employment opportunities during the Operational Phase.</p> <p>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.</p>

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		<p>Surely we want to ensure that communities are developed in areas where there are potential for job opportunities, etc.</p> <p>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.</p>	<p>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.</p> <p>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.</p>
22	<p>Date: 21/05/2020 Format: Email Letter I&AP: Deon Rossouw (0798816459) (drossouw7@gmail.com)</p>	<p>I am a plot owner next to Plot 2642, Opwag Groblershoop, and received and Nema PPR information letter yesterday.</p> <p>I would like to register as and Interested and Effected party, since I lay right next to the above mentioned Plot.</p> <p>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.</p> <p>Can you please sent me all relative info?</p> <p>Regards, Deon Rossouw</p>	<p>Respondent: EAP</p> <p>Noted. You have been registered as an I&AP.</p> <p>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.</p>
23	<p>Date: 29th June 2020 Format: Email Letter I&AP: Maryna Heese</p>	<p>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.</p> <p>We would like to affirm our personal and financial interest in the development.</p>	<p>Respondent: EAP</p> <p>Noted. You have been registered as an I&AP.</p> <p>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.</p>

No.	Comment Date, Comment Format, Organisation/I&AP	Comment	Response from EAP/Applicant/Specialist/Project Manager
		Kindly contact us on the following e-mail addresses: marynaheese@gmail.com and dh58zar@gmail.com . This is our preferred avenue of communication.	
24		<p>As Interested and Affected individuals we like to comment on the new Township referenced above.</p> <p>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.</p> <p>“Rational use of energy and power is a key to the economic development of human society and to achieve sustainable environment.” https://www.sciencedirect.com/science/article/pii/S1876610214032664</p> <p>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 co-ordinated, 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.</p> <p>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.</p> <p>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.</p>	<p>Respondent: EAP</p> <p>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.</p> <p>Noted. Please refer to Engineering Services Report (Appendix 4B) and Draft EIR.</p> <p>Noted. Please refer to Engineering Services Report (Appendix 4B) and Draft EIR.</p> <p>Noted. Thank you for your comments.</p>

No.	Comment Date, Comment Format, Organisation/I&AP	Comment	Response from EAP/Applicant/Specialist/Project Manager
		<p>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.</p> <p>Kind regards Daniel and Maryna Heese</p>	
25		<p>Regarded members of the Municipality,</p> <p>Re. Toilets</p> <p>I would like to share some thoughts with you regarding the proposed new development.</p> <p>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 (eThekweni 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.</p> <p>2. I will attempt to explain in layman's terms the principle behind different sanitation systems.</p> <ul style="list-style-type: none"> • 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 of the articles in the websites quoted. 	<p>Respondent: EAP</p> <p>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.</p> <p>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;</p>

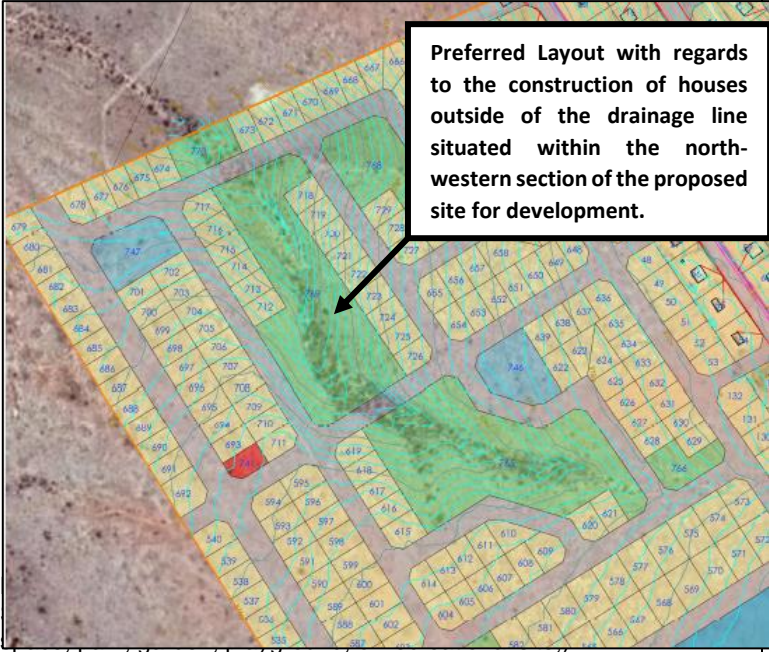
No.	Comment Date, Comment Format, Organisation/I&AP	Comment	Response from EAP/Applicant/Specialist/Project Manager
		<ul style="list-style-type: none"> • Flush toilets in a water-scarce country is not a long term solution in any community and all communities should re-consider the cost of using cleaned water to flush toilets. • 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. • Urine separating systems. An extract from a document <p>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 challenging environments; and (9) possibility of construction in close proximity to or inside of the home adds security and convenience for users (Rieck <i>et al.</i> 2012). https://iwaponline.com/washdev/article/7/1/111/30518/Urine-diversion-dry-toilets-in-eThekwin URINE SEPERATING TOILETS. This is the system I would like to propose.</p> <p>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. There are various methods to separate urine and faeces.</p> <p>1. ENVIRO-LOOS</p> <p>The Enviro loos system allow both urine and faeces to enter the chamber together and then the content falls on a sloped perforated surface...a hard plastic sheet with holes at an angle, that allows the urine to seep through</p>	<ul style="list-style-type: none"> • 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 355 m³ 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. <p>Thank you for your research conducted. It is greatly appreciated.</p>

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		<p>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.</p> <p>It needs a full sun site, additional power for the extraction fan and people living higher might still get a whiff from the extraction fans, but the biggest deterrent is possibly the cost, it is more expensive. 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</p> <p>2. URINE SEPERATION TWO CHAMBER SYSTEM</p> <p>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.</p> <p>b. Build a two chamber system. 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.</p> <p>c. The selection of the site: It is vital for the optimal drying of the faeces that the back wall of the bathroom unit face North. To increase the absorption of the sun rays the back panel and the chimney should be</p>	

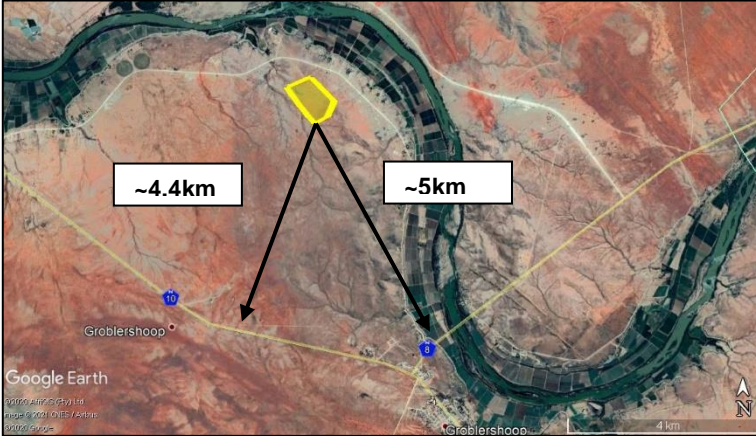
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		<p>Painted black or be manufactured from hard black plastic. Place a mosquito net above the chimney. The bigger the chimney the greater the up draft and reduced smell.</p> <p>d. The urine can be diverted to a soak away, or a solar evaporation site 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.</p> <p>e. By placing a bucket of sand, ash or sawdust 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.</p> <p>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 flies will then fly up and down the chimney until they die. It is highly unlikely if the seat remains closed.</p> <p>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 from</p> <p>https://en.wikipedia.org/wiki/Urine-diverting_dry_toilet an example from Peru.</p> <p>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.</p> <p>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.</p> <p>Additional resources:</p>	

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		<p>1. http://www.wrc.org.za/wpcontent/uploads/mdocs/Demonstrating%20New%20Sanitation%20Solutions%20through%20the%20Engineering%20Field%20Testing%20Platform%20in%20eThekweni.pdf This is a very comprehensive study for waterless Sanitation options as done in eThekweni (DURBAN)</p> <p>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.</p> <p>3. https://iwaponline.com/washdev/article/7/1/11/30518/Urinediversion-dry-toilets-in-eThekweni Introduction challenges faced in eThekweni (Durban)</p> <p>4. http://ccaa.irisyorku.ca/2011/07/flushing-out-the-realities-of-urine-diversion-toilets-in-south-africa%E2%80%99s-ethekweni-municipality/</p> <p>5. https://researchspace.csir.co.za/dspace/handle/10204/839</p> <p>6. https://www.fsmttoolbox.com/assets/pdf/269_-_Complete.pdf</p> <p>7. https://www.greenloo.org/enviro-loo-urinal.php</p>	
<p>Respondent: !Kheis Local Municipality Response on Initial PP (Appendix 1E.28)</p> <p>!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.</p> <p>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).</p> <p>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:</p> <ol style="list-style-type: none"> 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. 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 restoring dignity to poor people and correct the imbalances of the past. 			

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26	Date: 28 th August 2020 Format: Email Letter I&AP: SAHRA	<p>Interim Comment</p> <p>SAHRA requires the draft EIA documents before further comments can be issued.</p> <p>Should you have any further queries, please contact the designated official using the case number quoted above in the case header.</p>	<p>Respondent: EAP</p> <p>Noted, thank you. The Draft EIR will be made available to SAHRA for comment.</p>
27	Date: 22 nd September 2020 Format: Email Letter I&AP: Gariiep Watch	<p>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.</p> <p>Thank you for registering Gariiep 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.</p> <p>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.</p> <p>Our comments pertaining to this application for an extension of the Opwag settlement are as follows:</p> <p>1. The proposed extension of the Opwag settlement will interfere with two well-defined drainage lines that flow directly into the Orange River. Although the identification of site alternatives may not be feasible as noted in the Scoping Report, layout alternatives should be considered 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</p>	<p>Respondent: EAP</p> <p>Noted, thank you for your comment.</p> <p>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.</p> <p>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.</p> <p>1. Noted. Alternative design layouts, incorporating environmentally sensitive areas (including watercourses and botanical features as identified by the Freshwater Specialist and Botanical Specialist, respectively), have been appended as Appendices 2A-D. Design 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</p>

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		<p>therefore believe that the layout could be tailored to exclude sensitive drainage lines, corridors or riparian zones.</p>	<p>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.</p> 
		<p>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 by the municipality but not inconceivable that it is discharged into the veld close by. This aspect should be investigated.</p>	<p>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 sewer bulk infrastructure which is recommended by the Engineer's as per the Engineer's Services Report (Appendix 4B) as the total,</p>

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			<p>expected sewer flow would be 365 000l/day. Proposed upgrades, as per the recommendations of the Engineer, include;</p> <ul style="list-style-type: none"> • 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 355 m³ 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.
		<p>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.</p>	<p>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%.</p>
		<p>4. River health indices will not be feasible on the ephemeral drainage lines but could be conducted in the Orange River up-stream and down-stream from the proposed development. Aspects pertaining to solid waste, stormwater, groundwater and wastewater management should be key components of the Environmental Impact Assessment. All necessary measures must be put in place to prevent any pollution from reaching the Orange River.</p>	<p>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 trust, Groblershoop, Kakamas Triple D, Hopetown Sewer, Hopetown Sewer, Keimoes Housing, Upington Erf 323, Upington Affinity, Styerkraal, Grootdrink Bridge, and Turksvy Dam.</p>

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			<p>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.</p>
28		<p>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 16th 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.</p>	<p>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.</p>
29	<p>Date: 11th December 2020 Format: Email Letter I&AP: DENC (Mr. Olebile Seshupo (Case Officer))</p>	<p>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.</p>	<p>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).</p>  <p>Figure 2. Proximity of proposed site to the N10 and N8. Source: Google Earth (2021).</p> <p>A letter was submitted to the Department of Roads & Public Works (DRPW) (Appendix 3E.2.1). The objectives of the letter were to:</p> <ol style="list-style-type: none"> 1. To notify DRPW of the proposed township establishment project;

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			<p>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;</p> <p>3. To obtain approval in terms of the Advertising on Roads and Ribbon Development Act, 21 of 1940;</p> <p>4. To obtain approval for the existing access points.</p> <p>In response, the DRPW did not object to the rezoning and subdivision. As per the response letter, a Traffic Impact Assessment was not requested.</p> <p>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.</p>
Comments Received on Draft EIR			
10	<p>Date: 26th February 2021 Format: Email Letter I&AP: Gariiep Watch</p>	<p>Gariiep Watch reviewed the draft Environmental Scoping Reports as part of the public participation process and commented on each separate report on 22 September 2020. We note with disappointment that all our comments have not been incorporated into the specialist reports or draft EIR's. These raised issues remain unresolved. Our further comments on the draft EIR's have been narrowed down to apply to all six of these development proposals, and are provided below:</p>	<p>Thank you for your comments. Please note that issues raised by the Gariiep Watch were addressed in the Draft EIR. It must be further noted that this application is for the proposed housing development and <u>not</u> for the authorisation of a WWTW – in light of this, should the EA be granted for this application, the recommended WWTW would require a new application where environmental impacts will have to be re-assessed relative to impacts associated with WWTW. Please see following for summary of responses to previous comments raised:</p> <ol style="list-style-type: none"> 1. Findings of the Specialists, EAP and the Municipality were considered with regards to design alternative layouts (Appendix 2A-D). Design Alternative 4 (Appendix 2D) is the preferred layout and incorporates the aforementioned drainage lines – zoning these areas as Open Space II and Undetermined Zone and therefore, mitigating the impacts associated with the proposed housing development in close proximity to the identified watercourses. Moreover, proposed mitigation measures relative to the construction and

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			<p>operational phases have been included in the Final EIR, Specialist Reports and the EMPr, which must be complied with should the EA be granted.</p> <ol style="list-style-type: none"> 2. Illegal dumping was noted during the site visit conducted by the EAP and Specialists. Illegal dumping was identified as an impact to watercourses and the surrounding environment (e.g. Appendix 6C) and mitigation measures were proposed. Illegal dumping has been addressed in the Specialist Reports and Engineer's Services Report where a solid waste management plan was recommended to be compiled and implemented for the proposed development as a condition should the EA be granted. Mitigation measures and recommendations stipulated by the Specialists and Engineer (which has been included in the EMPr – Appendix H) must be complied with. 3. Issues relating to water quality and sewerage infrastructure have been addressed in the draft EIR, Specialist Reports (Appendix 6A-D), and Engineer's Services Report (Appendix 4B). As per the Engineer's Services Report, the Engineer has detailed existing services (including water supply, sewage management, solid waste management, electricity, roads, and stormwater management) capacity and has made recommendations relative to services required to service the proposed development. As per the Draft EIR, the proposed development is supported subject to the implementation of the recommended mitigation measures proposed by specialists, and stipulated in the EMPr, and the compilation and effective implementation of a waste management plan. This waste management plan would include the construction of a Wastewater Treatment Works with the capacity to service the current and proposed housing development. 4. Watercourses (non-perennial watercourses) present within/ surrounding the proposed development footprint are mostly dry throughout the year. The Freshwater Impact Assessment (Appendix 6C) includes biomonitoring results of the Orange River which were sampled at different locations. As per the Freshwater Assessment, biomonitoring was conducted at eleven (11) sampling points along the Lower Orange River, namely Augrabies Lair trust, Groblersshoop, Kakamas Triple D, Hopetown Sewer, Hopetown Sewer, Keimoes Housing,

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			<p>Uppington Erf 323, Uppington Affinity, Styrkraal, Grootdrink Bridge, and Turksvy Dam. These sites were sampled based on elucidating the combined impact of the proposed 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 as well as the Final EIR. Proposed mitigation measures have also been incorporated in these reports.</p>
11		<p>PROTECTION OF DRAINAGE LINES, CORRIDORS AND RIPARIAN ZONES</p> <p>Drainage lines, corridors and riparian zones close to these township developments are being used for illegal dumping and ablutions with rainfall that washes pollutants towards the lower Orange River. Measures to prevent and mitigate stormwater contamination should be investigated with cognisance of the expected run-off from these catchments, including the new development areas. It should, however, be endeavoured to avoid any development close to watercourses/dry drainage lines.</p> <p>We note and agree with the recommendation in the May 2020 Freshwater Report by Watsan Africa that a buffer zone of 50 m should be left undeveloped around all natural drainage lines. However, the township layout plans as shown in, for example, Figure 23 of the draft Boegoeberg EIR does not take cognisance of this recommendation. These buffer zones have been indicated in Appendix 2D (preferred layout site plan). The draft EIR's should be updated to include the correct plans that show the buffer zones.</p> <p>We disagree with the low-risk ratings that were awarded in the draft EIR's impact assessment for the destruction and contamination of the drainage lines. The draft EIR's do not address the design specifications of numerous road crossings that will be required when new erven are developed in close proximity to these drainage lines.</p> <p>Storm water runoff from many of these new townships will first flow through an agricultural zone before it reaches the Orange River. The mitigation of</p>	<p>Noted. Areas associated with watercourses have been zoned as open space – thereby incorporating a buffer from potential anthropogenic impact. Moreover, mitigation measures proposed by the Specialist have been included in the EMPr and Final EIR. Should the EA be granted by the competent authority, all mitigation measures must be complied with. In addition to parameters stipulated in the Engineer's Services Report (Appendix 4B), a Stormwater Management Plan (SWMP) must be designed and compiled to address concerns raised by the I&AP - namely the potential flow of sewage- and/or solid waste-contaminated stormwater runoff from the development into the drainage lines and subsequently, the Orange River. Therefore, it is recommended that the proposed development be supported/ authorized subject to the compilation of a SWMP which includes required engineering parameters (Appendix 4B) and the management of potentially sewage- and/or solid waste-contaminated stormwater runoff.</p> <p>This design layout was adapted from the Engineer's Services Report (Appendix 4B) to highlight the location of existing/ proposed services. The layout presented in Figure 23 is not the preferred layout (relative to zoning). Please refer to Appendix 2D for the preferred layout. It must be further noted that this application is for a proposed housing development and not for the authorisation of a WWTW – in light of this, should the EA be granted for this application, the recommended WWTW would require a new application where environmental impacts will have to be re-assessed relative to impacts associated with WWTW. As per the Freshwater Report (Appendix 6C), "<i>The drainage lines pass right through the current settlement, with a strip of land of about 50m wide to accommodate the drainage lines. It does not seem if formal</i></p>

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		<p>storm water that is contaminated with solid waste and sewerage has not been properly addressed as the impact on down-slope producers have not been evaluated. There is no clear plan to prevent solid waste from entering the drainage lines, polluting storm water and subsequently ending up in the Orange River.</p> <p>No link is made between the identified Critical Biodiversity Areas on the development sites and the drainage lines, corridors and riparian zones. The specialist studies in support of this application were therefore produced in isolation without any integration of results. Corridors protect environmentally sensitive areas by providing avenues for wildlife movement, buffers between natural and human communities as well as green space for humans.</p> <p>The exiting and visible high risk of contamination and destruction of the drainage lines cannot summarily be downgraded to a low risk as reported in the Freshwater Reports risk assessment and the draft EIR's. The threat to these drainage lines will increase profoundly with these proposed new developments, its associated infrastructure and human pressure.</p>	<p><i>storm water canals are required for this small catchment with a limited runoff. If anything of the kind is required for the new development, it can be small, minimalistic, with no more impact on the drainage line that is really required. From an environmental point of view, it would probably be best to leave a strip of land around the drainage line without any further disturbance</i>". And proposed mitigation measures include "Leave a strip of land 50m wide around the drainage line". This mitigation measure was included in the Draft EIR which must be complied with should the EA be granted. Specialists were consulted through the process with regards to the design layout and whether the proposed layout would negatively impact factors relative to the Specialist's field of expertise.</p> <p>Noted. These risk ratings were based on the Specialist Reports (Appendix 6A-D). This is the opinion of each Specialist relative to their field of expertise. For example, the Freshwater Assessment was based on the risk matrix developed by the Department of Water and Sanitation (DWS). Therefore, the rating of risks was undertaken in accordance with such guidelines in combination with the Specialist's experience and knowledge within the field (please refer to Specialist CVs – Appendix 6A – D). As per the Engineer's Services Report (Appendix 4B), internal roads can be upgraded to interlocking paved streets.</p> <p>Noted. In addition to parameters stipulated in the Engineer's Services Report (Appendix 4B), a Stormwater Management Plan (SWMP) must be designed and compiled to address concerns raised by the I&AP - namely the potential flow of sewage- and/or solid waste-contaminated stormwater runoff from the development into the drainage lines and subsequently the Orange River. Therefore, it is recommended that the proposed development be supported/ authorized subject to the compilation of a SWMP which includes required engineering parameters (Appendix 4B) and the management of potentially sewage- and/or solid waste-contaminated stormwater runoff. Please note that this application is for the proposed housing development and not for the authorisation of a WWTW – in light of this, should the EA be granted for this application, the recommended WWTW would require a new application where environmental impacts will have to be re-assessed</p>

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			<p>relative to impacts associated with WWTW. As per the conclusion of the EIR, it is recommended that the proposed Housing Development be supported and be authorised with the necessary conditions of approval, namely the compilation of a stormwater management plan, waste management plan (addressing sewage and solid waste management), along with the implementation of recommendations / mitigation measures proposed by Specialists (Appendices 6A-D) and included in the EMPr (Appendix 9). Moreover, it was not in the scope of this EIR to develop a waste management plan however, mitigation measures addressing these issues have been proposed and must be implemented during the construction and operational phases of this project – which aims to mitigate solid waste from entering the drainage lines, polluting storm water, and subsequently ending up in the Orange River.</p> <p>According to the Northern Cape CBA maps the proposed site falls within a CBA area. As per the Botanical Assessment (Appendix 6A), the site will not impact on any recognised centre of endemism. The 2016, Northern Cape CBA Map identifies biodiversity priority areas, called Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs), which, together with protected areas, are important for the persistence of a viable representative sample of all ecosystem types and species as well as the long-term ecological functioning of the landscape as a whole (Holness & Oosthuysen, 2016). The 2016 Northern Cape Critical Biodiversity Area (CBA) Map updates, revises and replaces all older systematic biodiversity plans and associated products for the province. The entire, proposed site for development falls within a CBA. The connectivity (namely the potential loss of ecological migration corridors) was considered and rated as Low (The transformation will destroy connectivity within the site but will not result in a significant impact on the surrounding area, where connectivity is still excellent) which was reduced to insignificant (should the proposed mitigation measures be implemented). Open Space zoning has been provided within the design layout (please refer to Appendix 2D), buffering the non-perennial watercourses from the proposed household activities. A buffer has been incorporated on watercourses (namely the non-perennial drainage lines), which have a corridor feature – thereby retaining the potential corridor function. Please refer to Appendix 6A (Botanical Assessment) for more information on the CBA.</p>

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			<p>Noted. Risk ratings in the Draft EIR were based on Specialist Reports. Please note that these risks were reduced to a low risk should the proposed mitigation measures be implemented. These mitigation measures have been included in the Draft EIR, Final EIR, EMPr, and Specialist Reports and must be complied with should the EA for this project be granted. Please refer to scoring matrices (Appendices 6A-D) and Appendix 7 for the Environmental Impact Assessment (which describes potential impacts and proposed mitigation measures).</p>
12		<p>EXISTING SEWERAGE MALPRACTICES</p> <p>The existing problems and adverse impacts pertaining to sewerage disposal malpractices should be addressed before embarking on any new developments. Years of bad governance by this dysfunctional municipality simply will not change overnight. It is dishonest to give the !Kheis Municipality the benefit of the doubt when assigning risks to new developments that will most likely just amplify the existing problems. Past behaviour predicts future behaviour.</p> <p>New sewerage oxidation dam systems or WWTW's have been proposed in the draft EIR's. The question is asked whether these new bigger facilities will be properly maintained and operated if the modest existing pump stations and sewerage dams are not.</p> <p>In the context of existing challenges pertaining to sewerage water treatment at !Kheis Municipality, we cannot agree with the assumption made in the freshwater impact assessment and the draft EIR's that an increased volume of sewerage poses a low risk.</p> <p>Table 1 was prepared from information contained in the October 2020 Bvi Engineering reports and show the expected cumulative sewerage flows per day.</p>	<p>Noted. Please note that this application is for the proposed housing development and not for the authorisation of a wastewater treatment works (WWTW) – considering this, should the EA be granted for this application, the construction of a WWTW (as recommended by the Engineer) would require a new application where environmental impacts will have to be re-assessed relative to impacts associated with WWTWs. Existing sewage services and future sewage infrastructure, required to service the proposed development, were addressed in the Engineer's Services Report (Appendix 4B). As per the conclusion of the EIR, it is recommended that the proposed Housing Development be supported and be authorised with the necessary conditions of approval, <u>namely the compilation of a waste management plan to address sewage and solid waste concerns (highlighted by the EAP, Specialists and I&APs), compilation of a Stormwater Management Plan,</u> and the implementation of mitigation measures proposed by the Specialists (Appendix 6A-D) and included in the EMPr.</p> <p>Noted. Please see comment above. Please note that the recommended construction / upgrade to sewage infrastructure to service the current and future development has been included in the Engineer's Services Report (Appendix 4B). The construction and / or operation of the recommended WWTW does not form part of this application and would therefore be addressed in an application for the construction of the WWTW.</p> <p>Noted. Please note that the recommendations made in the Draft EIR were based on findings from the specialists and site visits conducted. A low risk rating was given to the proposed increase in sewage generation should mitigation measures (which includes</p>

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		<p>Table 1: Expected sewerage flows</p> <table border="1" data-bbox="524 327 1256 742"> <thead> <tr> <th>TOWNSHIP</th> <th>EXPECTED NEW SEWERAGE FLOW l/day</th> </tr> </thead> <tbody> <tr> <td>WEGDRAAI 360 stands</td> <td>461 500</td> </tr> <tr> <td>TOPLINE 248 stands</td> <td>272 000</td> </tr> <tr> <td>OPWAG 730 stands</td> <td>365 000</td> </tr> <tr> <td>GROOTDRINK 370 stands</td> <td>546 000</td> </tr> <tr> <td>GROBLERSHOOP 1500 stands</td> <td>889 600</td> </tr> <tr> <td>BOEGOEBERG 550 stands</td> <td>531 050</td> </tr> <tr> <td>TOTAL</td> <td>3 065 150 l/day</td> </tr> </tbody> </table> <p>These calculations show that the expected cumulative volume of sewerage that will need to be treated with the development of 3 758 new erven, will amount to 3 065 m3/day.</p> <p>This cumulative volume of sewerage that will need to be discharged near the lower Orange River is significant. It can be expected that downstream users, aquatic ecosystems and ground water users down-slope of these developments may be adversely affected. These cumulative impacts have not been addressed in the draft EIR's. The re-use of treated wastewater should be investigated as part of impact management and mitigation measures.</p>	TOWNSHIP	EXPECTED NEW SEWERAGE FLOW l/day	WEGDRAAI 360 stands	461 500	TOPLINE 248 stands	272 000	OPWAG 730 stands	365 000	GROOTDRINK 370 stands	546 000	GROBLERSHOOP 1500 stands	889 600	BOEGOEBERG 550 stands	531 050	TOTAL	3 065 150 l/day	<p>the construction of the recommended WWTW) be implemented. As per the conclusion of the EIR, it is recommended that the proposed Housing Development be supported and be authorised with the necessary conditions of approval, namely the compilation of a stormwater management plan, waste management plan (addressing sewage and solid waste management), along with the implementation of recommendations / mitigation measures proposed by Specialists (Appendices 6A-D) and included in the EMPr (Appendix 9). Moreover, it was not in the scope of this EIR to develop a waste management plan however, mitigation measures addressing these issues have been proposed and must be implemented during the construction and operational phases of this project – which aims to mitigate solid waste from entering the drainage lines, polluting storm water, and subsequently ending up in the Orange River.</p> <p>Noted and confirmed that Table 1 shows total (combination of existing and expected) sewage generation for each proposed development and the overall total.</p> <p>Noted and confirmed that the total expected sewage flow will be 3 065 150 l/day (3 065.15m³/day).</p>
TOWNSHIP	EXPECTED NEW SEWERAGE FLOW l/day																		
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			<p>Noted. Cumulative impacts have been rated in the Botanical (please refer to Appendix 6A) and Freshwater (please refer to Appendix 6C) reports. Mitigation measures for these cumulative impacts have also been proposed and incorporated into the Draft / Final EIR. As per the Freshwater Assessment, biomonitoring was conducted at eleven (11) sampling points along the Lower Orange River, namely Augrabies Lair 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 to elucidate the combined impact of the proposed developments on the Orange River, and was carried out according to Dickens and Graham, (2002). The PES of the Orange River (for both riparian and instream zones) were categorized as Class C (Moderately modified - a loss and change of the natural habitat and biota, but the ecosystem function is predominantly unchanged), and is an Ecologically Important system (as classified by the Freshwater Specialist). Furthermore, the Orange River is Ecologically Sensitive.</p> <p>As per the conclusion of the EIR, it is recommended that the proposed Housing Development be supported and be authorised with the necessary conditions of approval, namely the compilation of a stormwater management plan, waste management plan (addressing sewage and solid waste management), along with the implementation of recommendations / mitigation measures proposed by Specialists (Appendices 6A-D) and included in the EMPr (Appendix 9). Moreover, it was not in the scope of this EIR to develop a waste management plan however, mitigation measures addressing these issues have been proposed and must be implemented during the construction and operational phases of this project – which aims to mitigate solid waste from entering the drainage lines, polluting storm water, and subsequently ending up in the Orange River. The potential re-use of treated wastewater would be addressed in the application for the proposed construction of the WWTW.</p>
13		<p>GROUND WATER CONTAMINATION</p> <p>Ground water quality down-slope from the proposed developments and the existing settlements should be investigated. It is believed that, in the</p>	<p>Noted. The current status of water supply, sewage and solid waste management, electricity, stormwater management, and road</p>

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		<p>absence of adequate wastewater services at many of these settlements, much sub-surface pollution may reach the shallow aquifer and neighbouring boreholes. These down-slope boreholes are being used for irrigation, livestock watering and potable purposes and may pose a serious risk to public health.</p> <p>Aspects pertaining to ground water contamination and its impact on downslope landowners and the Orange River were not addressed in the draft EIR's. The geotechnical report by Cederland Geotechnical Consult only briefly makes mention of a ground water aquifer that may be less than 15 metres deep, which means that a shallow ground water aquifer does exist.</p> <p>No boreholes were identified in the development zones and no ground water samples were analysed. The total disregard of this potential serious impact is a critical omission in the draft EIR's.</p> <p>It is disconcerting that no surface or ground water samples were analysed as part of the Freshwater Impact Report. Historical data was also ignored. The outcome of freshwater risk assessments for each development area cannot be trusted without any information on fresh water.</p>	<p>infrastructure and future infrastructure, required to service the proposed development, was determined by the Engineer (Appendix 4B). According to the Geo-technical Assessment (Appendix 6D), no perched groundwater was encountered on site during the geotechnical investigation (and is not anticipated to be problematic on site). As per the conclusion of the EIR, it is recommended that the proposed Housing Development be supported and be authorised with the necessary conditions of approval, namely the compilation of a stormwater management plan, waste management plan (addressing sewage and solid waste management), along with the implementation of recommendations / mitigation measures proposed by Specialists (Appendices 6A-D) and included in the EMPr (Appendix 9).</p> <p>Noted. As per the Freshwater Impact Assessment, the watercourses present within the development footprint were dry (i.e. non-perennial drainage lines) and therefore, surface water sampling could not be undertaken. As this application was for the proposed development of housing, the scope/ terms of reference of the Freshwater Impact Assessment was based on the nature of the proposed development. A Freshwater Impact Assessment was undertaken in terms of the National Water Act (NWA), Act No. 36 of 1998, which includes the completion of a Risk Matrix, as published on the DWA webpage. As per the Freshwater Assessment, biomonitoring was conducted at eleven (11) sampling points along the Lower Orange River, namely Augrabies Lair 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 to elucidate the combined impact of the proposed developments on the Orange River, and was carried out according to Dickens and Graham, (2002).</p>
14		NEW INFRASTRUCTURE REQUIREMENTS	<p>The Engineer's Services Report (Appendix 4B) investigated the status of existing services and proposed recommendations relative to the construction and/or upgrade of existing infrastructure to service the proposed housing development. It must be noted that this application</p>

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		<p>The existing wastewater services at the development areas are clearly inadequate and are inefficiently maintained. New infrastructure should be designed, built and maintained to prevent any sewerage water from polluting the groundwater or the lower Orange River.</p> <p>The design of new sewerage water infrastructure as performed by Bvi Civil Engineers neglected to specify whether oxidation dam systems should be equipped with an impermeable lining.</p> <p>The Gariep Watch water quality monitoring program clearly show that polluted shallow aquifers close to the river impact adversely on the Orange Rivers' water quality. A river profiling study close to a township such as Brandboom will in all likelihood show increases in <i>E. coli</i> as the river progresses past the township. These increases will be in the absence of any visible surface flow or point sources of sewerage pollution. Cederland Geotechnical Consult identified shallow aquifers at these !Kheis Municipality development sites and these aquifers must be protected according to law. No mitigation was proposed in the draft EIR's or associated specialist studies because this risk was not evaluated. The Gariep Watch comments on the draft Scoping Report were therefore ignored.</p> <p>Every township in the development area is littered with glass, plastic and chemicals that may cause water pollution. Licenced municipal waste disposal facilities should be developed to cater for any new development before it is undertaken. These facilities should be properly maintained.</p>	<p>is for the proposed housing development and not for the authorisation of a wastewater treatment works (WWTW) – considering this, should the EA be granted for this application, the recommended WWTW would require a new application where environmental impacts will have to be re-assessed relative to impacts associated with WWTWs. As per the conclusion of the EIR, it is recommended that the proposed Housing Development be supported and be authorised with the necessary conditions of approval, namely the compilation of a stormwater management plan, waste management plan (addressing sewage and solid waste management), along with the implementation of recommendations / mitigation measures proposed by Specialists (Appendices 6A-D) and included in the EMPr (Appendix 9).</p> <p>Noted. This should be incorporated into the application for the proposed construction of the WWTW.</p> <p>As per Final EIR, it is recommended that the proposed Housing Development be supported and be authorised with the necessary conditions of approval, namely the compilation of a stormwater management plan, waste management plan (addressing sewage and solid waste management), along with the implementation of recommendations / mitigation measures proposed by Specialists (Appendices 6A-D) and included in the EMPr (Appendix 9). Moreover, it was not in the scope of this EIR to develop a waste management plan however, mitigation measures addressing these issues have been proposed and must be implemented during the construction and operational phases of this project. These mitigation measures/ recommendations have been proposed by Specialists and aims to mitigate solid waste from entering the drainage lines, polluting storm water, and subsequently ending up in the Orange River. The potential re-use of treated wastewater would be addressed in the application for the proposed construction of the WWTW.</p> <p>Solid waste management has been identified as a potential impact by Specialists, I&APs, and was included in the EIR. Mitigation measures</p>

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			<p>and recommendations proposed by the Specialists and EAP have been included in the EIR and the EMP. This includes the recommended compilation of a stormwater management plan and wastewater management plan which incorporates engineering parameters (please refer to Appendix 4B) and concerns raised by the I&APs, namely the management of sewage and solid waste. Moreover, illegal dumping was observed during the site visit and by the Specialists.</p>
15		<p>BIOMONITORING IN SUPPORT OF A WATER USE LICENCE APPLICATION</p> <p>Wide-ranging assumptions were made in the Freshwater Reports to substantiate desktop ecological scores without site-specific field work. SASS5 is just one of the recognized rapid bioassessment methods, making use of benthic macroinvertebrates to assess ecosystem integrity in rivers. It is of limited use without information on instream water quality, flow, habitat, etc.</p> <p>Caution is therefore needed in applying rudimentary SASS surveys as the sole protocol when determining a rivers Present Ecological State (PES), Ecological Importance (EI), Ecological Sensitivity (ES) and for the completion of an aquatic ecosystem risk assessment. No fish, sediment, hydrology, geomorphology, water quality, diatom, habitat or riparian vegetation assessments were performed. The Freshwater Report's outcome is therefore based on opinion and not on scientifically credible research.</p> <p>Gariiep Watch is maintaining a detailed biomonitoring program on the lower Orange River and one of our sites are situated at EWR02 (Boegoeberg). A Boegoeberg SASS5 score of 146 was calculated by accredited practitioners of Clean Stream Biological Services for Gariiep Watch during September 2019.</p> <p>The DWS's River Health database as well as a 2010 macroinvertebrate survey for the DWS supports this score at EWR02. The SASS5 scores at twelve Orange River localities including the Boegoeberg area as sampled by Watsan Africa ranged between 18 and 50. This major discrepancy between our finding of 146 and those reported by Watsan Africa in their Freshwater Reports is disturbing, especially because these low scores are blamed solely on toxic agricultural runoff. There is no basis for this</p>	<p>Respondent: Freshwater Specialist</p> <p>The Department of Water and Sanitation maintains an elaborate biomonitoring schedule in the Lower Orange River. Sampling rounds are conducted every 3 months on selected sampling stations. These biomonitoring results are not available to specialist scientists for WULA's. The DWS, according to their rich database, is in the best position to decide if the limited biomonitoring results as offered can contribute towards their decision-making.</p> <p>Moreover, a Fresh Water Report for a WULA, apart from some of the key water quality attributes that can be measured with field instruments, because of typical time and budget constraints, cannot conduct microbiological and chemical water analysis. Again, the DWS maintains an elaborate sampling and national water quality analytical programme that has resulted in a long and very rich database. The DWS will draw on this knowledge for their decision-making.</p> <p>Some of the details: A SASS5 score of 146 is certainly not representative of a mature river, with limited habitat types and many impacts. To uphold this score as the base-line for the Lower Orange River is simply unrealistic and scientifically undefendable.</p> <p>The specialist is a registered scientist, in line with South African legislation who has participated in the National River Health Programme and have been conducting biomonitoring since its inception.</p>

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		<p>assumption and all findings in the Freshwater Reports should then be viewed with circumspection.</p> <p>Proof of the accreditation of Watsan Africa's SASS practitioners are requested.</p>	
16		<p>ECOLOGICAL WATER REQUIREMENTS</p> <p>A comprehensive Reserve determination for the lower Orange River WMA was conducted for the Orange Senqu River Commission (ORASECOM) and the DWS in 2016. This DWS report deals with the ecological water requirements for surface and ground water in the lower Orange River and includes a site EWR02, which is located at Boegoeberg in Management Resource Unit C (Prieska to Boegoeberg). No mention or reference is made to this important DWS Report No. RDM/WMA06/00/CON/COMD/0216 of August 2016 in the Freshwater Reports. The 2016 Ecoclassification at site EWR02 showed that the Ecological Importance and Sensitivity (EIS) is High, the Present Ecological State (PES) is moderately modified (Category C) and the Recommended Ecological Category (REC) falls in Category B/C.</p> <p>Another relevant report has also not been considered by the compilers of the Freshwater Reports and draft EIR's. Rivers for Africa as the professional service provider for DWS compiled a report on the ecological requirements for surface and ground waters in the lower Orange River WMA (Report no. RDM/WMA06/00/CON/COMP/0217 of July 2017). This report provides valuable input towards the implementation of an ecological reserve downstream from the development area.</p> <p>The aquatic impact assessments in the Freshwater Reports and draft EIR's have not incorporated relevant, available and credible scientific research. These reports can therefore not be relied on to plan for the mitigation of aquatic biodiversity-related risks that may be associated with the proposed developments.</p> <p>The cumulative impact of these six major developments on ecological water requirements in the lower Orange River were not considered in the draft EIR's. A water use licence in terms of Section 21 of the NWA should not be granted if this impact is not properly understood.</p>	<p>Respondent: Freshwater Specialist</p> <p>In the Freshwater Report, the Present Ecological State of the Orange River was assessed to be a Class C. This supports the findings of the 2016 report that assigned a "C" as well. It remains for the I&AP to scientifically prove that the "cumulative" impacts of the 6 proposed developments would be of such a scale and nature that a General Authorization should not be granted, provided the sewage and waste issues are resolved.</p>

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17		<p>WATER QUALITY</p> <p>Freshwater Reports without any reference to surface or ground water quality information should be viewed with caution. It is stated in the Freshwater Reports by Watsan Africa that pesticides in agricultural return flow is responsible for a heavy impact on biomonitoring results, resulting in a reduced SASS score. Detailed pesticide analyses of agricultural return flows and DEEEP toxicity studies were performed for Gariep Watch by Clean Stream and BiotoxLab. These analyses did not show any pesticides or environmental toxicity in the agricultural return flows or in the lower Orange River.</p> <p>The impact assessments that pertain to water quality in the Freshwater Reports and subsequent draft EIR's are based on speculation and not on credible scientific research. In the absence of water quality data, any conclusions made in these reports cannot be used to plan for the mitigation of any surface or ground water quality risks that may be associated with the proposed developments.</p> <p>Gariep Watch do appreciate and support Watsan Africa's viewpoint that further developments will exacerbate the current sewerage treatment and disposal malpractices. This forewarning by the project team's own specialists was shrewdly not carried over to the draft EIR's or risk assessment matrix.</p> <p>These Freshwater Reports were also prepared in support of a water use licence application (WULA) as required in terms of Section 21 of the National Water Act. Outdated and speculative information were provided therein, and a new water use licence could not in all conscience be approved by the DWS. The context of current sewerage treatment and disposal malpractices should be taken into consideration when reviewing new licence applications.</p>	<p>Respondent: Freshwater Specialist and EAP</p> <p>According to the findings of the Freshwater Report, a General Authorization would be in order, provided that the wastewater and urban waste issues be resolved. This is entirely in agreement with the I&AP's stance on these "malpractices".</p> <p>Please note that as per the conclusion of the EIR, it is recommended that the proposed Housing Development be supported and be authorised with the necessary conditions of approval, namely the compilation of a stormwater management plan, waste management plan (addressing sewage and solid waste management), along with the implementation of recommendations / mitigation measures proposed by Specialists (Appendices 6A-D) and included in the EMPr (Appendix 9). Moreover, it was not in the scope of this EIR to develop a waste management plan however, mitigation measures addressing these issues have been proposed and must be implemented during the construction and operational phases of this project. These mitigation measures/ recommendations have been proposed by Specialists and aims to mitigate solid waste from entering the drainage lines, polluting storm water, and subsequently ending up in the Orange River. The potential re-use of treated wastewater would be addressed in the application for the proposed construction of the WWTW.</p>
18		<p>WATER ABSTRACTION</p>	<p>Respondent: Freshwater Specialist and EAP</p>

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		<p>The abstraction of additional water resources from the lower Orange River was not addressed in the specialist studies or draft EIR's. The cumulative impact of all !Kheis township development proposals should be evaluated. This is a serious omission and considered to be another fatal flaw in the environmental application process.</p> <p>Available research should be used to prepare a credible water use licence application that takes cognisance of the Ecological Reserve. Relevant reports are DWS Report No. RDM/WMA06/00/CON/COMD/0216 of August 2016 and Report no. RDM/WMA06/00/CON/COMP/0217 of July 2017.</p> <p>Table 2 was prepared from information enclosed in the Bvi Engineering reports and show the existing annual average daily water demands compared with the expected growth in annual average daily water demand.</p> <p>Table 2: Existing and new annual average daily water demands.</p> <table border="1" data-bbox="539 783 1218 1070"> <thead> <tr> <th>TOWNSHIP</th> <th>CURRENT AVERAGE DAILY DEMAND m³/day</th> <th>EXPECTED NEW DAILY DEMAND m³/day</th> <th>ADDITIONAL WATER REQUIREMENT m³/day</th> </tr> </thead> <tbody> <tr> <td>WEGDRAAI 360 stands</td> <td>535</td> <td>319</td> <td>216</td> </tr> <tr> <td>TOPLINE 248 stands</td> <td>428</td> <td>279</td> <td>149</td> </tr> <tr> <td>OPWAG 730 stands</td> <td>488</td> <td>106</td> <td>382</td> </tr> <tr> <td>GROOTDRINK 370 stands</td> <td>681</td> <td>459</td> <td>222</td> </tr> <tr> <td>GROBLERSHOOP 1500 stands</td> <td>3496</td> <td>1172</td> <td>2324</td> </tr> <tr> <td>BOEGOEBERG 550 stands</td> <td>710</td> <td>380</td> <td>330</td> </tr> <tr> <td>TOTAL</td> <td>6 338 m³/day</td> <td>2 715 m³/day</td> <td>3 673 m³/day</td> </tr> </tbody> </table> <p>Table 2 shows that the total cumulative new water demand will increase to 9 053 m³/day, which include the developments additional cumulative water demand of 3 623 m³/day.</p> <p>This additional water requirement from the lower Orange River for the development of 3 758 new stands is significant. It can be expected that downstream users and especially the aquatic ecosystems may be affected during low flow conditions. These cumulative impacts have not been addressed in the draft EIR's.</p>	TOWNSHIP	CURRENT AVERAGE DAILY DEMAND m ³ /day	EXPECTED NEW DAILY DEMAND m ³ /day	ADDITIONAL WATER REQUIREMENT m ³ /day	WEGDRAAI 360 stands	535	319	216	TOPLINE 248 stands	428	279	149	OPWAG 730 stands	488	106	382	GROOTDRINK 370 stands	681	459	222	GROBLERSHOOP 1500 stands	3496	1172	2324	BOEGOEBERG 550 stands	710	380	330	TOTAL	6 338 m³/day	2 715 m³/day	3 673 m³/day	<p>The DWS is in the best position to discount the additional water abstraction against the Ecological Reserve. This is a formidable study on its own and is beyond the scope of a WULA Fresh Water Report. Moreover, this additional water abstraction is negligible if compared to that of agriculture and irrigation.</p> <p>Please note that a Water Use License Application is in process. The Department of Water and Sanitation is the competent authority with regards to granting the Water Use license.</p> <p>Noted, and confirmed (please note that the expected new daily demand for Groblershoop is 1127m³.day and not 1172m³/day). Total_{expected new daily demand} = 2670m³/day and Total_{additional water requirement} = 3668m³/day.</p> <p>Please note that a Water Use License Application is in process. The Department of Water and Sanitation is the competent authority with regards to granting the Water Use license.</p>
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19		<p>PROCEDURAL SHORTCOMINGS</p> <p>Gariiep Watch commented on the draft Scoping Report on 22 September 2020. These comments should have been addressed by the various specialists for its inclusion into the draft EIR's, which is dated January 2021. The Freshwater Reports are dated May 2020, which means that the Sept 2020 Gariiep Watch comments have been ignored and not included in these reports or the draft EIR's.</p> <p>This is a serious shortcoming in the interactive public participation process that should be followed for such an important and expansive development proposal.</p> <p>The draft EIR's by EnviroAfrica conclude with an assertion that the proposed development does not pose any significant impact, should the proposed mitigation measures be implemented. We strongly disagree with this misleading statement and view it as a fatal flaw in the process. The real risks to the lower Orange River as highlighted by Gariiep Watch has been ignored and were therefore not included in the environmental decision-making process that leads to mitigation.</p> <p>We believe that there is a high likelihood that existing adverse impacts associated with untreated sewerage discharges from the !Kheis Municipality will merely continue and new developments will compound the severity of these impacts. Prevailing malpractices at the !Kheis Municipality should be resolved before embarking on any new extensions.</p> <p>Please feel free to contact Gariiep Watch if there are any questions or queries.</p>	<p>Please note that issues raised by the Gariiep Watch were addressed in the Draft EIR in the following way. It must be further noted that this application is for the proposed housing development and <u>not</u> for the authorisation of a WWTW – in light of this, should the EA be granted for this application, the recommended WWTW would require a new application where environmental impacts will have to be re-assessed relative to impacts associated with WWTW. Moreover, as per the conclusion of the EIR, it is recommended that the proposed Housing Development be supported and be authorised with the necessary conditions of approval, namely the compilation of a stormwater management plan, waste management plan (addressing sewage and solid waste management), along with the implementation of recommendations / mitigation measures proposed by Specialists (Appendices 6A-D) and included in the EMPr (Appendix 9).</p> <p>Please see following for summary of responses to previous comments raised:</p> <ol style="list-style-type: none"> 1. Findings of the Specialists, EAP and the Municipality were considered with regards to design alternative layouts (Appendix 2A-D). Design Alternative 4 (Appendix 2D) is the preferred layout and incorporates the aforementioned drainage lines – zoning these areas as Open Space II and Undetermined Zone and therefore, mitigating impacts associated with proposed households being in close proximity to the identified watercourses. Moreover, proposed mitigation measures relative to the construction and operational phases have been included in the Final EIR, Specialist Reports, and the EMPr, which must be complied with should the EA be granted. 2. Illegal dumping was noted during the site visit conducted by the EAP and Specialists. Illegal dumping was identified as an impact to watercourses and surrounding environment (e.g. Appendix 6C) and mitigation measures were proposed. Illegal dumping has been addressed in the Specialist Reports and

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			<p>Engineer's Services Report where a solid waste management plan was recommended to be compiled and implemented for the proposed development as a condition of the EA. Mitigation measures and recommendations stipulated by the Specialists and Engineer (and as included in the EMPr – Appendix H) must be complied with.</p> <p>3. Issues relating to water quality and sewerage infrastructure have been addressed in the draft EIR, Specialist Reports (Appendix 6A-D), and Engineer's Services Report (Appendix 4B). As per the Engineer's Services Report, the Engineer has detailed existing services (including water supply, sewage management, solid waste management, electricity, roads, and stormwater management) capacity and recommended the construction / upgrade of services (e.g., sewage management infrastructure) to adequately service the proposed development. As per the Draft EIR, the proposed development is supported with the necessary conditions of approval, namely the compilation of a stormwater management plan, waste management plan (addressing sewage and solid waste management), along with the implementation of recommendations / mitigation measures proposed by Specialists (Appendices 6A-D) and included in the EMPr (Appendix 9).</p> <p>Watercourses (non-perennial watercourses) present within the proposed development footprint are mostly dry throughout the year. The Freshwater Impact Assessment (Appendix 6C) included the 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 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 in order to elucidating the combined impact of the proposed developments on the Orange River. Biomonitoring was carried out according to Dickens and Graham, (2002). Impacts on the Orange River, associated with the proposed development, have been included in the Freshwater Assessment as well as the Final EIR. Proposed mitigation measures have also been included.</p>

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20	<p>Date: 24th February 2021 Format: Email Letter I&AP: SAHRA</p>	<p>Final Comment The following comments are made as a requirement in terms of section 3(4) of the NEMA Regulations and section 38(8) of the NHRA in the format provided in section 38(4) of the NHRA and must be included in the Final EIA and EMPr: 38(4)a – The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit no objections to the proposed development; 38(4)b – The recommendations of the specialists are supported and must be adhered to. No further additional specific conditions are provided for the development; 38(4)c(i) – If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA APM Unit (Natasha Higgitt/Phillip Hine 021 462 5402) must be alerted as per section 35(3) of the NHRA. Non-compliance with section of the NHRA is an offense in terms of section 51(1)e of the NHRA and item 5 of the Schedule; 38(4)c(ii) – If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (Thingahangwi Tshivhase/Mimi Seetelo 012 320 8490), must be alerted immediately as per section 36(6) of the NHRA. Non-compliance with section of the NHRA is an offense in terms of section 51(1)e of the NHRA and item 5 of the Schedule; 38(4)d – See section 51(1) of the NHRA; 38(4)e – The following conditions apply with regards to the appointment of specialists: i) If heritage resources are uncovered during the course of the development, a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the heritage resource. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA; The Final EIA and EMPr must be submitted to SAHRA for record purposes; The decision regarding the EA Application must be communicated to SAHRA and uploaded to the SAHRIS Case application.</p> <p>Should you have any further queries, please contact the designated official using the case number quoted above in the case header.</p>	<p>Noted, thank you for providing comment on the aforementioned project.</p> <p>These requirements have been included as part of the Final EIR and EMPr.</p>