13 May 2011 Email: louise.corbett@aurecongroup.com

Dear Registered Interested and Affected Party

PROPOSED REVERSE OSMOSIS PLANT AT HENDRINA POWER STATION, MPUMALANGA (DEA REF NO.: 12/12/20/2273): NOTIFICATION OF PROPOSED PROJECT AND OPPORTUNITY TO COMMENT

The above-mentioned project has reference. The purpose of this letter is to notify Interested and Affected Parties (I&APs) of the proposed project and provide I&APs an opportunity to comment on the proposed project.

1. Background

Hendrina Power Station (Hendrina) is located approximately 16 km north north west of Hendrina town in the Steve Tshwete Local Municipality in Mpumalanga. Hendrina was completely commissioned in 1976 and consists of ten units of 200 megawatts (MW) each (i.e. a total of 2 000 MW) and operates wet cooling and ashing systems. The station's wet ashing system consists of five dams with a combined total surface area of approximately 210 hectares (ha). The power station layout is provided in **Annexure A**.

Hendrina obtains raw water from the Komati water system, which consists of Nooitgedacht and Vygeboom dams. The Komati system is augmented from the Usutu system via the Komati/Usutu link. Other power stations supplied by the Komati system include Arnot, Komati and Duvha Power Stations.

a) Cooling system

In the wet cooling system, raw water is gravity fed into the ponds of cooling towers no. 7 and 8 on the south side of Hendrina, and cooling towers no. 3 and 4 on the north side to make up for all the losses experienced in the system. The most prominent contributor of the losses is the evaporation which happens in the cooling towers.

The cooling water is circulated via the cooling water pumps which take water from the cooling tower ponds and pump this water to the condenser where it cools the exhaust steam from the turbine. The return water from the condenser is at a higher temperature because of the heat it has absorbed from the steam. This hot water returns to the cooling towers where it is distributed as a fine spray by the flow distributors inside the cooling towers. This fine spray is cooled by the draft, which is created by the natural design of the cooling tower, which evaporates some of the water whilst the rest of the water remains in liquid form and fills the cooling tower ponds.

This remnant liquid water is then re-circulated in the aforementioned process including the make-up water which comes from the raw water reservoirs.

b) Ashing system

Coal that is used in the power station possesses useful constituents which aid the process of combustion; the other constituents are waste material and form ash. When the coal is burnt in the furnace the ash still remains as it is not volatile. The ash which remains is of two different grades namely coarse ash and fly ash. The coarse ash is the ash which collects at the bottom of the furnace and is often slightly larger in particle size in comparison to the fly ash. The fly ash, which is more commonly known as dust, flies through the top end of the furnace into the flue, where it is captured by bag filters.

The coarse ash is collected in the ash hoppers which are situated below the furnace, whereas the fly ash collects in dust hoppers. These hoppers are filled with water to facilitate the movement of ash (as slurry). The water used for the conveyance of ash is ash water return (AWR) that is usually supplemented with service water (untreated raw water which is pumped from the water treatment plant (WTP)) and wastewater generated from the demineralised water production process. This water enters the hopper and mixes with the ash, the resultant ash/water mixture collects in ash sumps and is subsequently pumped by the ash pumps to booster pumps which increase the pressure head so that the ash can be transported to the ash dams which are situated a few kilometres away from the station.

The ash water slurry that is pumped to the ash dams collects at the different discharge points on the ash dams. The ash settles at the bottom and the water is then sucked by a penstock which directs it to the new lower dams. From the new lower dams the water is pumped to the old lower dams which in turn pump the water to the upper dams (AWR dams). The upper dams then pump the water back to the station as AWR to be used in the ashing process.

c) Water Management at Hendrina

The station currently receives, on average, approximately 82 megalitre (ML) of raw water per day, with the power station operating at an average load factor of 75 %. Of the raw water received 77 % evaporates from cooling water, 3.5 % evaporates from the steam water cycle, 3.5 % is absorbed by ash, 12 % evaporates from the ash system and 3.5 % is used for potable production. The remaining 0.5 % is lost from smaller power station systems.

The effluents from the water treatment processes are used as make-up water for transporting ash from the power station to the ash dams. During this process some of these effluents are absorbed by the ash and the balance evaporates from the ash dams.

The ash dams and AWR dams are constructed and operated to have a free board of approximately 1.5 m (height of dam wall above water level). During wet season an additional volume of storm water (see **Table 1**) collected in the ashing system must be accommodated. Storm water enters the ash dams and is pumped to the AWR dams. This causes the free board of both the ash dams and the AWR dams to decrease. Should the ash dams overflow they overflow into the AWR dams. Should the AWR dams overflow they would spill to the environment. As such the additional volume of storm water is a risk to Eskom‘s Zero Liquid Effluent Discharge (ZLED) policy compliance and has to be accommodated in order to comply with the station’s licence conditions and legislation.

Table 1: Wet season storm water gain from Hendrina Power Station ash dams

Rainfall (mm/pa)	Storm water gain (ML/ day)
690	11
800	13
900	14.5
1000	16
1050	17

2. Proposed project

Eskom has considered the risk to the current water management system and compliance with Eskom's ZLED at Hendrina as described above, and proposes to construct a RO plant to treat the concentrated cooling water (CCW). The treated water (permeate) from this plant would be re-used as a feed for the demineralisation plant at the power station's WTP or, should there not be sufficient demand for demineralised water, it would be re-used as cooling water.

By removing salts from the CCW in the proposed RO plant the raw water currently used for producing demineralised water could be replaced with treated water from the proposed RO plant, thus decreasing water consumption. Alternately the treated water from the proposed RO plant could be re-used as cooling water, which would also decrease water consumption.

This is possible because the ashing system was designed to operate with cooling water as an occasional feed only. However, due to deterioration in the quality of the raw water supplied to Hendrina, the number of cycles for which cooling water can be re-used is constrained and hence there is more blowdown of CCW than anticipated. The CCW is used in the ashing system to avoid releasing it into the environment. Therefore the ashing system has water in excess of its requirements, particularly when large volumes of storm water are received in above-average rainfall years. The ashing system does however still require CCW during dry periods when there is not sufficient storm water and other effluent feeds for ashing.

Installation of the RO plant at Hendrina would make it possible to manage the ash dams effectively as the volume of CCW sent to the ash dams would be reduced. This would free up additional volume within the ashing system (ash dams and AWR dams) to accommodate excess storm water in above average rainfall years and thereby ensure conformance to the ZLED policy, the National Water Act and Water Use Licence conditions.

The proposed RO plant would also assist in reducing the quantity of imported soluble salts (i.e. commercial chemicals) used in the production of demineralised water by 30 %. This is due to the requirement for suitable quality feed water for the production of demineralised water, which requires that salts are removed from the raw water feed. The proposed RO process would use less chemicals in the removal of salts for the feed water than the current process. This would result in a better quality feed water, which in turn would require less chemicals to produce demineralised water. As such the volume of salts to be disposed on the ash dam would ultimately decrease when using RO water as a feed for the demineralisation process. The reduced need for chemicals would also result in a cost saving for Eskom.

a) Proposed RO Plant process

The proposed RO plant for Hendrina would treat 8 ML/day of CCW, which is equivalent to 2 920 ML per annum. The feed water to the plant would be supplied from a tap-off from the cooling water sedimentation plant on the northern side of the station with an existing interlink from the south cooling water plant.

The plant would be designed with a minimum recovery of 80 %. The plant would be modular so that the plant could continue to operate whilst modules are offline for maintenance, hence allowing an availability of 90 %. It would also be designed to remove organics and other impurities such that the permeate (recovery water) would satisfy the quality requirements for feed water to the demineralised water process).

The recovered water (permeate) would primarily be sent to the demineralisation plant and in cases where there is no need at the demineralisation plant, the water would be sent to the cooling water system. It is anticipated 6.4 ML/day of permeate would be produced by the proposed RO plant. The reject stream, including the effluent from clean in place chemicals from the plant, would be transferred to the existing effluent neutralisation sump at the WTP, from where it would be pumped and disposed via the wet ashing process. It is anticipated 1.6 ML/day of reject would be produced.

Should the RO plant be offline, feed water to the demineralisation plant would be obtained from raw water as is currently practised.

3. Legal requirements

In terms of the National Environmental Management: Waste Act (No. 59 of 2008)(NEM:WA) the proposed treatment of waste in an RO plant, as described above, is listed in Category B of Schedule 1 (Government Notice (GN) No. 718 of 3 July 2009). The following activities are applicable:

No.	Listed activity (category B)
7	The treatment of effluent, wastewater or sewage with an annual throughput capacity of 15 000 cubic metres or more.
11	The construction of facilities for activities listed in Category B of this Schedule (not in isolation to associated activity).

According to Section 4 of Schedule 1, *"…a person who wishes to commence, undertake or conduct an activity listed under this Category, must conduct an environmental impact assessment process, as stipulated in the environmental impact assessment regulations made under section 24(4) of National Environmental Management Act…as part of the waste licence application."*

Furthermore, in terms of the National Environmental Management Act (No. 107 of 1998) (NEMA) the proposed RO plant is also listed in GN No. 544 of 18 June 2010. The following activity is applicable:

No.	Listed activity (GN No. 544, 18 June 2010)
28	The expansion of or changes to existing facilities for any process or activity where such expansion or changes to will result in the need for a permit or license in terms of national or provincial legislation governing the release of emissions or pollution, excluding where the facility, process or activity is included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case that Act will apply.

According to Section 3(2) of GN No. 544 of 18 June 2010, *"The investigation, assessment and communication of potential impact of activities must follow the procedure as prescribed in regulations 21 to 25 of the Environmental Impact Assessment Regulations published in terms of section 24(5) of the Act."* Section 21 to 25 of the EIA Regulations refers to the BA process.

However, Section 20 (4) of the NEMA allows that *"If an applicant intends undertaking an activity to which S&EIR [Scoping and Environmental Impact Report] must be applied in terms of subregulation (2) and the applicant, on advice of the EAP managing the application, is for any reason of the view that it is likely that the competent authority will be able to reach a decision on the basis of information provided in a basic assessment report, the applicant may apply, in writing, to the competent authority for permission to apply basic assessment instead of S&EIR to the application."*

A motivation for a downgrade from an EIA to a BA process was subsequently submitted to DEA on 1 April 2011, based on the following:

1. The project is a brownfields development. All activities would occur within the confines of the power station, on land already impacted either through ash disposal or the power station precinct.
2. The re-use of water from CCW would result in a net gain for the environment, compared to the current status, as the risk of a pollution event would be reduced.
3. Effluent from the proposed RO plant would not increase the volume of effluent disposed of at Hendrina.
4. The proposed RO plant would result in a decreased salt load being disposed of in the ash dam.
5. The proposed RO plant would allow for decreased water consumption at Hendrina.
6. The footprint of the proposed RO plant and associated infrastructure would be relatively small, approximately 5 000 m^2 and 480 m^2, respectively.
7. The proposed RO plant would be integrated with the existing cooling water infrastructure.

The downgrade was subsequently approved by DEA on 12 April 2011. As such a BA process, as outlined in sections 21 to 25 of Regulation R543, is currently being undertaken for the proposed project. A flow diagram explaining the required procedure is attached as **Annexure B.**

4. Public participation

You have been identified as a potential I&AP for this project, either because you represent an affected organisation or because of your proximity to the proposed project. Public participation is an integral part of the environmental process, and would entail the following phases:

- ***Phase 1~ Notification of the proposed project***
  This letter notifies I&APs of the proposed project and provides background information and a project description. The proposed project has also been advertised in the Middelburg Observer and a notice has been placed at the entrance to Hendrina. I&APs are invited to submit comments indicating their comments and/or concerns. All comments received will be incorporated and responded to in a Comments and Responses Report (CRR), which will be included in the Draft Basic Assessment Report (BAR).

- ***Phase 2~ Comment on Draft Basic Assessment Report (BAR)***
  The Draft BAR would be lodged at Pullenshope Public Library and Hendrina and made available on the Eskom and Aurecon websites for a 40 day public comment period to elicit any comments or concerns. All registered I&APs would be notified by letter of the availability of the Draft BAR for

comment. All comments received would be incorporated into the Final BAR and a CRR. Where relevant, the report would be amended in light of comments received.

- ***Phase 3 ~ Comment on the Final Basic Assessment Report***
  The Final BAR would be lodged at the same locations as the Draft BAR, for final 21-day comment period. Any comments received during this period would be collated and forwarded to DEA, along with the Final BAR.

- ***Phase 4 ~ Opportunity for Appeal***
  All registered I&APs would be notified of the environmental authorisation decision within 10 days of it being issued. Anyone wishing to appeal the decision would be required to follow the appeal procedure as indicated in Chapter 7 of the EIA Regulations (GN No. 543 of 18 June 2010).

The public participation phases are indicated in the flow diagram of the BA process in **Annexure B**.

Please review the information contained in this letter and submit your comments on the proposed project by Friday, 3 June 2011. To comment, write a letter, call or e-mail Louise Corbett of Aurecon on Tel: (021) 481-2501, Fax: (021) 424-5588 or louise.corbett@aurecongroup.com or PO Box 494, Cape Town, 8000.

5. Way forward

Should you have any comments or concerns regarding the proposed project, please provide your comments in writing to Aurecon by email, fax or post, on or before **3 June 2011**. All comments received and issues raised will be included in a CRR, which will be appended to the Draft BAR. Copies of the CRR will be sent to those who submitted comment. All registered I&APs will be notified when the Draft BAR is available for comment.

If you have any questions or comments, or require clarification of the content of this letter, please contact **Louise Corbett** of Aurecon

Yours sincerely
AURECON

LOUISE CORBETT *(Pr.Sci.Nat.)*
Practitioner: Environmental Services

BRETT LAWSON *(Pr.Sci.Nat., Cert. EAPSA)*
Technical Director: Environmental Services

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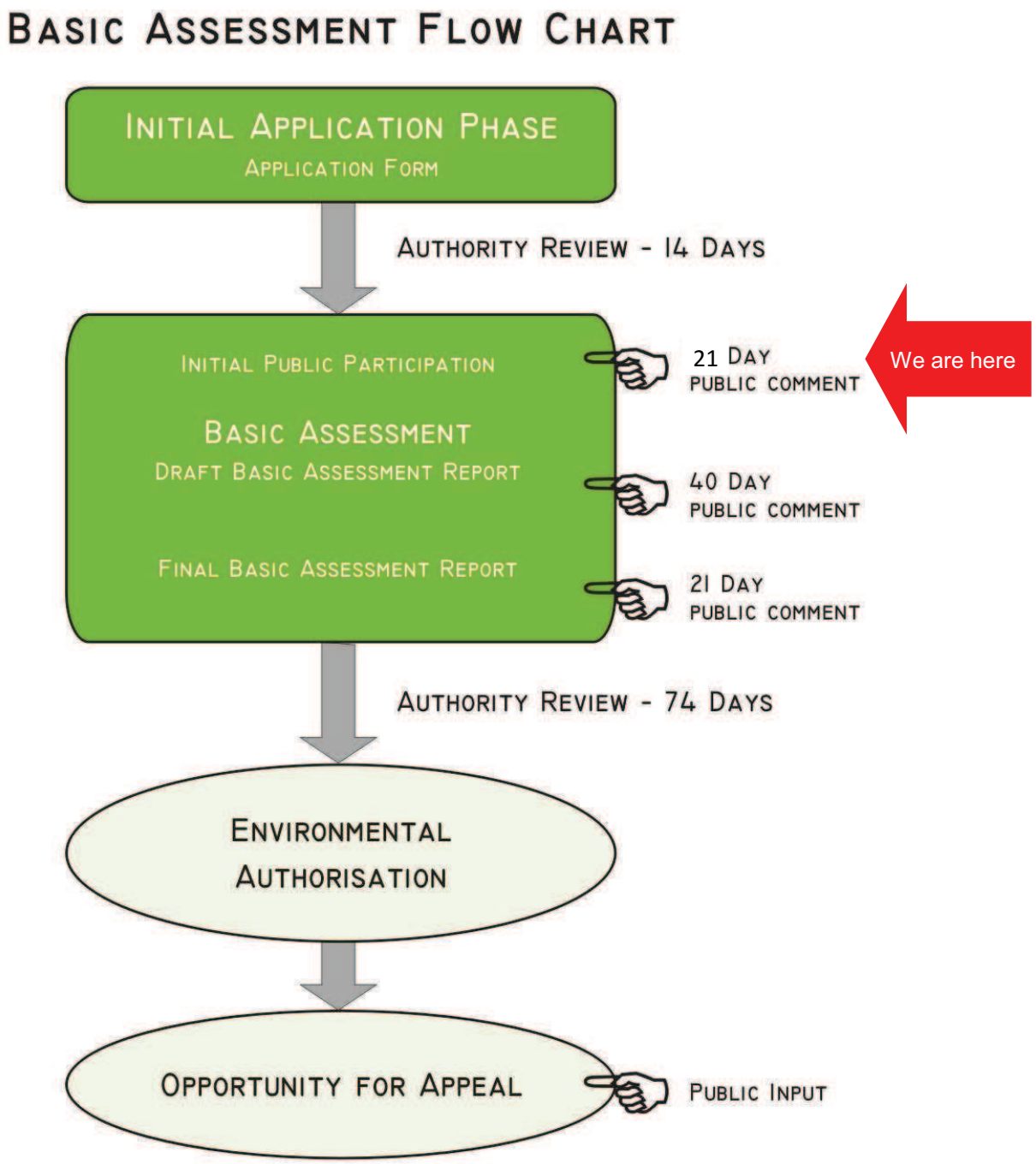
Annexure A: Location Map

Figure 1: Location of Hendrina Power Station, Mpumalanga showing various infrastructure (courtesy Google Earth)

Annexure B: Flow chart of the BA process



13 Mei 2011 E-pos: louise.corbett@aurecongroup.com

Geagte Geregistreerde Belanghebbende en Geaffekteerde Party

BEOOGDE TRU-OSMOSE-AANLEG BY HENDRINA KRAGSENTRALE, MPUMALANGA (DOS VERWYSINGSNR: 12/12/20/2273): KENNISGEWING VAN BEOOGDE PROJEK EN GELEENTHEID VIR KOMMENTAAR

Bogenoemde projek het betrekking. Die doel van hierdie brief is om Belanghebbende en Geaffekteerde Partye (B&GPe) van die beoogde projek in kennis te stel en B&GPe die geleentheid te gee om op die beoogde projek kommentaar te lewer.

1. Agtergrond

Hendrina Kragsentrale (Hendrina) is ongeveer 16 km noord noord-wes van die dorp Hendrina in die Steve Tshwete Plaaslike Munisipaliteit, Mpumalanga, geleë. Hendrina is in 1976 in gebruik geneem en bestaan uit tien eenhede van 200 megawatt (MW) elk (i.e. 'n totaal van 2 000 MW), en maak gebruik van 'n nat-verkoelingsproses en 'n asstelsel. Die kragsentrale se nat-asstelsel bestaan uit vyf damme met 'n gesamentlike oppervlakte van ongeveer 210 hektaar (ha). Die uitleg van die Kragsentrale word in **Bylae A** aangedui.

Hendrina verkry sy rouwater vanaf die Komati waterstelsel, wat bestaan uit die Nooitgedacht- en Vygeboomdam. Die Komati-stelsel word aangevul met water vanaf die Usutu-stelsel by wyse van die Komati/Usutu-verbinding. Ander kragsentrales wat water vanuit die Komati-stelsel ontvang, is onder andere die Arnot, Komati en Duvha kragsentrales.

a) Verkoelingstelsel

Rouwater word in die nat verkoelingstelsel onder gravitasie na koeltorings nr. 7 en 8 (suid van Hendrina) geneem, sowel na koeltorings nr. 3 en 4 aan die noordekant. Dit word gebruik ter aanvulling vir die verliese wat in die stelsel voorkom. Die vernaamste verliese word veroorsaak deur verdamping in die koeltorings.

Verkoelingswater word d.m.v. verkoelingswaterpompe gesirkuleer. Hierdie pompe neem water uit die koeltoringdamme en pomp dit na die kondensator waar dit die turbine se uitlaatstoom afkoel. Die terugvloeiwater vanaf die kondensator is heelwat warmer omdat dit die hitte van die stoom geabsorbeer het. Hierdie warm water word na die koeltorings teruggeneem, waar dit by wyse van vloeiverdelings in die koeltorings in 'n fyn sproei verdeel word. Die ontwerp van die koeltoring veroorsaak dat die atmosferiese lug die fyn sproei afkoel. Dit beteken dat 'n gedeelte van die sproei verdamp, terwyl die res van die water in sy vloeibare vorm bly en na die koeltoringdamme afvloei.

Hierdie oorblywende vloeibare water word dan weer gesirkuleer soos hierby beskryf, tesame met die nodige bykomende water wat vanaf die rouwater-reservoirs onttrek word om op te maak vir die verliese a.g.v. verdamping.

b) Asstelsel

Die steenkool wat in die kragsentrale gebruik word, beskik oor bruikbare samestellings wat die verbrandingsproses aanhelp. Die oorblywende komponente is afvalmateriaal en word as “as” uitgeskei. Wanneer steenkool in die oond verbrand word, bly as agter (alle nie-vlugtige grondstowwe). Daar is twee grade agterblywende as, naamlik growwe as en vliegas. Growwe as versamel op die bodem van die oond en die partikelgrootte daarvan is gewoonlik effens groter as dié van vliegas. Vliegas – beter bekend as stof – styg op na die skoorsteenpyp aan die bokant van die oond, waar dit in sakfilters opgevang word.

Die growwe as word opgevang in as-valbakke wat onder die oond geplaas word, terwyl vlieg-as in stof-valbakke opgevang word. Hierdie valbakke is met water gevul sodat die as/ watermengsel (bekend as flodder) makliker vervoer kan word. Water wat vir die wegneem van as gebruik word, is hoofsaaklik terugvloei-aswater (TAW), en word gewoonlik aangevul met dienste-water (onbehandelde rouwater vanaf die waterbehandelingsaanleg), asook die uitvloeisel van water waaruit alle soute/ minerale verwyder is. Die water in die valbak meng met die as, en die gevolglike as/watermengsel (flodder) word na asputte geneem vanwaar dit na aanjaagpompe gepomp word. Laasgenoemde verhoog die drukhoogte sodat die as in die asdamme, ’n paar kilometer weg van die kragsentrale af, gestort kan word.

Die aswater/ flodder wat na die asdamme gepomp word, versamel by die verskillende loslatingspunte in die asdamme. Die as sak dan ondertoe, en die oorblywende water word by wyse van 'n sluisklep opgesuig en na die ‘nuwe’ laer damme geneem. Vandaar word die water na die ‘ou’ laer damme gepomp, en dan weer na die boonste damme (TAW-damme). Hierdie water, bekend as TAW, word dan weer na die kragsentrale gepomp om in die as-proses gebruik te word

c) Waterbestuur by Hendrina

Die kragsentrale ontvang tans ‘n gemiddeld van ongeveer 82 megaliter (ML) rouwater per dag, en die kragsentrale word teen ’n gemiddelde lasfaktor van 75 % bedryf. Sewe-en-sewentig persent (77 %) van die rouwater verdamp a.g.v. die verkoelingsproses; 3.5 % verdamp tydens die stoom-watersiklus; 3.5 % word deur die as geabsorbeer; 12 % verdamp vanuit die asstelsel; en 3.5 % word vir drinkwaterdoeleindes gebruik. Die oorblywende 0.5 % is verliese wat in die kleiner stelsels van die kragsentrale voorkom.

Die uitvloeisels van die waterbehandelingsprosesse word benut as bykomende water om die as vanaf die kragsentrale na die asdamme te vervoer. Sommige uitvloeisels word tydens hierdie proses deur die as geabsorbeer, en die balans verdamp vanuit die asdamme.

Die as- en TAW-damme word op so ’n manier gebou en bestuur dat daar altyd 1.5 m vry spasie tussen die oppervlakte van die water/ flodder en die top van die damwal is. Dit word gedoen om voorsiening te maak vir die bykomende volume stormwater (lees **Tabel 1**) tydens die reënseisoen. Stormwater vloei eers in die asdamme, vanwaar dit na die TAW-damme gepomp word. Dit beteken dus dat die hoeveelheid vry spasie in beide die as- en TAW-damme deur stormwater verlaag word. Indien die asdamme sou oorloop, sal dit in die TAW-damme inloop. Indien die TAW-damme oorloop, sal dit ongelukkig ’n nadelige effek op die omgewing hê. Die bykomende volume stormwater hou dus ’n risiko in vir Eskom se voldoening aan sy Zero Storting van Vloeibare Afvalwater (ZSVAW), en moet aangespreek word sodat die kragsentrale aan sy lisensievoorwaardes en die regsverpligtinge kan voldoen.

Tabel 1: Stormwater wat tydens die reënseisoen vanaf die Hendrina Kragsentrale na die asdamme vloei

Reënval (mm/pa)	Stormwater toename (ML/ dag)
690	11
800	13
900	14.5
1 000	16
1 050	17

2. Beoogde projek

Eskom het ondersoek ingestel na die huidige waterbestuurstelsel en die voldoening aan Eskom se ZSVAW by Hendrina soos hierbo beskryf, en beoog daarom om 'n tru-osmose (TO)-aanleg te bou wat die gekonsentreerde verkoelingswater (GVW) sal behandel. Die behandelde water vanaf die TO-aanleg sal dan gebruik word as toevoerwater vir die ontsouting (demineralisering) van water by die kragsentrale se waterbehandelingsaanleg. Indien daar nie genoeg aanvraag vir hierdie ontsoute water is nie, sal dit as verkoelingswater hergebruik word.

Die verwydering van soute (minerale) in die GVW by wyse van die TO-proses, beteken dat die rouwater wat tans in die ontsoutingsproses gebruik word, met behandelde water vanaf die beoogde TO-aanleg vervang kan word; en dus waterverbruik sal verlaag. Die behandelde water vanaf die beoogde TO-aanleg kan alternatiewelik ook as verkoelingswater gebruik word, wat waterverbruik verder sal verminder.

Bogenoemde is alleenlik moontlik omdat die asstelsel ontwerp is om verkoelingswater slegs as bykomende toevoerwater gebruik. As gevolg die agteruitgang in die kwaliteit van rouwater wat aan Hendrina voorsien word, is die aantal kere wat verkoelingswater hergebruik kan word beperk, en veroorsaak dit dat die GVW meer stoom afgee as wat aanvanklik verwag is. Die GVW word in die asstelsel gebruik om te verhoed dat dit in die omgewing vrygestel word. Daar is dus meer water in die asstelsel as wat nodig is – veral wanneer daar 'n groot invloei van stormwater in jare met bogemiddelde reënval is. In droë tye wanneer daar nie genoeg stormwater en ander uitvloeisels is nie, sal die asstelsel egter nog steeds GVW benodig.

Die bou van 'n TO-aanleg by Hendrina sal dit moontlik maak om die asdamme beter te bestuur omdat minder GVW na die asdamme geneem sal word. Dit het tot gevolg dat daar meer spasie in die asstelsel (asdamme en TAW-damme) beskikbaar sal wees, en dat die oormaat stormwater tydens jare met bogemiddelde reënval dus opgevang kan word. Op hierdie manier kan Eskom aan sy ZSVAW-beleid, die Nasionale Waterwet en die voorwaardes van sy Watergebruikslisensie voldoen.

Die beoogde TO-aanleg sal ook help om die hoeveelheid bygevoegde oplosbare soute (i.e. kommersiële chemikalieë) wat in die ontsoutingsproses gebruik word, met 30 % te verminder. Die ontsouting is nodig geskikte toevoerwater nodig is vir die ontsouting van rouwater (oftewel die demineralisering daarvan). Die beoogde TO-proses sal minder chemikalieë gebruik as wat tans die geval is vir die verwydering van soute in toevoerwater. Dit beteken dat daar 'n beter kwaliteit toevoerwater sal wees, en dat minder chemikalieë nodig is om die water te ontsout. Verder beteken dit ook dat minder volumes soute (minerale) in die asdamme gestort sal word. Hierdie afname in gebruik van chemikalieë hou ook 'n koste-besparing vir Eskom in.

a) Beoogde TO-proses

Die beoogde TO-aanleg vir Hendrina sal 8 megaliter GVW per dag kan behandel; wat gelykstaande is aan 2920 ML per jaar. Die aanleg se toevoerwater sal bekom word vanaf 'n aftappunt in die afkoelwater sedimentasie-aanleg, aan die noordekant van die kragsentrale. Dit sal geskied by wyse van 'n bestaande verbinding met die suidelike verkoelingswater-aanleg.

Die aanleg sal ontwerp word sodat ten minste 80 % water herwin kan word. Die aanleg sal modulêr van aard wees sodat die aanleg in bedryf kan bly terwyl modules vir onderhoudswerkwerk van lyn af kan wees – en dus 90 % van die tyd in bedryf kan wees. Dit sal ook ontwerp word om organiese stowwe en ander onsuiwerhede te verwyder sodat die water wat sodoende herwin word, kan voldoen aan die kwaliteit toevoerwater wat vir die ontsoutingsproses nodig is).

Die herwinde water sal hoofsaaklik vir die demineraliseringsaanleg gebruik word. Indien die demineraliseringsaanleg geen behoefte hieraan het nie, sal die water na die verkoelingstelsel geneem word. Na verwagting sal 6.4 ML herwinde water per dag deur die beoogde TO-aanleg beskikbaar gestel word. Die uitskot, wat die uitvloeisel van skoon, in plek chemikalieë vanaf die aanleg insluit, kan by wyse van die bestaande neutraliserings-opgaartenk vir uitvloeisel na die waterbehandelingsaanleg geneem word. Hiervandaan sal dit gepomp en in die asdamme weggedoen word. Na verwagting sal 1.6 ML uitskot per dag geproduseer word.

Indien daar 'n kragonderbreking by die TO-aanleg is, sal rouwater as die toevoerwater vir die ontsoutingsaanleg gebruik word (soos tans die geval is).

3. Regsverpligtinge

Die beoogde behandeling van afvalwater in 'n TO-aanleg, soos hierbo beskryf, word kragtens die Wet op die Nasionale Omgewing: Afvalbestuur (Nr. 59 van 2008) (WNO:AB) gelys in Kategorie B van Artikel1 (Goewermentskennisgewing (GK) Nr. 718 van 3 Julie 2009). Die volgende bedrywighede is van toepassing:

Nr.	Gelyste bedrywigheid (Kategorie B)
7	Die behandeling van uitvloeisel, afvalwater of rioolvuil met 'n jaarlikse toevoerkapasiteit van meer as 15 000 kubieke meter.
11	Die bou van fasiliteite vir die bedrywighede gelys in Kategorie B van hierdie Bylae (nie in isolasie van die verwante bedrywigheid nie).

Volgens Artikel 4 van Skedule 1, moet *"…'n persoon wat beoog om 'n gelyste bedrywigheid in hierdie Kategorie te begin, onderneem of uit te voer, 'n omgewingsinvloedbepaling onderneem, soos voorgeskryf in regulasies in Artikel 24 (4) van die Wet op Nasionale Omgewingsbestuur....as deel van die aansoek vir 'n afvallisensie."*

Die beoogde TO-aanleg is ook gelys in die Wet op Nasionale Omgewingsbestuur (Nr. 107 van 1998) (WNOB), GK Nr. 544 van Junie 2010. Die volgende is van toepassing:

Nr.	Gelyste bedrywigheid (GK Nr. 544, 18 Junie 2010)
28	Die uitbreiding van en/of veranderinge aan bestaande fasiliteite vir enige proses of aktiwiteit waar sodanige uitbreiding sal lei tot die behoefte aan 'n nuwe, of wysiging van 'n bestaande, permit of lisensie ingevolge nasionale of provinsiale wetgewing oor die vrystelling van emissies of

Nr.	Gelyste bedrywigheid (GK Nr. 544, 18 Junie 2010)
	besoedeling, uitgesonderd waar die fasiliteit, proses of aktiwiteit ingesluit is in die lys van afvalbestuursaktiwiteite soos afgekondig ingevolge Artikel 19 van die Wet op die Nasionale Omgewing: Afvalbestuur, 2008 (Wet Nr. 59 van 2008), in welke geval daardie Wet van toepassing is.

Artikel 3 (2) van GK Nr. 544 van 18 Junie 2010 stel die volgende: *"Die ondersoek, beoordeling en kommunikasie van moontlike impakte of bedrywighede moet die prosedure volg soos voorgeskryf in regulasies 21 tot 25 van die Regulasies vir 'n Omgewingsinvloedbepaling, soos afgekondig kragtens Artikel 24 (5) van die Wet."* Artikels 21 tot 25 van die OIB-regulasies verwys na die basiese IB-proses.

Artikel 20 (4) van die WNOB laat egter die volgende toe: *"Indien 'n applikant beoog om 'n bedrywigheid uit te voer en kragtens subregulasie (2) aansoek moet doen vir 'n Omvang- en Omgewingsinvloedbepalingsverslag (O&OIBV), en die applikant, op advies van die OBP wat die aansoek hanteer, van mening is dat die bevoegde owerheid 'n besluit kan neem op grond van die inligting wat in 'n basiese invloedbepaling vervat is, mag die applikant 'n skriftelike versoek aan die bevoegde owerheid rig en toestemming vra om slegs die basiese invloedbepaling (BIB) as die O&OIB uit te voer."*

'n Motivering vir die afskaling van 'n OIB na 'n BIB-proses is op grond van die volgende redes op 1 April2011 by die DOS ingedien:

1. Die projek is 'n bruinveld-ontwikkeling. Alle bedrywighede vind plaas binne die grense van die kragsentrale, en op grond wat reeds verander is deur die wegdoen van as of die voetspoor van die kragsentrale self.
2. In vergelyking met die huidige situasie, is die hergebruik van GVW 'n netto wins vir die omgewing omdat dit die risiko van 'n besoedelingsinsident verlaag.
3. Die uitvloeisel vanaf die beoogde TO-aanleg sal nie veroorsaak dat die volume uitvloeisel wat by Hendrina weggedoen word, toeneem nie.
4. Die beoogde TO-aanleg het tot gevolg dat minder soute in die asdamme gestort word.
5. Die beoogde TO-aanleg beteken dat Hendrina minder water sal gebruik.
6. Die voetspoor van die beoogde TO-aanleg en verwante infrastruktuur is redelik klein, onderskeidelik ongeveer 5 000 m^2 en 480 m^2.
7. Die beoogde TO-aanleg sal deel uitmaak van die bestaande infrastruktuur vir verkoelingswater.

Hierdie afskaling is op 12 April 2011 deur die DOS goedgekeur. Om hierdie rede word 'n BIB-proses, soos omskryf in Artikels 21 tot 25 van Regulasie R543, tans vir die beoogde projek onderneem. 'n Vloeidiagram wat die proses verduidelik, is ingesluit as **Bylae B.**

4. Openbare deelname

U is as 'n moontlike B&GP tot hierdie projek geïdentifiseer, hetsy omdat u 'n geaffekteerde organisasie verteenwoordig of omdat u naby die beoogde projek woonagtig is. Openbare deelname is 'n sleutelkomponent van hierdie omgewingsproses en sal op verskeie stadiums van die projek plaasvind. Die proses sal die volgende stappe insluit:

- ***Fase 1~ kennisgewing van die beoogde projek***
  Met hierdie breif word B&GPe van die beoogde projek in kennis gestel. Dit gee ook agtergrondinligting oor en 'n beskrywing van die projek. Die beoogde projek is ook geadverteer die Middelburg Observer en 'n kennisgewing is by die ingang na Hendrina opgesit. B&GPe is uitgenooi om kommentaar in te dien en hulle bekommernisse en/of kwellinge te identifiseer. Alle kommentaar

wat ontvang word sal in 'n Kommentaar- en Antwoordverslag (K&AV) vervat en beantwoord word, en sal by die verslag ingesluit word.

- ***Fase 2~ Kommentaar op die Konsep Basiese Invloedbepalingsverslag (BIBV)***
  Die Konsep BIBV sal vir 'n openbare kommentaartydperk van 40-dae by die Openbare Biblioteke in Pullenshoop en Hendrina, asook op Eskom en Aurecon se webwerwe beskikbaar wees sodat die publiek daarop kommentaar kan lewer en hulle kommer daaroor kan uitspreek. Alle geregistreerde B&GPe sal per brief in kennis gestel word van die beskikbaarheid van die Konsep BIB vir openbare kommentaar. Alle kommentaar wat ontvang word sal by die Finale BIBV ingesluit word, asook in 'n K&AV. Die verslag sal, waar toepaslik, opgedateer word in die lig van die kommentaar wat ontvang is.

- ***Fase 3 ~ Kommentaar op die Finale Basiese Invloedbepalingsverslag***
  Die Finale BIBV sal op dieselfde plekke beskikbaar gestel word as wat met die Konsep BIBV die geval was, en daar is 21 dae geleentheid om hierop kommentaar te lewer. Enige kommentaar wat gedurende hierdie tydperk ontvang word, sal bymekaargesit en tesame met die Finale BIBV aan die DOS deurgestuur word.

- ***Fase 4 ~ Geleentheid tot Appèl***
  Alle geregistreerde B&GPe sal, binne 10 dae nadat die besluit uitgereik is, van die omgewingebesluit in kennis gestel word. Enige persoon wat die besluit wil teenstaan moet die appèlprosedure volg soos uiteengesit in Hoofstuk 7 van die OIB-regulasies (GK Nr. 543 van 18 Junie 2010).

Die fases in die proses van openbare deelname word aangedui in die vloeidiagram vir die BIB-proses – verwys na **Bylae B**.

Lees asseblief die inligting wat in hierdie brief vervat is deeglik deur, en lewer u kommentaar op die beoogde projek teen Vrydag, 3 Junie 2011. Skryf 'n brief, bel, of stuur 'n epos aan Louise Corbett van Aurecon by Tel: (021) 481-2501, Faks: (021) 424-5588, of louise.corbett@aurecongroup.com of Posbus 494, Kaapstad, 8000.

5. Pad vorentoe

Indien u enige kommentaar of kommer oor die beoogde projek het, word u versoek om hierdie inligting voor of op **3 Junie 2011** skriftelik per pos, faks of e-pos aan Aurecon te stuur. Alle kommentaar sal in 'n K&AV opgeneem en as 'n bylae tot die Konsep BIBV ingesluit word. Afskrifte van die K&AV sal gestuur word aan diegene wat kommentaar gelewer het. Alle geregistreerde B&GPe sal in kennis gestel word sodra die Konsep BIBV vir kommentaar beskikbaar is.

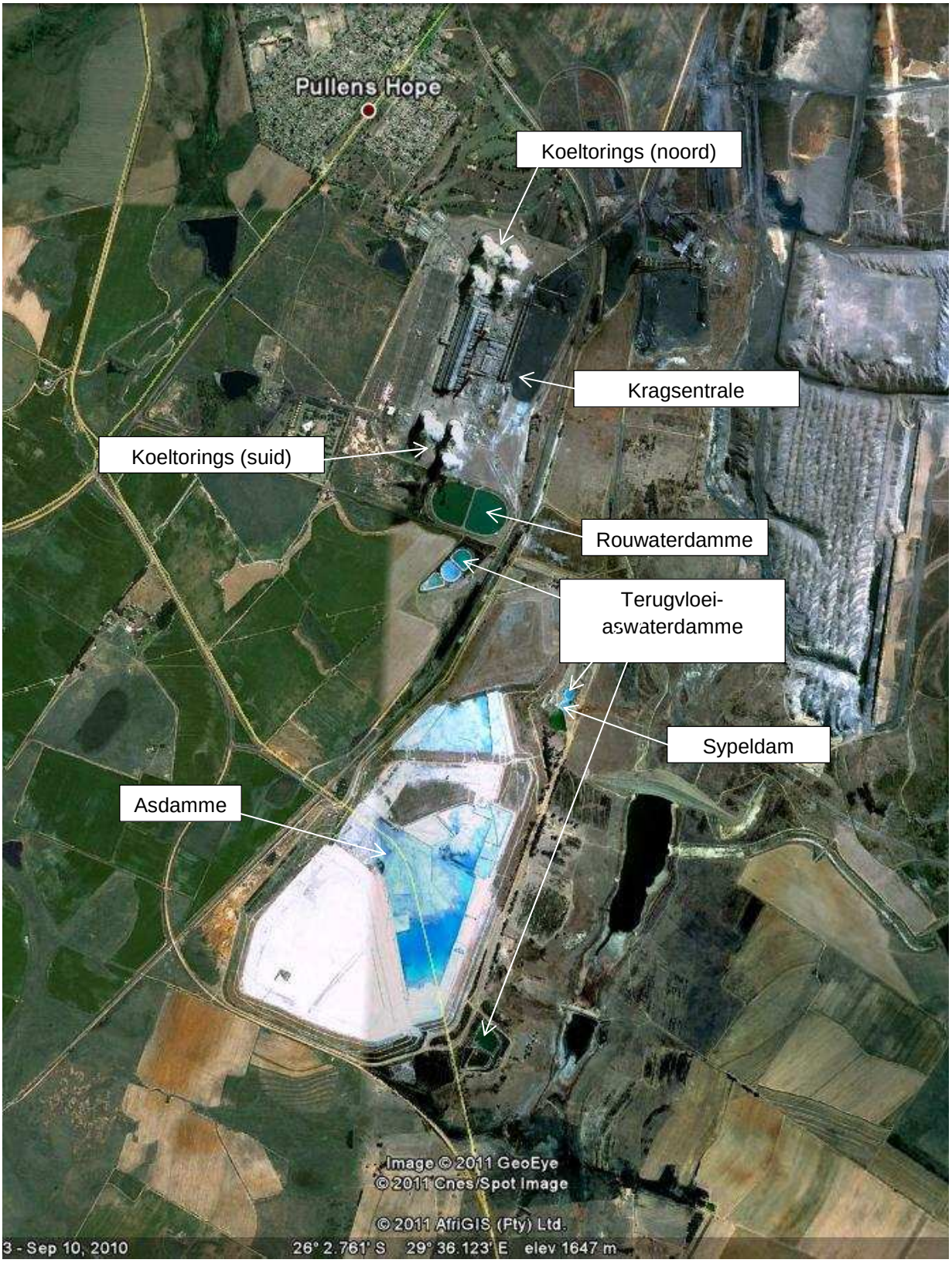
Tree asseblief met **Louise Corbett** van Aurecon in verbinding indien u enige vrae of kommentaar, of 'n verduideliking benodig oor die brief se inhoud, het.

Die uwe
AURECON

LOUISE CORBETT *(Pr.Sci.Nat.)*
Praktisyn: Omgewingsdienste

BRETT LAWSON *(Pr.Sci.Nat., Cert. EAPSA)*
Tegniese Direkteur: Omgewingsdienste

Bylae A: Liggingskaart



Figuur 1: Ligging van die Hendrina Kragsentrale, Mpumalanga, waarop sekere infrastruktuur aangedui is (met vergunning van Google Earth)

Bylae B: Vloeidiagram van die Basiese OB-proses