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

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LICENCE IN TERMS OF CHAPTER 4 OF THE NATIONAL WATER ACT, 1998 (ACT NO. 36 OF 1998) (THE ACT)

I, ***Trevor Balzer,*** in my capacity as Deputy Director-General: Special Projects in the Department of Water and Sanitation: and acting under authority of the powers sub-delegated to me by the Acting Director- General of Water and Sanitation, hereby authorizes the amendment of , of licence No. 07/A42J/G/5318 dated 05 June

SIGNED: _____

DATE: 5/07/2018

The licence is hereby amended to read as follows:

LICENCE NO: 07/A42J/GB/6418
FILE NO: 27/2/2/A942/4/4

1.	**Licensee**	**Exxaro Coal (Pty) Ltd: Grootegeluk Coal Mine and Reductants (Char)**
	Postal Address	P.O Box 178 LEPHALALE 0555
2.	**Water Uses**	
2.1	Section 21(a) of the Act:	Taking of water from a water resource subject to conditions as set out in Appendices I and II
2.2	Section 21(b) of the Act:	Storing water' subject to the conditions as set out in Appendices I and III
2.3	Section 21(g) of the Act:	Disposing of waste in a manner which may detrimentally impact on a water resource, subject to the conditions as set out in Appendices I and IV
2.4	Section 21(j) of the Act:	Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people as set out in Appendices I and V.

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3. Properties in respect of which this licence is issued

Table 1: Property details where water uses occur

Water use	Farm name	Registered owner	Title Deed
Section 21(a)	Daarby 458 LQ	Exxaro Coal (Pty) Ltd.	T000136805/20
	Enkelbult 462 LQ		
	Hieromtrent 460 LQ		
	Grootegeluk 459 LQ		
Section 21 (b)	Turfvlakte 463 LQ	Exxaro Coal (Pty) Ltd.	T000136805/20
Section 21(g)	Daarby 458 LQ	Exxaro Coal (Pty) Ltd.	T000136805/20
	Enkelbult 462 LQ		
	Appelvlakte 448 LQ		
	Turfvlakte 463 LQ		
	Hieromtrent 460 LQ		
	Grootegeluk 459 LQ		
	Leeudrift 312 LQ		
	Goedehoop 457 LQ		
Section 21(j)	Grootegeluk 459 LQ	Exxaro Coal (Pty) Ltd.	T000136805/20
	Daarby 458 LQ		
	Enkelbult 462 LQ		
	Hieromtrent 460 LQ		

4. Licence and Review Period

4.1 This licence is valid for a period of twenty nine (29) years from the date of issuance and it may be reviewed at intervals of not more than five (5) years

5. Definitions

All the terms, words and expressions as defined in the National Water Act, 1998 (Act 36 of 1998) shall bear the same meaning when used in this licence. In this licence, unless the context indicates otherwise, the words and expressions shall have the following meanings:

"Department"	means Department of Water and Sanitation;
"Licensee"	means the legal entity to which this licence is issued, as stipulated in item 1 above;
"Minister"	means the Minister of Water and Sanitation;
"NWA"	means the National Water Act, 1998 (Act 36 of 1998), as amended;

"Provincial Head"	means the Head of Provincial Operations: Limpopo, Department of Water and Sanitation, Private Bag X 9506, Polokwane, 0700; and
"WC/WDM"	means Water Conservation and Water Demand Management, a process prescribed and monitored by the Department.

6. Description of the activity

The proposed activity entails the amendment of the issued Integrated Water Use Licence (IWUL) to Exxaro Coal (Pty) Ltd: Grootegeluk Coal Mine and Reductants (Char): Grootegeluk dated 05 June 2017 under Licence Number 07/A42J/G/5318 to incorporate changes in the existing water uses and addition of new water uses.

APPENDIX I

General conditions for the licence

1. This licence is subject to all applicable provisions of the National Water Act, 1998 (Act 36 of 1998).

2. The responsibility for complying with the provisions of the licence is vested in the Licensee and not any other person or body.

3. The Licensee must immediately inform the Provincial Head of any change of name, address, premises and/or legal status.

4. If the property in respect of which this licence is issued is subdivided or consolidated, the Licensee must provide full details of all changes in respect of the properties to the Provincial Head of the Department within sixty (60) days of the said change taking place.

5. If a water user association does exist or is established in terms of the NWA to manage water from the relevant water resource from which the Licensee receives or may receive water, membership of this association may be made compulsory by the responsible authority.

6. The Licensee must pay all water use charge or levies imposed from time to time by a responsible authority in terms of the Pricing Strategy for Raw Water Use Charges, Waste Discharge Charges and Water Resource Management Charge of the Department, or any other water use charges as per water supply agreements or levies that might be imposed in terms of appropriate legislation.

7. While effect must be given to the Reserve as determined in terms of the Act, where a desktop determination of the Reserve has been used in issuance of a licence, when a comprehensive determination of the Reserve has finally been made; it shall be given effect to.

8. The licence must not be construed as exempting the Licensee from compliance with the provisions of any other applicable Act, Ordinance, Regulation or By-law.

9. The licence and amendment of this licence are also subject to all the applicable procedural requirements and other applicable provisions of the Act, as amended from time to time.

10. The Licensee must conduct an annual internal audit on compliance with the conditions of licence. A report on the audit shall be submitted to the Provincial Head within one month of the finalisation of the audit.

11. The Licensee must appoint an independent external auditor to conduct an annual audit on compliance with the conditions of this licence. The first audit must be conducted within 3 (three) months of the date this licence is issued and a report on the audit shall be submitted to the Provincial Head within one month of finalisation of the audit.

12. Flow metering, recording and integrating devices must be maintained in a sound state of repair and calibrated by a competent person at intervals of not more than two years. Calibration certificates must be available for inspection by the Provincial Head or his/her representative upon request.

13. Any incident that causes or may cause water pollution must be reported to the Provincial Head or his/her designated representative within 24 hours.

14. When compulsory licensing is implemented for the water resource in respect of which this licence was issued, the water use authorised in this licence could be subject to appropriate reduction.

15. The Licensee must establish and implement a continuous process of raising awareness amongst its employees, agents and stakeholders for the need for Water Conservation and Water Demand Management

16. The Licensee must apply water conservation measure to meet all requirements in terms of WC/WDM guidelines of the responsible authority as follow:

    16.1. The Licensee shall put into practice water efficient devices or apply techniques for the re-use of water containing waste, in an endeavour to conserve water at all times.
    16.2. The Licensee shall include the progress and status of these investigations into the annual updated Integrated Water and Waste Management Plan.

17. Where necessary, notices prohibiting unauthorised persons from entering certain areas, as well as internationally acceptable signs indicating the risks involved in case of an unauthorised entry must be displayed along the boundary fence(s) of these areas.

18. This licence supersede licence 07/A42J/G/5318 issued on 05 June 2017.

APPENDIX II

Section 21(a) of the Act: Taking water from a water resource

1. The licence authorises the taking of groundwater in cubic meters per annum (m^3/a) from dewatering boreholes and Grootegeluk In-Pit sumps on properties as listed in Table 2:

Table 2: Section 21(a) Water Use Activities

Description of Activity / Purpose	Properties	Total Quantity (m^3/a)	Co-ordinates
Abstraction of groundwater from Borehole WB 33 for process water	Farm Daarby 458 LQ	2 400 000	S23 39' 25.40359" E27 32' 55.20116"
Abstraction of groundwater from Borehole WB 35 for process water			S23 39' 19.08297" E27 32' 40.96954"
Abstraction of groundwater from Borehole WB 36A for process water			S23° 39' 29.132" E 27° 32' 25.893"
Abstraction of groundwater from Borehole WB 38 for process water	Enkelbult 462 LQ		S23 39' 59.60" E27 33' 18.85"
Abstraction of groundwater from Borehole WB 39A for process water			S 23° 40' 3.403" E 27° 33' 22.779"
Abstraction of groundwater from Borehole WB 41 for process water			S23 40' 03.54058" E27 33' 36.07525"
Abstraction of groundwater from Borehole WB 42 for process water			S23 40' 11.15419" E27 33' 17.72228"
Abstraction of groundwater from Borehole WB 43 for process water			S23 39' 55.10471" E27 33' 30.23365"
Abstraction of groundwater from Borehole WB 45 for process water			S23 39' 53.57424" E27 33' 51.84923"
Abstraction of groundwater from Borehole WB 46 for process water			S23 40' 06.31107" E27 33' 51.61343"
Abstraction of groundwater from Borehole WB 49 for process water			S23 39' 28.59048" E27 33' 37.81549"
Abstraction of groundwater from Borehole WB 50 for process water			S23 39' 02.87241" E27 33' 47.89301"

Description of Activity / Purpose	Properties	Total Quantity (m^3/a)	Co-ordinates
Abstraction of groundwater from Borehole WB 51 for process water			S23 39' 38.09110" E27 33' 41.04121"
Abstraction of groundwater from Borehole WB 52 for process water			S23 40' 05.03633" E27 33' 05.87707"
Abstraction of groundwater from Borehole WB 53 for process water			S23 39' 52.50427" E27 33' 18.19635"
Abstraction of groundwater from Borehole WB 54 for process water			S23 40' 04.11537" E27 33' 35.96607"
Abstraction of groundwater from Borehole WB 55 for process water			S23 39' 40.81340" E27 33' 55.54022"
Abstraction of groundwater from Borehole WB 56 for process water			S23 39' 35.91699" E27 33' 00.53742"
Abstraction of groundwater from Borehole WB 57 for process water			S23 39' 08.86556" E27 32' 59.37305"
Abstraction of groundwater from Borehole WB 59 for process water			S23 39' 31.03196" E27 33' 18.60954"
Abstraction from the Grootegeluk In-Pit sumps	Enkelbult 462 LQ portion 0		S23° 40' 40.55" E27° 32' 40.74" S23° 42' 13.11" E27° 29' 34.05" S23° 40' 32.02" E27° 28' 27.82" S23° 39' 41.21" E27° 31' 12.10" S23° 39' 57.87" E27° 32' 50.22"

2. This licence authorises the taking of a maximum quantity of two million four hundred thousand (2 400 000) cubic metres (m^3) per annum of groundwater from dewatering boreholes and in-pit sumps as indicated in Table 2 of which 954 072 m^3/annum (average) and maximum of 1 606 689 m^3/annum is from in-pit sumps to be used for mining activities.

3. A maximum quantity of water abstracted, for mining purposes from the de-watering boreholes on any one day shall not exceed six thousand six hundred cubic metres per day (6 600 m^3/day).

4. The Minister may for good reason change the water resource from which is made available to the Licensee. The Licensee must further note that the Minister does not guarantee the quality of the water provided and the Licensee must make provision for this aspect in its operations.

5. The Licensee must at own cost provide for sufficient storage capacity, duly authorised before hand in terms of the NWA, and maintain it, with a minimum live storage of 18 days of its average annual daily volume of water as authorised in this licence. This storage may only be utilised for emergencies and extended planned maintenance on the bulk water supply system.

6. Additional licence(s) for any other water uses by the Licensee, as defined in section 21 of the NWA must be applied for in good time by the Licensee in order to be considered by the Minister, and only if approved, commencement of the specific other uses(s) will be lawful. The unlawful commencement of any water uses by the Licensee may result in this licence being suspended or withdrawn as provided for in the NWA.

7. The quantity of water authorised to be taken in terms of this licence may not be exceeded without any prior written authorisation from the Minister.

8. This licence does not imply any guarantee that the said quantities and qualities of water will be available at present or at any time in the future.

9. The abovementioned volumes may be amended when the licence is reviewed.

10. The Licensee shall investigate new and emerging technologies, which shall include the treatment of water for the re-use for mining purposes if deemed necessary as follows:

    10.1 The Licensee shall put into practice water efficient devices or apply techniques for the re-use of water containing waste, in an endeavour to conserve water at all times.

    10.2 The Licensee shall include the progress and status of these investigations in the annual Integrated Water and Waste Management Plan.

11. All water taken from the resource shall be measured, recorded and reported as follows:

    11.1 the daily quantity of water taken must be metered or gauged and the total recorded at the last day of each month; and

    11.2 the Licensee shall keep record of all water taken and a copy of the records shall be forwarded to the Provincial Head on or before 25 January and 25 July of each year.

12. No water taken may be pumped, stored, diverted, or alienated for purposes other than intended in this licence, without written approval by the Minister or his/her delegated nominee.

13. The Licensee shall install and monitor appropriate water measuring equipment to measure the amount of water abstracted from dewatering boreholes and in-pit sumps as applicable to the infrastructure.

14. The department accepts no liability for any damage, loss or inconvenience, of whatever nature, suffered as a result of:

    14.1 shortage of water;
    14.2 inundation or flood;
    14.3 siltation of the resource; and
    14.4 required reserve releases.

15. The Licensee shall ensure that all measuring devices are properly maintained and in good working order and must be easily accessible. This shall include a programme of checking, calibration, and/or renewal of measuring devices.

16. The Licensee shall establish an Information Management System, which maintains a database on water supply, distribution and delivery infrastructure.

APPENDIX III

Section 21 (b) of the Act: Storing water

1. STORAGE OF WATER

1.1 The licence authorises storage of twenty one thousand four hundred and seventy two cubic metres (21 472 m^3) volume of raw water at Voeltjie Dam, for the purpose of game watering. The geographical location of the activity is at the coordinates S23° 40' 45.74" and E27° 33' 31.83" on portion 0 of the Farm Turfvlakte 463 LQ in the Limpopo Water Management Area.

1.2 The Licensee must obtain any proprietary rights or servitudes at his/her own cost.

1.3 The Licensee is not indemnified from any detrimental effect that the dam(s) may have on other properties. The Department does not accept any responsibility or liability for any damages or losses that may be suffered by any other party as a result of the construction and utilization of the dams.

1.4 No additional water storage facilities can be constructed on the property without prior written consent of the Minister or responsible authority.

2. MONITORING REQUIREMENTS

2.1 Suitable measuring structures must be constructed upstream and downstream of the dams to measure the flow entering and leaving the dam and this information must be available on request.

2.2 The Licensee shall establish a monitoring programme and the date and time of monitoring in respect of each sample taken shall be recorded together with the results of the analysis as well as other significant information (low flow, flooding, pollution incident, etc.)

2.3 The quantity of water stored shall be recorded at the last day of each month.

3. CONSTRUCTION OF DAM

3.1 The Government reserves the right to construct storage works at any time in any stream and to store all surplus water reaching the dam(s) and to control the allocation of such water.

Appendix IV

Section 21 (g) of the Act: disposing of waste in a manner which may detrimentally water impact on a water resource.

1. CONSTRUCTION AND OPERATION

1.1. The Licensee must carry out and complete all the activities, including the construction and operation of the facilities indicated in Table 3 according to the Report and according to the final plans as approved by the Provincial Head.

1.2. The construction of the stockyards indicated in Table 3 must be carried out under the supervision of a professional Civil Engineer, registered under the Engineering Profession of South Africa Act, 1990 (Act 114 of 1990), as approved by the designer.

1.3. The Licensee must ensure that the disposal of the mining waste and polluted water and the operation and maintenance of the system are done according to the provisions in the Report as submitted by the Licensee.

1.4. The Licensee must as well submit a set of as-built drawings to the Provincial Head after the completion of the waste water facilities listed on Table 3.

1.5. The waste water facilities listed on Table 3 shall be operated and maintained to have a minimum free board of 0.8 above supply level and all other water systems related thereto shall be operated in such a manner that it is at all times capable of handling the 1:50 year floodline event on top of its mean operating level.

1.6. The Licensee must use acknowledged methods for sampling, date, time and sampler must be indicated for each sample.

1.7. The operation of all the facilities must be carried out under the supervision of competent appointees by the manager. However modifications to any facilities must be conducted under the supervision of a professional Civil Engineer, registered under the Engineering Profession of South Africa Act, 1990 (Act 114 of 1990).

1.8. Within 30 days after the completion of the activities referred here in accordance with the relevant provisions of this licence, the Licensee must in writing; under reference 27/2/2/A942/4/4 informs the Provincial Head thereof. This must be accompanied by a signature of approval from the designer referred to above that the construction was done according to the design plans referred to in the Report.

1.9. This Reductants concrete lined tank shall be operated in matter that will not allow any leakage and/or overflow to the surrounding environment. The domestic waste water stored in this tank must be continually pumped into the Grootegeluk waste water treatment facility as indicated by the Report. Measures must be put in place to ensure that no domestic waste water reaches the clean environment during the course of storage and pumping of such domestic waste water.

1.10. During construction activities on Grootegeluk the contents of the chemical toilets and any waste water shall be disposed at the existing Grootegeluk wastewater treatment facility or via a registered sewage disposal company. All general waste shall be disposed of in a legally authorized waste disposal facility.

1.11. Coal delivered into the char plant via a conveyor belt must be temporarily stockpiled in the lined and compacted kidney stockpile area as indicated in the report. Any runoff from this stockpile must be contained in the lined water pollution dam.

1.12. Flow metering devices on the main water supply lines must be maintained in a sound state of repair and calibrated by a competent person at intervals of not more than once in two years. Calibration certificates must be available for inspection by the Provincial Head or his/her representative upon request.

2. DISPOSAL OF WASTE OR WATER CONTAINING WASTE

2.1 The Licensee is authorized to dispose of waste or water containing waste into the containment facilities as indicated in Table 3.

Table 3: S21 (g) water uses: Disposing of waste in a manner which may detrimentally impact on a water resource

No	Water Use Name	Description/Purpose	Capacity	Volume	Coordinates	Property Description
Stockpiles and Stockyards						
1.	Stockpiling of coal at the GG6/2 Stockyard.	Stockpiling of coal	Current Capacity = 231 100 m^3	Current Annual disposal quantity = 8 385 000 tons/a	S 23°39'32.72" E 27°33'24.19"	Enkelbult 462 LQ portion 0
2.	Stockpiling of coal at the GG4 and GG5 Stockyards	Stockpiling of coal	Current Capacity = 20 000 m^3	Current Annual disposal quantity = 2 000 000 tons/a	S23°39'10.63" E 27°33'26.19"	Daarby 458 LQ portion 0 Enkelbult 462 LQ portion 0
3.	Stockpiling of coal at the GG10 Stockyard A (next to Discard Dump)	Stockpiling of coal	Current Capacity = 400 000 tons	Current Annual disposal quantity = 4 500 000 tons/a	S23°38'33.23" E 27°33'00.57"	Daarby 458 LQ portion 0
4.	Stockpiling of coal at the GG10 Stockyard B (D8 Loop Footprint)	Stockpiling of coal	Current Capacity = 400 000 tons	Current Annual disposal quantity = 4 500 000 tons/a	S 23°39'21.85" E 27°33'03.33"	Daarby 458 LQ portion 0 Enkelbult 462 LQ portion 0

5.	Stockpiling of coal at the Multiproduct Overflow Stockyard.	Stockpiling of coal	Current Capacity = 140 000 tons	Current Annual disposal quantity = 3 000 000 tons/a	S 23°39'04.55" E 27°33'21.31"	Daarby 458 LQ portion 0
6.	Stockpiling of coal at the Buffer Stockpile as part of the fines recovery.	Stockpiling of coal	Current Capacity = 60 000	Current Annual disposal quantity = 700 000 tons/a	S 23°38'52.92" E 27°33'55.31"	Daarby 458 LQ portion 0
7.	Stockpiling of coal at the Conical Stockpile as part of the fines recovery	Stockpiling of coal	Current Capacity = 10 000 tons (5 000 tons per stockpile)	Current Annual disposal quantity = 2 000 000 tons/a	S23°39'55.25" E27°32'51.56"	Enkelbult 462 LQ portion 0
8.	Reductants feed stockpile (Extension)	Stockpiling of coal	Current Capacity = 735 840 m^3	Current Annual disposal quantity = 735 840 m^3/a	S 23°38'50.57" E 27°33'13.62"	Daarby 458 LQ portion 0
9.	Reductant product Stockpile	Stockpiling of coal	Asbuilt Capacity = 20 945m^3 or 15 500 tons/a	Annual disposal quantity = 135 000m^3	S 23°38'58.92" E 27°33'05.46"	Daarby 458 LQ portion 0
10.	Reductant product Stockpile (extension)	Stockpiling of coal	Asbuilt Capacity = 6 081 m^3 or 4 500 tons/a	Annual disposal quantity = 61 000 m^3/a	S23 38'57.50" E27 33'06.82"	Daarby 458 LQ portion 0
11.	Reductants feed stockpile (Kidney Stockpile)	Stockpiling of coal	Current Capacity = 199 416 m^3	Current Annual disposal quantity = 407 592 tons/a	S23°38'52.10" E27°33'15.82"	Daarby 458 LQ portion 0
12.	Existing GG1 Stockyard SSCC	Stockpiling of coal	Capacity = 180 000 m^3	Volume = 1.5 mil t	S23 39'28.80" E27 33'31.35"	Enkelbult 462 LQ portion 0
13.	Existing GG1-6 Stockyard PSC	Stockpiling of coal	Capacity = 613 654 m^3	Volume = 9.7 mil t	S23 39'19.52" E27 33'26.84"	Enkelbult 462 LQ portion 0
14.	Existing GG4 & 5 Met	Stockpiling of coal	Capacity = 131 265 m^3	Volume = 1.6 mil t	S23 39'21.86" E27 33'14.63"	Enkelbult 462 LQ portion 0
15.	Existing GG7&8 Stockyard PSC	Stockpiling of coal	Capacity = 310 355 m^3	Volume = 10.1 mil t	S23 39'12.61" E27 33'18.20"	Daarby 458 LQ portion 0 Enkelbult 462 LQ

						portion 0
16.	Existing GG6 Stockyard Export	Stockpiling of coal	Capacity = 86 000 m^3	Volume = 817 000 t	S23 39'21.43" E27 33'33.69"	Enkelbult 462 LQ portion 0
Short Term Stockpiles						
17.	Short Term - Laydown Area Stockpile.	Short Term Stockpiling of compacted coal	Capacity = 1,282,000 m^3	Annual disposal quantity = 1 666 600 tons/a	S 23°39'09.9" E 27°32'48.0"	Enkelbult 462 LQ portion 0
18.	Short Term - GG10 B Stockpile and Expansion Area	Short Term Stockpiling of compacted coal	Capacity = 1,265,500 m^3	Annual disposal quantity = 1 645 150 tons/a (maximum storage capacity)	S 23°39'01.7" E 27°33'13.9"	Daarby 458 LQ portion 0 Enkelbult 462 LQ portion 0
19.	Short Term - Multiproduct Stockpile	Short Term Stockpiling of compacted coal	Current = 140 000 tons	Annual disposal quantity = 3 000 000 tons/a	S 23°39'04.55" E 27°33'21.31"	Daarby 458 LQ portion 0
Dump area						
20.	Dumps 4 & 5	Disposal of Plant Discard	Current Capacity = 284 966 875 m^3 Surface area of dump = 709ha	Current Annual disposal quantity = 18.5 million tons per annum	S23 38'32.10" E27 32'01.46"	Goedehoop 457 LQ portion 0 Daarby 458 LQ portion 0
Dust suppression						
21.	Dust Suppression of the mine roads with process water form water reticulation system and PCD's.	Dust suppression		Current Annual disposal quantity = 642 800 m^3/a	Haul and gravel roads	Enkelbult 462 LQ portion 0 Daarby 458 LQ portion 0 Turfvlakte 463 LQ portion 0 Hieromtrent 460 LQ portion 0 Grootegeluk 459 LQ

						portion 0 Leeudrift 312 LQ portion 0 Appelvlakte 448, Portion 1 and 0 Goedehoop 457 LQ portion 0
Process water infrastructure with sumps						
22.	Return Water Dam A for water from the Cyclic ponds	Return Water Dam for water from the Cyclic ponds	Current Capacity = 49 500 m^3	Current Annual disposal quantity = 1 257 094 m^3/a	S 23°37'54.32" E 27°33'58.12"	Appelvlakte 448 LQ portion 0
23.	Return Water Dam B for water from the Cyclic ponds	Return Water Dam for water from the Cyclic ponds	Current Capacity = 49 500 m^3	Current Annual disposal quantity = 1 257 094 m^3/a	S23 37'54.24" E27 34'09.15"	Appelvlakte 448 LQ portion 0
24.	Slimes Return Water Dam (Cement dam)	Receives clarified water from the penstocks associated with the slimes dams	Current Capacity = 1 782 m^3	Current Annual disposal quantity = 890 000 m^3	S 23°38'12.06" E 27°34'23.44"	Appelvlakte 448 LQ portion 0
25.	Cyclic Operated Coal Slurry Pond System (COCSP S1-4)	Disposal of slurry from Beneficiation Plants into Cyclic Operated Coal Slurry Pond System (COCSPS 1-4)	Current Capacity = 1 440 000 m^3	Current Annual disposal quantity = 6 851 772 m^3/a	S 23°38'04.14" E 27°33'56.18" S 23°38'04.17" E 27°34'01.52" S23°38'04.06" E27°34' 06.85" S23°38'04.47" E 27°34'11.66"	Appelvlakte 448 LQ portion 0 Appelvlakte 448 LQ portion 1
26.	Slimes Dam 5	Slimes Dam 5, an inactive dam footprint area that may be recovered	Current Capacity = 199 416 m^3	Current Annual disposal quantity = 407 592 m^3/a	S 23°38'27.96" E 27°34'34.56"	Appelvlakte 448 LQ portion 0
27.	Slimes dams (active dams 1 and	Disposal of fines from the coal beneficiation process	Current Capacity = 16 639 453 m^3	Current Annual disposal quantity =	S23 38'26.39" E27 34'04.75"	Appelvlakte 448 LQ portion 0 Appelvlakte

	2)			750 000 tons per annum		448 LQ portion 1
28.	Catchment sump at N1 overflow to Olifantskop dam	Overflow of process water to Olifantskop Dam	Current Annual disposal quantity = 1 000 000 m^3		S23 39'52.22" E27 33'17.35"	Enkelbult 462 LQ portion 0
29.	Storm water dam north of dump 6	Receives wash water from workshop and wash bay and contaminated storm water from surrounding area	Capacity of storage = 50 520 m^3	Total volumes waste water discharged = 26 065 m^3/annum Disposal volume = 33 069 m^3/annum	S23 40'04.60" E27 33'40.58"	Enkelbult 462 LQ portion 0
30.	Reductant Plant Pollution Control Dam	Stored process water and contaminated surface run-off for reuse	Current Capacity = 12 828 m^3	Current Annual disposal quantity = 232 032	S23° 38' 56.77" E27° 33' 13.67"	Daarby 458 LQ portion 0
31.	Medupi Sump 1: Southern Sump	Drains / pumped to the In –pit sumps	Current Capacity = 47 748 m^3	Current Annual disposal quantity = 20 400	S23° 38' 33.710" E27° 33' 06.518"	Daarby 458 LQ portion 0
32.	Medupi Sump 2: Northern Sump	Drains / pumped to Bosbok Dam	Current Capacity = 23 520 m^3	Current Annual disposal quantity = 10 049	S23° 38' 56.457" E27° 32' 53.043"	Daarby 458 LQ portion 0
33.	Medupi Sump 3	Drains / pumped to Bosbok Dam	Current Capacity = 59 604 m^3	Current Annual disposal quantity = 25 440	S23° 39' 1.454" E27° 32' 40.177"	Daarby 458 LQ portion 0
34.	Olifantskop dam	Contains wastewater from the Beneficiation Plant and contaminated storm water from surrounding areas	Asbuilt Capacity = 114 600 m^3	Annual disposal quantity = 900 000 m^3	S23° 40' 04.3" E27° 33' 27.75"	Enkelbult 462 LQ portion 0
35.	Buffer dam	Contain wastewater, only when required.	Asbuilt Capacity = 94 500 m^3	Annual disposal quantity = 0	S23 39'59.00" E27 33'33.00"	Enkelbult 462 LQ portion 0
36.	Bosbok Dam and silt trap	Contain contaminated storm water runoff from the Plant with associated silt trap.	Bosbok dam Asbuilt Capacity = 114 450 m^3 Silt trap = 18 500m^3	Annual disposal quantity = 940 000 m^3	S23° 38' 56.82" E27° 33' 45.72" S23° 39' 00.0" E27° 33'	Daarby 458 LQ portion 0

					47.11"	
37.	Mamba dam	Collects contaminated runoff from the slimes dam area as well as clean water from the penstock	Current Capacity = 73 000 m^3	Current Annual disposal quantity = 280 000 m^3	S23 38'10.11" E27 34'19.62"	Appelvlakte 448 LQ portion 0
38.	Bench 11 open pit storage dam	In-pit storage of contaminated runoff and process water for re-use in the Beneficiation Plants	Current Capacity = 188 000 m^3	Current Annual disposal quantity = 2 000 000 m^3	S23° 40' 19.30" E27° 32' 38.48"	Enkelbult 462 LQ portion 0
39.	Movable Bench 13 in-pit sump	In-pit storage of contaminated runoff and process water for re-use in the Beneficiation Plants	Total volumes waste water discharged = 596 808 m^3/annum	Maximum disposal volume = 69 190 m^3/month	23° 38' 50.044" S 27° 31' 2.061" E23° 41' 4.447" S27° 34' 3.258" E 23° 41' 56.080" S 27° 32' 26.050" E 23° 42' 34.598" S 27° 29' 46.621" E 23° 41' 36.306" S 27° 29' 11.797" E 23° 40' 37.010" S 27° 28' 31.189" E 23° 40' 3.769" S 27° 28' 16.199" E 23° 39' 7.789" S 27° 30' 1.683" E	Enkelbult 462 LQ portion 0 Grootegeluk 459 LQ portion 0
40.	Reductants Concrete lined sewage tank	Reductants concrete lined tank	Surface area 138 m^2, a wall height of 2.83 m and capacity to hold 112 m^3		S23° 38' 55.59" E27° 33' 12.57"	Daarby 458 LQ portion 0

41.	Expansion of the Reductants PCD Silt trap	Expansion of the Reductants PCD Silt trap	Silt trap of height 1.3 m, surface area of 122 m^3 and capacity of 242 m^3.		S23 38'55.54" E27 33'13.46"	Daarby 458 LQ portion 0
In-pit backfilling						
40.	In-pit backfilling / disposal	Backfilling with inter- and overburden as well as discard material	Current Capacity = 51 769 000 m^3	Current Annual disposal quantity = 12 million tons/a	23° 38' 50.044" S27° 31' 2.061" E 23° 41' 4.447" S27° 34' 3.258" E 23° 41' 56.080" S27° 32' 26.050" E 23° 42' 34.598" S27° 29' 46.621" E 23° 41' 36.306" S27° 29' 11.797" E 23° 40' 37.010" S 27° 28' 31.189" E 23° 40' 3.769" S 27° 28' 16.199" E 23° 39' 7.789" S 27° 30' 1.683" E	Grootegeluk 459 LQ portion 0 Leeuwdrift 312 LQ portion 0 Hieromtrent 460 LQ portion 0 Turfvlakte 463 LQ portion 0 Enkelbult 462 LQ portion 0 Daarby 458 LQ portion 0

2.2 The Licensee shall ensure that all newly constructed attenuation ponds are lined with the HDPE geomembrane liner of 1.5 mm minimum thickness or a DWS suitably approved lining system to capture all dirty and seepage water emanating from these facilities.

2.2.1 Any changes to the accepted liner system needs to be approved by the Department and should be submitted to the Provincial Head for acknowledgement and final written approval before construction commences.

2.2.2 All the existing storm-water dams must be monitored for possibility of contamination and should that possibility detected; the Licensee must improve the existing facilities through the implementation of the liner requirements subject to approval by the Department.

2.3 The Licensee shall ensure that dirty storm water is not released into a sensitive environment and must be contained on a dirty water containment facility.

2.4 The Licensee shall submit within a period of six months from the date of issuance of this licence to the Provincial Head for approval a concise report in which all possible sources of pollution are identified, the engineered mitigating measures formulated and a programme for the implementation.

2.5 The Licensee must indicate how the existing designed channels and the new channels around the cyclic ponds and return water dam are sealed to effectively prevent seepage of pollutants into the ground water regime.

2.6 Short term stockpile liner to be aligned with the liner systems approved for the new product stockpiles at Grootegeluk.

2.7 Short term stockpiles to be decommissioned and rehabilitated after 4 years.

2.7.1 Should the mine require these stockpiles to become permanent, written permission needs to be requested from DWS motivating the change.

3. QUALITY OF WASTE WATER TO BE DISPOSED

3.1 The quality of waste water effluent disposed of into the surrounding environment must not exceed the following limits as indicated in Table 4 and shall form part of the Monitoring plan for Grootegeluk.

Table 4: Quality of waste water to be disposed into waste water facility

Substance/parameter	Water quality Limit
pH	3 – 10
Electrical Conductivity (mS/m)	500
Calcium as Ca in mg/l	700
Magnesium as Mg in mg/l	300
Sodium as Na in mg/l	600
Chloride as Cl in mg/l	400
Sulphate as SO4 in mg/l	3000
Nitrate as NOxN in mg/l	35
Fluoride as F in mg/l	5

4. MONITORING

4.1 The Licensee must establish a comprehensive surface water monitoring plan and submit them to the Provincial Head as part of a Monitoring plan for Grootegeluk.

4.2 The Licensee must establish additional boreholes to monitor groundwater around the cyclic pond project area to identify the impacts on the groundwater resource as part of a Monitoring plan for Grootegeluk.

4.3 The Licensee must submit the description and the co-ordinates for the existing and additional borehole to the Provincial Head as part of a Monitoring plan for Grootegeluk.

4.4 The Licensee must undertake regular water level monitoring to measure the groundwater drawdown around the mine area as part of a Monitoring plan for Grootegeluk.

4.5 The date, time and monitoring point in respect of each sample taken must be recorded together with the results of the analysis as part of a Monitoring plan for Grootegeluk.

4.6 Monitoring points must not be changed prior to notification to and written approval by the Provincial Head and will then form part of the updated Monitoring plan for Grootegeluk.

4.7 The Licensee must ensure that alternative water supply is provided to groundwater users that are impacted on.

4.8 Water quality testing to be performed on the Pollution Control Dams on a quarterly basis in order to determine the risks to the receiving environment. The data gathered in the investigation must be reported annually to the Provincial Head. If any concentrations levels as specified above are exceeded, the Licensee must institute an investigation to determine the cause of poor water quality. Furthermore, the Licensee must undertake geochemical assessment on Coal Slurry.

4.9 Water quality testing must be conducted monthly on the wastewater stream from the water return dam when returned back to the mine for use as process water and will then form part of the updated Monitoring plan for Grootegeluk.

4.10 The Licensee shall participate in any initiative such as Direct Estimation of Ecological Effect Potential (DEEEP) to determine the toxicity of complex tailings waste discharges. Both acute and chronic toxicity must be addressed and at least three taxonomic groups must be present when toxicity tests are performed.

4.11 The methods for the measurement of specific substances and parameters in any waste water must be carried out by a laboratory that has been accredited under the South African National Accreditation System (SANAS) in terms of SABS Code 0259 for that method.

4.12 The methods of analysis shall not be changed without prior notification to and written approval by the Minister and shall then be included into the Monitoring plan for Grootegeluk.

5. INCIDENT MONITORING

5.1. In the event that the emergency incident results in pollution of water resource, the Licensee must monitor the water quality and the incident report must be submitted to the Provincial Head within fourteen (14) days.

6. WATER RESOURCE PROTECTION

6.1 The impact of the activities of the mine on groundwater shall not exceed the water quality limits as indicated in Table 5 and will form part of the updated Monitoring plan for Grootegeluk.

Table 5: Water quality limits

Variable	Water quality Limit
pH	**5 – 9.5**
Electrical Conductivity (mS/m)	**370**
Calcium as Ca in mg/l	**300**
Magnesium as Mg in mg/l	**200**
Sodium as Na in mg/l	**400**

Chloride as Cl in mg/l	**600**
Sulphate as S04 in mg/l	**600**
Nitrate as NOx N in mg/l	**20**
Fluoride as F in mg/l	**1.9**

6.2 The Licensee shall ensure that dirty storm water is not released into the natural environment and must be contained on a dirty water containment facility.

7. REPORTING

7.1 The Licensee shall update the water balance annually and calculate the loads of waste emanating from the activities. The Licensee shall determine the contribution of their activities to the mass balance for the water resource and must furthermore co-operate with other water users in the catchment to determine the mass balance for the water resource reserve compliance point.

7.2 The Licensee shall submit the results of analysis for the monitoring requirements to the Provincial Head on a quarterly basis under Reference number 27/2/2/A942/4/4, Monitoring plan for Grootegeluk.

7.3 The Licensee shall submit the nature and the quality of the waste water disposed into the Pollution Control dams within the Monitoring plan for Grootegeluk.

8. STORM WATER MANAGEMENT

8.1 Storm water leaving the Licensee's premises shall in no way be contaminated by any substance, whether such substance is a solid, liquid, vapour or gas or a combination thereof which is produced, used, stored, dumped or spilled on the premises.

8.2 Increase runoff due to vegetation clearance and/or soil compaction must be managed, and steps must be taken to ensure that storm water does not lead to bank instability and excessive levels of silt entering the stream.

8.3 Storm-water shall be diverted from the mine complex site and roads and shall be managed in such a manner as to disperse runoff and concentrating the storm-water flow.

8.4 Where necessary works must be constructed to attenuate the velocity of any storm-water discharge and to protect the banks of the affected watercourses.

8.5 Storm-water control works must be constructed, operated and maintained in a sustainable manner throughout the impacted area.

8.6 All storm-water that would naturally run across the pollution areas shall be diverted via channels and trapezoidal drains designed to contain the 1:50 year flood.

8.7 The polluted storm water system shall be designed and implemented to provide suitable routing and pumping capacity for contaminated storm water from the individual facilities to the respective storm water dams in accordance with the design specifications as contained in the Integrated Water Use Licence Application report.

9. PLANT AREAS AND CONVEYANCES

9.1 Pollution caused by spills from the conveyances must be prevented through proper maintenance and effective protective measures.

9.2 All reagent storage tanks and reaction units must be supplied with a bunded area built to the capacity of the facility and provided with sumps and pumps to return the spilled material back into the system. The system must be maintained in a state of good repair and standby pumps must be provided.

9.3 Any hazardous substances must be handled according to the relevant legislation relating to the transport, storage and use of the substance.

10 ACCESS CONTROL

10.1 Strict access procedures must be followed in order to gain access to the properties.

10.2 Access to the pollution control dams, coal slurry discard dumps, storm water dam and return water dam must be limited to authorised employees of the Licensee and their Contractors only.

10.3 Notices prohibiting unauthorised persons from entering controlled access areas as well as internationally acceptable signs indicating the risks involved in case of an unauthorised entry must be displayed along the boundary fence of these areas.

11 CONTINGENCIES

11.1 Accurate and up-to-date records shall be kept of all system malfunctions resulting in non-compliance with the requirements of this licence. The records shall be available for inspection by the Provincial Head upon request. Such malfunctions shall be tabulated under the following headings with a full explanation of all the contributory circumstances:

11.1.1 operating errors
11.1.2 mechanical failures (including design, installation or maintenance)
11.1.3 environmental factors (e.g. flood)
11.1.4 loss of supply services (e.g. power failure) and
11.1.5 Other causes.

11.2 The Licensee must, within 24 hours, notify the Provincial Head of the occurrence or potential occurrence of any incident which has the potential to cause, or has caused water pollution, pollution of the environment, health risks or which is a contravention of the licence conditions.

11.3 The Licensee must, within 14 days, or a shorter period of time, as specified by the Provincial Head, from the occurrence or detection of any incident referred above, submit an action plan, which must include a detailed time schedule, to the satisfaction of the Provincial Head of measures taken to:

11.3.1 correct the impacts resulting from the incident
11.3.2 prevent the incident from causing any further impacts and
11.3.3 prevent a recurrence of a similar incident.

12 INTEGRATED WATER AND WASTE MANAGEMENT

12.1 The Licensee must update an Integrated Water and Waste Management Plan (IWWMP), which must together with the updated Water balance be submitted to the Provincial Head for approval within one (1) year from the date of issuance of this licence.

12.2 The IWWMP and water balance shall thereafter be updated and submitted to the Provincial Head for approval, annually.

12.3 The Licensee must, at least 180 days prior to the intended closure of any facility, or any portion thereof, notify the Provincial Head of such intention and submit any final amendments to the IWWMP and RSIP *Rehabilitation Strategy* and *Implementation Programme (RSIP)* as well as a final *Closure Plan,* for approval.

12.4 The Licensee shall make full financial provision for all investigations, designs, construction, operation and maintenance for a water treatment plant should it become a requirement as a long-term water management strategy.

12.5 The Licensee shall at all times implement measures that prevent and minimise the acid mine drainage generation.

12.6 The Licensee shall ensure that the negative water balance is achieved during the operation of the mine and after the closure of the mine.

13 SITE SPECIFIC CONDITIONS

13.1 Water samples must be taken from all the monitoring boreholes by using approved sampling techniques and adhering to recognized sampling procedures. Samples should be analyzed for both organic as well as inorganic pollutants, as mining activity often lead to hydrocarbon spills in the form of diesel and oil. At least the following water quality parameters should be analyzed for:

13.1.1 Major ions (Ca, Mg, Na, SO_4, NO_3, Cl, F).
13.1.2 pH.
13.1.3 Electrical Conductivity (EC).
13.1.4 Total Alkalinity.

These should be recorded on a data sheet. It is proposed that the data should be entered into an appropriate computer database and reported to the Department of Water and Sanitation as part of the Quarterly Quality Report for Grootegeluk.

13.2 For the Cyclic Ponds facility quarterly groundwater sampling must be done to establish database of plume movement trends, to aid eventual mine closure as part of the Monitoring plan for Grootegeluk.

13.3 The Licensee must ensure in advance that alternative water supply for external water users is provided to these users should groundwater resources be impacted.

13.4 A proper ground and surface water monitoring network should be established to monitor the quality and quantity of groundwater as per the comprehensive

Monitoring Plan for Grootegeluk ensuring that water used by other water users are safeguarded in accordance to chapter 14 of the National Water Act, 1998.

13.5 The cyclic ponds return water dam and the newly constructed attenuation dams must be designed in such a manner that any spillage can be contained and reclaimed within surrounding environment, a plan must be in place to stop overflowing in a dam in case of rainy seasons.

13.6 The Licensee shall ensure that dirty storm water is not released into a natural environment and must be contained on a dirty water containment facility.

13.7 The Licensee shall ensure that Pollution Control Dam, Water return dam, Attenuation dams and Cyclic Ponds System are lined with the HDPE geomembrane liner of 1,5mm minimum thickness to capture all dirty and seepage water emanating from the slimes dam area.

13.8 The Licensee is authorized to construct a silt trap of height 1.3 m, surface area of 122 m^3 and capacity of 242 m^3.

13.9 The Licensee is authorized to erect a concrete lined tank with surface are 138 m^2, a wall height of 2.83 m and capacity to hold 112 m^3 with reserve capacity to accommodate potential short to medium term increases as indicated in the report. The tank shall only be used for storage of domestic waste water referred to in the Report.

13.10 The revised design for the proposed lining of the new product stockpiles / yards as presented in May 2015 and subsequent meetings by BVI Consulting engineers is accepted on condition that a Construction Quality Assurance (CQA) plan be implemented and the results thereof confirm construction in accordance with the approved design. This confirmation is to be forwarded to the department in writing prior to the disposal of waste.

13.11 Appropriate ground water monitoring needs to be designed to monitor any adverse impacts on groundwater resources.

13.12 Ground water level trends and ground water quality needs to be monitored on a bi-annual basis and form part of the Monitoring Plan for Grootegeluk.

13.13 The Licensee shall maintain and manage the drainage systems of the existing stockpiles as per the design intent. Monitoring of the SO4 plume in terms of migration and concentrations during operations and post closure should continue.

13.13.1 Should the pollution be detected in the existing stockyards, the Licensee shall re-line the existing stockyard and conduct monitoring as indicated in condition 13.19.

APPENDIX V

Section 21(j) of the Act: **Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people.**

1 REMOVAL OF WATER FOUND UNDERGROUND

1.1 The Licensee is authorized to remove or dewater a maximum quantity of water on the properties and with a purpose as indicated in **Table 6.**

Table 6: S21 (j) water use: Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people

No	Water Use Name	Description/Purpose	Volume	Coordinates	Property Description
1.	Abstraction from the Grootegeluk Pit & In-Pit sumps	Removing, discharging or disposing of water found inside Grootegeluk the open pit	954 072 m^3/annum (average) and maximum of 1 606 689 m^3/annum	S23° 40' 40.55" E27° 32' 40.74" S23° 42' 13.11" E27° 29' 34.05" S23° 40' 32.02" E27° 28' 27.82" S23° 39' 41.21" E27° 31' 12.10" S23° 39' 57.87" E27° 32' 50.22"	Enkelbult 462 LQ portion 0; Hieromtrent 460 LQ; portion 0; Grootegeluk 459 LQ portion 0

1.2. The quantity of the water authorised to be removed and disposed of into the storage dams and process plants in terms of this licence may not be exceeded without prior authorisation by the Minister.

1.3. The Licensee shall provide any water user whose water supply is impacted by the water use with potable water.

1.4. The quantity of water removed from underground must be metered and recorded on a daily basis.

1.5. The groundwater levels surrounding the Pit area must be monitored every six (6) months (once in the beginning of the dry season and once in the beginning of the wet season).

1.6. Suitable measuring structures must be installed, to measure the flows entering and leaving the delivery lines.

1.7. The methods for the measurement of specific substances and parameters in any wastewater must be carried out by a laboratory that has been accredited under the South African National Accreditation System (SANAS) in terms of SABS Code 0259 for that method

1.8. The methods of analysis, as discussed within the Monitoring Plan for Grootegeluk, shall not be changed without prior notification to the Licensee and written approval by the Minister or his/her delegated nominee.

1.9. The Provincial Head must be informed of any incident that may lead to groundwater being disposed of contrary to the provisions of this licence, by submitting a report containing the following information:

1.9.1. Nature of the incident (e.g. operating malfunctions, mechanical failures, environmental factors, loss of supply services, etc);
1.9.2. Actions taken to rectify the situation and to prevent pollution or any other damage to the environment; and
1.9.3. Measures to be taken to prevent re-occurrence of any similar incident.

1.10. The Licensee must follow acceptable construction, maintenance and operational practices to ensure the consistent, effective and safe performance of the groundwater removal system.

1.11. Reasonable measures must be taken to provide for mechanical, electrical or operational failures and malfunctions of the underground water removal system.

[END OF LICENCE]

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

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AMENDMENT LICENCE IN TERMS OF SECTION 50 OF THE NATIONAL WATER ACT, 1998 (ACT NO 36 OF 1998)

I, ***Trevor Balzer,*** in my capacity as Deputy Director-General: Special Projects in the Department of Water and Sanitation and acting under authority of the powers sub- delegated to me by the Acting Director- General of Water and Sanitation, hereby authorizes the amendment of licence dated 05 July 2018, licence no: **07/A42J/GB/6418: Exxaro (Pty) Ltd-Grootegeluk Coal Mine and Reductants (Char).**

SIGNED: _____

DATE: 30/11/2020

The above mentioned licence is amended as follows:

Amendment of Table 3 of Appendix IV, Section 2.1

4. Table 3 of the of the licence is hereby amended-

a. by substitution of Item no.21 of the licence as follows.

No	water use Name	Description/Purpose	Capacity	Volume	Coordinates	Property Description
21.	Dust Suppression of the mine roads with process water from water reticulation system and PCD's	Dust Suppression		Annual Disposal quantity = 1 600 000 m³/a	Haul Roads within mining area B08657	Enkelbult 462 LQ, Portion 0, Daarby 458 LQ, portion 0 Turfvlakte 463 LQ, portion 0 Hieromtrent 460 LQ, portion 0 Grootegeluk 459 LQ, portion 0 Leeuwdrift 312 LQ portion 0 Appelvlakte 448, Portion 1 and 0 Goedehoop 457 LQ portion 0

b. by addition of the following water uses on Appendix VI - Table 3

No	water use Name	Description/Purpose	Capacity	Volume	Coordinates	Property Description
	Oxidation ponds – 4 Ponds	Decommissioned but Retained for Emergency disposal.	Design capacity = 14 747 m3 Large pond (compartments 1 and 2) = 7 600 – 15 200 m3; Small pond (compartments 3 and 4 combined) = 2 400 m3	Disposal capacity = 0 / Emergency back-up for new system.	S23° 40' 34.24" E27° 33' 35.60"	Turfvlakte 463 LQ portion 0
	Attenuation dam North at Phase 2 Stockpile area	Receives run-off from the Phase 2 Stockyards area A	Design Volume = 15 850 m3 Active storage = 13 095 m3	Annual disposal = 157 140 m3/a	S23° 39' 00.26" E27° 32' 59.69" S23° 38' 58.86" E27° 32' 58.45" S23° 38' 53.47" E27° 33' 04.22" S23° 38' 54.46" E27° 33' 05.83"	Daarby 458 LQ portion 0
	Attenuation dam South at Phase 2 Stockpile area	Receives run-off from the Phase 2 Stockyards area B	Design Volume = 18 900 m3 Active storage = 13 000 m3	Annual disposal = 156 000 m3/a	S23° 39' 02.14" E27° 33' 13.11" S23° 39' 05.23" E27° 33' 16.52" S23° 39' 07.25" E27° 33' 13.92" S23° 39' 03.66" E27° 33' 10.04"	Daarby 458 LQ portion 0

[END OF LICENCE AMENDMENT]