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, **Anil Bijman Singh,** in my capacity as Director-General (Acting) in the Department of Water and Sanitation and acting under authority of the powers delegated to me by the Minister of Water and Sanitation, hereby authorise the following water uses in respect of this licence.

SIGNED: _____

DATE: 22/09/2016

LICENCE NO: 05/U30B/ABCI/4036
FILE NO: 27/2/2/U30B/6/1/2/3/9

1.	**Licensee:**	**TONGAAT HULETT DEVELOPMENTS (PTY) LTD (Cornubia Phase 2)**
	Postal Address:	PO Box 22319 GLENASHLEY 4022
2.	**Water uses**	
2.1	Section 21(b) of the Act:	Storing water, subject to the conditions set out in Appendices I and II.
2.2	Section 21(c) of the Act:	Impeding or diverting the flow of water in a watercourse, subject to the conditions set out in Appendices I and III.
2.3	Section 21(i) of the Act:	Altering the bed, banks course or characteristics of a watercourse, subject to the conditions set out in Appendices I and III.

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3. Properties in respect of which the licence is issued

3.1 Refer to list of properties below and also included in Appendix IV

4. Registered owner(s) of the Properties

Property Description	Ownership	Title Deed Number
Cornubia Phase 2		
Ptn 50 (of 8) of the Farm Lot 31 No 1560	Tongaat Hulett	T8502/90
Ptn 465 (of 8) of the Farm Lot 31 No 1560	SANRAL	T5641/07
Rem of Erf 27 Cornubia 217	Tongaat Hulett	T8055/2015
Ptn 57 (of 21) of the Farm Lot 31 No 1560	Tongaat Hulett	T31399/89
Rem of Ptn 16 of the Farm Lot 31 No 1560	Tongaat Hulett	T3332/90
Ptn 1 of Farm Lot 21 No 1529	Tongaat Hulett	T8490/90
Remainder of the Farm Lot 21 No 1529	Tongaat Hulett	T1547/21
Rem of Ptn 21 of the Farm Lot 31 No 1560	Tongaat Hulett	T3338/90
Portion 5 of Farm Lot 21 No 1529	Tongaat Hulett	T8501/90
Rem of Ptn 15 of the Farm Lot 31 No 1560	Tongaat Hulett	T3333/90
Ptn 5 (of 4) of the Farm Lot 31 No 1560	Tongaat Hulett	T8493/90
Rem of Ptn 6 (of 4) of the Farm Lot 31 No 1560	Tongaat Hulett	T8488/90
Rem of Ptn 8 of the Farm Lot 31 No 1560	Tongaat Hulett	T3335/90
Rem of Ptn 14 of the Farm Lot 31 No 1560	Tongaat Hulett	T8505/90
Rem of Ptn 13 of the Farm Lot 31 No 1560	Tongaat Hulett	T8496/90
Rem of the Farm Lot A 39 No 1532	Tongaat Hulett	T8499/90
Ptn 2 of the Farm Lot 21 No 1529	Tongaat Hulett	T8478/90
Ptn 8 of the Farm Lot 21 No 1529	Tongaat Hulett	T8491/90
Ptn 9 of the Farm Lot 21 No 1529	Tongaat Hulett	T8500/90
Rem of the Farm Lot 20 No 1557	eThekwini Municipality	T58841/08
Rem of Ptn 1 of the Farm Lot 20 No 1557	eThekwini Municipality	T58841/08
Ptn 7 of the Farm Lot 21 No 1529	Tongaat Hulett	T27986/89
Ptn 4 of the Farm Lot 21 No 1529	Tongaat Hulett	T5629/90
Ptn 3 of the Farm Lot 21 No 1529	Tongaat Hulett	T5630/90
Ptn 11 of the Farm Lot 21 No 1529	Tongaat Hulett	T8503/90
Erf 13 of farm Blackburn No. 25	Tongaat Hulett	T53818/2006
Erf 14 of farm Blackburn No. 25	Tongaat Hulett	T43781/2008
Rem of Erf 3440 Umhlanga Rocks	Tongaat Hulett	T53818/2006
Rem of Ptn 4 of the Farm Lot 31 No 1560	Tongaat Hulett	T8510/1990
Portion 471(of 21) of Farm Lot 31 No. 1560	SANRAL	T5641/07
Portion 4 of Lot A 39 No. 1532	SANRAL	T5641/07
Erf 851 Mt Edgecombe	Mt Edgecombe Park Properties (Pty) LTD	T64622/04

Property Description	Ownership	Title Deed Number
Erf 52 Mt Edgecombe No. 217	KZN DoT	T3088/97

Table1: Property details

5. Licence and Review Period

5.1 This licence is valid for a period of twenty (20) year(s) from the date of issuance, and maybe reviewed every five (5) year (s) thereafter.

6. Definitions

Any terms, words and expressions as defined in the National Water Act, 1998 (Act 36 of 1998) must bear the same meaning when used in this licence.

"The Act" means the National Water Act, 1998 (Act 36 of 1998).

"The Regional Head" means the Regional Chief Director: Kwa-Zulu Natal, Department of Water Affairs P.O. Box 1018, Durban 4000.

7. Brief description of the application

This licence authorises Section 2(b); (c) and (i) water uses in terms of Section 40 the National Water Act, 1998 (Act 36 of 1998). These include construction of attenuation structure, crossing of wetlands and rivers or stream. The activities fall within U30B quaternary catchment in Pongola Water Management Area.

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 Regional Head of any change of name, address, premises and/or legal status.

4. If the propert(ies) 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 Regional Head of the Department within sixty (60) days of the said change taking place.

5. If a water user association is established in the area to manage the resource, membership of the Licensee to this association is compulsory.

6. The Licensee must be responsible for any water use charges or levies imposed by a responsible authority.

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 this licence, when a comprehensive determination of the Reserve has finally been made; it must 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 must be submitted to the Regional 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 three (3) months of the date of issuance of this licence and a report on the audit must be submitted to the Regional Head within one month of finalisation of the report.

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 (2) years. Calibration certificates must be available for inspection by the Regional Head or his / her representative upon request.

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

APPENDIX II

Section 21 (b) of the Act: Storing of water

1. STORING OF WATER

1.1 The Licensee is authorised to store a maximum quantity of ten thousand six hundred cubic metres (10 600m^3) of water in the weir for attenuation of storm water, located on Portion 1 of the farm lot 21 NO. 1529. Geographic location of the dam wall is 29°42' 22.9"S; 31° 03' 19.7"E.

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

2. Monitoring Requirements

2.1 Suitable measuring structures must be constructed to measure the flows entering and leaving the weir and this information must be available to the Regional Head on request.

3. Dam Safety Requirements

3.1 The operation and maintenance of all dam facilities classified as a dam with a safety risk, must be carried out under supervision of a Professional Civil Engineer, registered under the Engineering Profession of South Africa Act, 1990 (Act 114 of 1990).

3.2 All dams with a safety risk shall be registered with the Department Dam Safety Office.

3.3 An approved professional person must be appointed to carry out a dam safety evaluation annually and must:

3.3.1 Consider whether the safety norms pertaining to the design, construction, monitoring, operation, performance and maintenance of the dam satisfy acceptable dam engineering practices.

3.3.2 Compile a report on the matters contemplated above according to the prescribed requirements and submit the signed and dated report to the owner of the dam within the prescribed period.

3.4 The Licensee is not exempted from compliance with the provisions of the Regulations published under Government Notice R139 of 24th February 2012, read with Chapter 12 of the Act.

4. Operation of attenuation storage

4.1 The as-built drawing and specifications of the attenuation structures and all river crossings must be submitted to the Regional Head, three months after completion of construction.

4.2 The Government reserves the right to construct storage works at any time in any stream and to store all surplus water reaching the dams and to control the allocation of such water.

APPENDIX III

Section 21(c) of the Act: **Impeding or diverting the flow of water in a watercourse**
and
Section 21(i) of the Act: **Altering the bed, banks, course or characteristic of a watercourse**

1. GENERAL

1.1 This licence authorises Tongaat Hulletts Development for construction of Section 21(c) and (i) water use activities as set out in Table 2 and in the water use licence application reports submitted to the Department or the Regional Head(refer condition 1.2).

Wetland HGM Unit	Hydro-geomorphic type	Purpose or Description	Properties	Volume of water (m^3/a) or Altering or Impeding and diverting watercourse (m)	Co-ordinates
-		Construction of storm water attenuation storage	Portion 1 of the farm lot 21 NO. 1529 T8490/1990	3 340 m^3 Length:94.1m Width: 33m Surface area 0.15ha	29°42' 56.0"S; 31° 03' 20.5"E
A1	Channelled valley bottom wetland	Storm water management facility crossing	Portion 14 of the farm Blackburn no 25	Length: 16.1m Width: 91m Area:1684m^2	**Start** 29° 42' 22.8"S 31° 03' 16.6"E **End** 29° 42' 23.0"S 31° 03' 19.0"E
A10	Channelled valley bottom wetland	Bridge crossing	Portion 50 (of 8) of Lot 31	Length:102m Width :49m Area: 3035m^2	**Start** 29° 42' 46.15"S; 31° 03' 29.99"E **End** 29° 42' 44.90"S; 31° 03' 28.89"E
A11	Valley head seep	Cycletrack Crossing	Portion 5 of LOT 21 No. 1529	Length:23m Width: 3m Area: 69m^2	**Start** 29° 42' 54.13"S 31° 03' 21.37"E **End** 29° 42' 53.54"S 31° 03' 21.88"E
A11A	channelled valley bottom	Filling Wetland for road	Remainder of Portion 15 of LOT	Length: 111m Width: 34m Area: 2505m^2	**Start** 29° 42' 35.52"S; 31° 03' 48.33"E

Wetland HGM Unit	Hydro-geomorphic type	Purpose or Description	Properties	Volume of water (m^3/a) or Altering or Impeding and diverting watercourse (m)	Co-ordinates
	wetland	crossing	31 No. 1560		**End** 29° 42' 33.39"S; 31° 03' 45.00"E
A12	Channelled Valley bottom	Infilling of the entire wetland for the Cornubia Phase 2 earth-worked platforms	Remainder of LOT A39 No.1532	Length: 83m Width: 18,4m Area: 1533m²	**Start** 29° 42' 13.67"S; 31° 03' 59.22"E **End** 29° 42' 11.11"S; 31° 04' 01.17"E
A11A	Valley head seep	Stormwater Management facility crossing	Remainder of Portion 4 of the farm LOT 31 NO. 1560 T8055/2015	Length: 95.2m Width : 62.1m Area:3077m²	**Start** 29° 42' 58.75"S 31° 03' 18.05"E **End** 29° 42' 55.16"S; 31° 04' 23.22"E
A2	Channelled valley bottom wetland	Stormwater Management facility crossing	Portion 11 of Lot 21 NO. 1529 T8491/1990	Length:34.3m Width :62.6m Area:2879m²	**Start** 29° 41' 47.64"S; 31° 03' 57.27"E **End** 29° 41' 41.66"S; 31° 03' 57.24"E
A3	Water path crossing	Cycletrack crossing	Portion 11 of the farm LOT 21 NO. 1529 T8491/1990	Length:1m Width: 3m Area: 3m²	**Start** 29° 41' 47.53"S; 31° 03' 55.91"E **End** 29° 41' 47.16"S; 31° 03' 55.75"E
A3A	Channelled valley bottom wetland	Cycletrack crossing	Portion 11 of the farm LOT 21 NO. 1529 T8503/1990	Length: 6m Width : 3m Area : 18m²	**Start** 29° 41' 48.89"S; 31° 03' 51.49"E **End** 29° 41' 48.82"S; 31° 03' 51.66"E

Wetland HGM Unit	Hydro-geomorphic type	Purpose or Description	Properties	Volume of water (m^3/a) or Altering or Impeding and diverting watercourse (m)	Co-ordinates
A3B	Channelled valley bottom wetland	Bridge crossing	Portion 9 of the farm LOT 21 NO. 1529 T8500/90	Length: 49m Width : 17m Area : 682m²	**Start** 29° 41' 56.54"S; 31° 03' 46.46"E **End** 29° 41' 56.01"S; 31° 03' 46.29"E
A3C	Channelled valley bottom wetland	Infilling of the entire wetland for the Cornubia Phase 2 earth-worked platforms	Portion 2 of the farm LOT 21 NO. 1529 T8493/90	Length: 276m Width : 8m Area :1657m²	**Start** 29° 42' 04.76"S 31° 03' 15.29"E **End** 29° 42' 18.33"S; 31° 03' 09.22"E
A3D	Channelled valley bottom wetland	Sewer line crossing	Portion 2 of the farm Lot 21 No. 1529 T8493/1990	Length:75m Width : 3m Area : 225m²	**Start** 29° 42' 07.94"S; 31° 03' 29.58"E **End** 29° 42' 07.69"S; 31° 03' 27.60"E
A4	Valley Head Steep	bridge crossing	Portion 9 of the farm Lot 21 No. 1529 T8490/1990	Length: 102m Width : 61m Area :2162m²	**Start** 29° 42' 09.60"S; 31° 03' 49.68"E **End** 29° 42' 07.80"S; 31° 03' 48.69"E
A4A	Channelled valley bottom wetland	Infilling of the entire wetland for the Cornubia Phase 2 earth-worked platforms	Portion 11 of the farm Lot 21 No. 1529 T8500/1990	Length:155m Width:24 Area:2479	**Start** 29° 42' 05.87"S; 31° 03' 51.42"E **End** 29° 42' 06.51"S; 31° 03' 52.73"E
A4B	Channelled valley bottom wetland	Infilling of portion of the wetland for Cornubia Phase 2 earth-worked platforms	Rem of Portion 16 of the farm Lot 31 No. 1560	Length:156m Width:9m Area:1300m²	**Start** 29°42'19.75"S; 31° 3'50.30"E **End** 29°42'15.10"S; 31° 3'47.16"E

A4C	Section 21(c) and (i)	Channelled valley bottom wetland	Infilling of the entire wetland for the Cornubia Phase 2 earth-worked platforms	Remainder of the farm Lot 31 NO. 1560 T3332/1990	Length:149m Width: 12m Area:1299m²	**Start** 29° 42' 27.77"S 31° 03' 50.44"E **End** 29° 42' 05.52"S 31° 03' 51.52"E
A5	Section 21(c) and (i)	channelled valley bottom wetland	Cycletrack crossing	Portion 5 of the Lot 21 NO. 1529	Length:59m Width :3m Area: 117m²	**Start** 29° 42' 28.96"S; 31° 03' 35.80"E **End** 29° 42' 27.22"S; 31° 03' 34.90"E
A6	Section 21(c) and (i)	Channelled valley bottom wetland	Filling wetland for road crossing	Portion 1 of Lot 21 NO. 1529	Length:131m Width: 63m Area:3435m²	**Start** 29° 42' 29.15"S 31° 03' 29.18"E **End** 29° 42' 27.58"S 31° 03' 29.60"E
A6A	Section 21(c) and (i)	Channelled valley bottom wetland	Road crossing	Portion 1 of the farm Lot 21 NO. 1529	Length: 15m Width: 6m Area: 90m²	**Start** 29° 41' 40.97"S; 31° 02' 53.96"E **End** 29° 41' 40.73"S; 31° 02' 53.87"E
A8	Section 21(c) and (i)	Channelled valley bottom wetland	Stormwater management facility crossing	Portion 1 of Lot 21 NO. 1529 T8490/1990	Length:27.6m Width:107.4m Area: 2283m²	**Start** 29° 42' 30.72"S; 31° 03' 37.11"E **End** 29° 42' 30.99"S; 31° 03' 33.12"E
A8A	Section 21(c) and (i)	Channelled valley bottom wetland	Infilling of portion of the wetland for Cornubia Phase 2 earth-worked platforms	Rem of Ptn 15 of the Farm Lot 31 No 1560	Length:111m Width : 34m Area:2505m²	**Start** 29° 42' 28.30"S; 31° 03' 49.67E **End** 29° 42'

						26.26S; 31° 03' 46.70"E
A8B	Section 21(c) and (i)	Channelled valley bottom wetland	Infilling of portion of the wetland for Cornubia Phase 2 earth-worked platforms	Remainder of Portion 15 of Lot 31 NO. 1560 T3333/1990	Length:66m Width:42m Area:940m²	**Start** 29° 42' 35.52"S 31° 03' 48.33"E **End** 29° 42' 33.39"S; 31° 03' 45.00"E
A9	Section 21(c) and (i)	Channelled valley bottom wetland	Sewer line crossing	Portion 14 of the farm Lot 31 NO. 1560 T8505/1990	Length:50m Width: 3m Area: 150m²	**Start** 29° 42' 34.40"S; 31° 03' 39.37"E **End** 29° 42' 35.16"S; 31° 03' 41.02"E
B1	Section 21(c) and (i)	Channelled valley bottom wetland	Filling wetland for road crossing	Portion 8 of the farm LOT 21 NO. 1529 T8491/1990	Length: 46m Width :43 Area :1702m²	**Start** 29° 41' 36.51"S; 31° 03' 25.81"E **End** 29° 41' 35.87"S; 31° 03' 28.08"E
B2	Section 21(c) and (i)	Channelled valley bottom wetland	Cycletrack crossing	Portion 8 of the farm LOT 21 NO. 1529 T8491/1990	Length: 6m Width : 6m Area : 18m²	**Start** 29° 41' 30.09"S; 31° 04' 08.53"E **End** 29° 41' 29.92"S; 31° 04' 08.44"E
C1	Section 21(c) and (i)	Un-channelled valley bottom wetland	Filling wetland for road crossing	Portion 3 of the farm Lot 21 No. 1529 T5630/1990	Length:81m Width : 55m Area :3123m²	**Start** 29° 41' 29.85"S; 31° 03' 27.02"E **End** 29° 41' 27.71"S; 31° 03' 28.74"E

C2	Section 21(c) and (i)	Channelled valley bottom wetland	Stormwater management facility crossing	Portion 3 of the farm Lot 21 No. 1529 T5630/1990	Length: 24m Width : 38.9m Area :830m²	**Start** 29° 41' 18.15"S; 31° 03' 35.17"E **End** 29° 41' 19.74"S; 31° 03' 34.89"E
C3	Section 21(c) and (i)	Un-Channelled valley bottom wetland	Filling wetland for road crossing	Portion 3 of the farm Lot 21 No. 1529 T5630/1990	Length:281m Width:23m Area:2080m²	**Start** 29° 41' 24.50"S; 31° 03' 21.63"E **End** 29° 41' 19.02"S; 31° 03' 22.65"E
C4	Section 21(c) and (i)	Channelled valley bottom wetland	Infilling of the entire wetland for the Cornubia Phase 2 earth-worked platforms	Portion 3 of the farm Lot 21 NO. 1529 T5630/1990	Length:142m Width : 10m Area :1420m²	**Start** 29° 41' 18.06"S; 31° 03' 25.78"E **End** 29° 41' 17.09"S; 31° 03' 30.93"E

C5	Section 21(c) and (i)	Channelled valley bottom wetland	Stormwater management facility crossing	Portion 3 of the farm Lot 21 NO. 1529 T5630/1990	Length: 41m Width: 59,7m Area:2120m²	**Start** 29° 41' 18.15"S; 31° 03' 35.17"E **End** 29° 41' 19.74"S; 31° 03' 34.89"E
C8	Section 21(c) and (i)	Channelled Valley bottom wetland	Cycletrack crossing	Portion 7 of the farm Lot 21 NO. 1529 T27986/1989	Length: 12m Width: 3m Area: 36m²	**Start** 29° 41' 14.47"S; 31° 04' 11.90"E **End** 29° 41' 14.23"S; 31° 03' 59.76"E

C8B	Section 21(c) and (i)	Channelled Valley bottom wetland	Cycletrack crossing	Portion 7 of the farm Lot 21 1529 T27986/1989	Length: 28m Width: 3m Area: 84m²	**Start** 29° 41' 09.90"S; 31° 03' 59.76"E **End** 29° 41' 09.19"S; 31° 03' 54.04"E
C9A	Section 21(c) and (i)	Channelled Valley bottom wetland	Infilling of the entire wetland for the Cornubia Phase 2 earth-worked platforms	Portion 4 of the farm LOT 31 NO. 1560 T5629/1990	Length: 452m Width : 42m Area:14149m²	**Start** 29° 41' 05.78"S 31° 03' 26.68"E **End** 29° 40' 58.09"S; 31° 03' 41.00"E
C9C	Section 21(c) and (i)	Channelled Valley bottom wetland	Cycletrack crossing	Portion 4 of the farm Lot 21 NO. 1529 T5629/1960	Length: 38m Width: 3m Area: 114m²²	**Start** 29° 41' 02.52"S; 31° 03' 44.29"E **End** 29° 41' 01.30"S; 31° 03' 44.49"E
D1	Section 21(c) and (i)	Channelled valley bottom wetland	bridge crossing	Remainder of Portion 1 of the farm LOT 20 NO. 1557 T5884/08	Length:43m Width: 6m Area: 274m²	**Start** 29° 41' 17.66"S; 31° 03' 15.69"E **End** 29° 41' 17.53"S; 31° 03' 15.54"E
D2	Section 21(c) and (i)	Channelled valley bottom wetland	Storm water management facility crossing	Portion 3 of the farm Lot 21 NO. 1529 T58841/1990	Length:75.4m Width :35m Area :1787m²	**Start** 29° 41' 15.38"S; 31° 03' 18.32"E **End** 29° 41' 14.77"S; 31° 03'

						17.18"E
D3	Section 21(c) and (i)	Channelled valley bottom wetland	Cycletrack crossing	Remainder of the farm LOT 20 NO. 1557 T5619/1990	Length: 16m Width : 3m Area : 48m²	**Start** 29° 41' 03.27"S; 31° 03' 10.09"E **End** 29° 41' 05.17"S; 31° 03' 11.34"E
D4	Section 21(c) and (i)	Channelled valley bottom wetland	Filling wetland for road crossing	Remainder of Portion 1 of the farm LOT 20 NO. 1557 T5884/2008	Length: 82m Width : 19m Area : 1085m²	**Start** 29° 41' 05.40"S 31° 02' 59.45"E **End** 29° 41' 05.06"S; 31° 03' 00.44"E
D5	Section 21(c) and (i)	channelled valley bottom wetland	Water abstraction facility at Ohlanga River	Portion 5 of the farm Lot 21 No. 1529 T9530/2011	Length:94m Width : 76m Area : 5821m²	**Start** 29° 40' 43.10"S; 31° 03' 33.76"E **End** 29° 40' 45.06"S; 31° 03' 33.83"E
E1	Section 21(c) and (i)	Flood plain	Water abstraction facility at Ohlanga River	Portion 5 of the farm Lot 21 No. 1529 T5629/1990	Length: 76m Width : 51m Area :3366m²	**Start** 29° 40' 46.16"S; 31° 03' 46.51"E **End** 29° 40' 46.76"S; 31° 03' 49.73"E
E1	Section 21(c) and (i)	Flood plain	Water abstraction facility at Ohlanga River	Portion 5 of the farm Lot 21 No. 1529 T8490/1990	Length: 76m Width: 51m Area: 3366	**Start** 29° 40' 46.16"S; 31° 03' 46.51"E **End** 29° 40' 46.76"S;

						31° 03' 49.73"E
E2	Section 21(c) and (i)	Channelled valley bottom wetland	Filling wetland for road crossing	Remainder of the farm Lot 20 NO. 1557 T6519/1990	Length: 39m Width : 39m Area : 1094m²	**Start** 29° 40' 38.81"S; 31° 03' 25.59"E **End** 29° 40' 37.06"S; 31° 03' 26.22"E

F1	Section 21(c) and (i)	Channelled valley bottom wetland	Filling wetland for road crossing	Remainder of Portion 1 of the farm lot 20 NO. 1557 T5884/2008	Length: 36m Width: 23m Area:931m²	**Start** 29° 41' 11.76"S 31° 02' 52.60"E **End** 29° 41' 11.30"S 31° 02' 51.10"E
G1	Section 21(c) and (i)	channelled valley bottom wetland	Cycletrack crossing	Remainder of the Erf Cornubia 27 T16526/1994	Length:253m Width :3m Area: 759m²	**Start** 29° 41' 40.44"S; 31° 02' 40.92"E **End** 29° 41' 46.18"S; 31° 02' 34.29"E
G2	Section 21(c) and (i)	channelled valley bottom wetland	Water abstraction from marshal dam	Remainder of ERF 27 Cornubia	Length:169m Width: 82m Area: 10 179m²	**Start** 29° 42' 05.82"S 31° 02' 28.23"E **End** 29° 42' 07.38"S 31° 02' 28.23"E

H3	Section 21(c) and (i)	Channelled Valley bottom wetland	Infilling of the entire wetland for the Cornubia Phase 2 earth-worked platforms	Remainder of Erf Cornubia 27	Length: 89m Width : 27m Area: 1888m²	**Start** 29° 42' 04.19"S; 31° 03' 22.49"E **End** 29° 42' 04.10"S; 31° 03' 17.68"E
I1	Section 21(c) and (i)	Channelled valley bottom wetland	Stormwater management facility crossing	Portion 13 of the farm Lot 31 NO. 1560 T8496/1990	Length:90.1m Width:115.9m Area: 3924m²	**Start** 29° 42' 52.82"S; 31° 03' 48.84"E **End** 29° 42' 49.69"S; 31° 03' 53.23"E
J1	Section 21(c) and (i)	Flood Plain Wetland	Stormwater management facility crossing	Remainder of the farm LOT A39 NO. 1532 T8499/1990	Length:92.8m Width :124m Area : 5574m²	**Start** 29° 41' 56.82"S; 31° 04' 23.65"E **End** 29° 41' 53.30"S; 31° 04' 25.89"E
J6	Section 21(c) and (i)	Valley Head Steep	Infilling of the entire wetland for the Cornubia Phase 2 earth-worked platforms	Portion 11 of the farm Lot 21 No. 1529 T8503/1990	Length:119m Width:20m Area:2092m²	**Start** 29° 42' 04.94"S; 31° 04' 10.04"E **End** 29° 42' 01.88"S; 31° 04' 11.08"E

1.2 The Licensee must carry out and complete all the activities listed under condition 1.1 according to the following:

1.2.1. Reports submitted to the Department or the Regional Head, specifically:

1.2.1.1. Environmental Management Programme Report prepared by Humayrah Bassa (MSc Environmental Science) dated 30th August 2013.

1.2.1.2. Wetland Impact Assessment Report by Kurt Barichievy (Pr.Sci.Nat.) dated 12th September 2013

1.2.1.3. Wetland and Open Space Rehabilitation Plan Report by K. Barichievy (Pr.Sci.Nat.), G. Boote and Dr. R. Kinvig (Pr.Sci.Nat.) dated 3rd September 2013

1.2.1.4. Engineering Services Report by M.Koekemoer (Professional Engineering Technologist), dated July 2013

1.2.1.5. Storm Water Management plan Report by M.Koekemoer (Professional Engineering Technologist) dated October 2013

1.2.1.6. Agricultural Potential Report by Mottram and Associates cc (Specialists in Irrigation Water Management);

1.2.1.7. Geotechnical Assessment Report by Drennan Muad & Partners Consulting Enginners and Enginnering Geologist, dated 16th March 2013; and

1.2.1.8. Public Participation Summary Report by Humayrah Bassa (MSc Environmental Science), dated 30th August 2013

1.2.2 Environmental authorisation issued by Department of Environmental and Tourism, for New Multi Product Pipeline, in terms of Regulation 36 of the Environmental Impact Assessment Regulations, 2006, dated 04th November 2009.

1.2.3 Conditions of this licence; and

1.2.4 Any other written directive issued by the Provincial Head in relation to this licence.

1.3 No activity must take place within the 1:100 year flood line or the delineated riparian habitat, whichever is the greatest, or within 500 m radius from the boundary of any wetland unless authorised by this licence.

1.4 The conditions of the authorisation must be brought to the attention of all persons (employees, sub-consultants, contractors etc.) associated with the undertaking of these activities and the Licensee must take such measures that are necessary to bind such persons to the conditions of this licence.

1.5 A copy of the water use licence and reports set out under condition 1.2 must be on site at all times.

1.6 A suitably qualified and registered person(s) with professional body of South Africa, appointed by the Licensee, must be responsible for ensuring that the activities are undertaken in compliance with the specifications as set out in reports submitted to the Provincial Head and the conditions of this licence.

1.7 All pipes encased on bridge decking/ slabs or any structures should be located down stream of crossings.

1.8 Pipeline should be encased on concrete if constructed on loose or unstable soils.

APPENDIX IV

Property Description	Ownership	Title Deed Number
Cornubia Phase 2		
Ptn 50 (of 8) of the Farm Lot 31 No 1560	Tongaat Hulett	T8502/90
Ptn 465 (of 8) of the Farm Lot 31 No 1560	SANRAL	T5641/07
Rem of Erf 27 Cornubia 217	Tongaat Hulett	T8055/2015
Ptn 57 (of 21) of the Farm Lot 31 No 1560	Tongaat Hulett	T31399/89
Rem of Ptn 16 of the Farm Lot 31 No 1560	Tongaat Hulett	T3332/90
Ptn 1 of Farm Lot 21 No 1529	Tongaat Hulett	T8490/90
Remainder of the Farm Lot 21 No 1529	Tongaat Hulett	T1547/21
Rem of Ptn 21 of the Farm Lot 31 No 1560	Tongaat Hulett	T3338/90
Portion 5 of Farm Lot 21 No 1529	Tongaat Hulett	T8501/90
Rem of Ptn 15 of the Farm Lot 31 No 1560	Tongaat Hulett	T3333/90
Ptn 5 (of 4) of the Farm Lot 31 No 1560	Tongaat Hulett	T8493/90
Rem of Ptn 6 (of 4) of the Farm Lot 31 No 1560	Tongaat Hulett	T8488/90
Rem of Ptn 8 of the Farm Lot 31 No 1560	Tongaat Hulett	T3335/90
Rem of Ptn 14 of the Farm Lot 31 No 1560	Tongaat Hulett	T8505/90
Rem of Ptn 13 of the Farm Lot 31 No 1560	Tongaat Hulett	T8496/90
Rem of the Farm Lot A 39 No 1532	Tongaat Hulett	T8499/90
Ptn 2 of the Farm Lot 21 No 1529	Tongaat Hulett	T8478/90
Ptn 8 of the Farm Lot 21 No 1529	Tongaat Hulett	T8491/90
Ptn 9 of the Farm Lot 21 No 1529	Tongaat Hulett	T8500/90
Rem of the Farm Lot 20 No 1557	eThekwini Municipality	T58841/08
Rem of Ptn 1 of the Farm Lot 20 No 1557	eThekwini Municipality	T58841/08
Ptn 7 of the Farm Lot 21 No 1529	Tongaat Hulett	T27986/89
Ptn 4 of the Farm Lot 21 No 1529	Tongaat Hulett	T5629/90
Ptn 3 of the Farm Lot 21 No 1529	Tongaat Hulett	T5630/90
Ptn 11 of the Farm Lot 21 No 1529	Tongaat Hulett	T8503/90
Erf 13 of farm Blackburn No. 25	Tongaat Hulett	T53818/2006
Erf 14 of farm Blackburn No. 25	Tongaat Hulett	T43781/2008
Rem of Erf 3440 Umhlanga Rocks	Tongaat Hulett	T53818/2006
Rem of Ptn 4 of the Farm Lot 31 No 1560	Tongaat Hulett	T8510/1990
Portion 471(of 21) of Farm Lot 31 No. 1560	SANRAL	T5641/07
Portion 4 of Lot A 39 No. 1532	SANRAL	T5641/07
Erf 851 Mt Edgecombe	Mt Edgecombe Park Properties (Pty) LTD	T64622/04
Erf 52 Mt Edgecombe No. 217	KZN DoT	T3088/97

2 FURTHER STUDIES AND INFORMATION REQUIREMENTS

2.1 For water use activities in Table 2:

2.1.1 No fundamental alterations of the work method statements, site plan(s) and drawings are allowed, unless a modification is requested and granted by the Provincial Head in writing; and

2.1.2 No site activities must occur beyond the proposed site location of the erosion and sedimentation controls and marked limits of disturbance.

2.2 If the Licensee is not the end user/beneficiary of the water use related infrastructure and will not be responsible for long term maintenance and management of the infrastructure, the Licensee must provide a programme for hand over to the successor-in-title including a brief management/maintenance plan and the agreement for infrastructure along with allocation of responsibilities, within three (3) months of the date of issuance of this licence.

2.3 An Environmental Management Plant (EMP) and rehabilitation plan for the decommissioning of any of the water use activities listed in Table 2 must be submitted five (5) years before commencing with closure to the Provincial Head for written approval.

2.4 For all the activities listed under condition 1.1, Table 2, "as-built" plan(s) and engineering drawing(s) prepared by a registered professional engineer, must be submitted to the Provincial Head within six (6) months of completion of new activities and for existing water uses within six (6) months of the date of issuance of this licence. These plan(s) and drawing(s) must indicate the watercourse(s) including wetland boundaries and layout and structure location(s) of all infrastructure impeding and/or diverting flow of watercourses as well as alterations to watercourse(s) on the properties.

3 PROTECTIVE MEASURES

3.1 Stormwater Management

3.1.1 Stormwater management practices must be constructed, operated and maintained in a sustainable manner throughout the project and for the water use activities set out in condition 1.1 and must include but are not limited to the following:

3.1.1.1 Increased runoff due to vegetation clearance and/or soil compaction must be managed, and steps must be taken to ensure that stormwater does not lead to bank instability and excessive levels of silt entering the watercourse(s);

3.1.1.2 Stormwater must be diverted from construction works, bare rehabilitated areas, roads and the abstraction works and must be managed in such a manner as to disperse runoff and to prevent the concentration of stormwater flow;

3.1.1.3 The velocity of stormwater discharges must be attenuated and the banks of the watercourses protected;

3.1.1.4 Stormwater leaving the Licensee's premises must 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;

3.1.1.5 Drainage next to the activities listed in Table 2 must be diverted away from the water course(s) to ensure that any contaminated runoff does not flow directly into the watercourse(s) as a stormwater discharge; and

3.1.1.6 Sheet runoff from paved, hardened and compacted surfaces and access roads need to be curtailed.

3.1.1.7 Pipeline route must be optimised to avoid straight lines over mountains. Follow and make use of contours to avoid unnecessary scarring and erosion down the mountain to the river. Sufficient erosion protection to be implemented.

3.1.1.8 Diversion to be protected against erosion. Use materials like sandbags or rock. Division to be removed afterwards

3.1.1.9 Dirty water from trenches to be filtered before discharged back to stream

3.2 Structures, Construction Area and Materials

3.2.1 Necessary erosion prevention measures must be employed to ensure the sustainability of all structures.

3.2.2 The height, width and length of structures must be limited to the minimum dimension necessary to accomplish the intended function.

3.2.3 Structures must not be damaged by floods exceeding the magnitude of floods occurring on average once in every 100 years.

3.2.4 Structures must be non-erosive, structurally stable and must not induce any flooding or safety hazard.

3.2.5 Structures must be inspected regularly for accumulation of debris, blockage, erosion of abutments and overflow areas. Debris must be removed and damages must be repaired and reinforced immediately.

3.2.6 The construction camp, plant and material stockpiles must be located outside the extent of the watercourse(s) and must be recovered and removed three (3) weeks after construction has been completed.

3.2.7 During construction, erosion berms should be installed for the entire life-of-project to prevent gully formation, according to the slope as set out in Table 3.The designs and placement of the berms must be done by a registered, professional,

independent Civil Engineer and approved in writing by the Provincial Head before construction commences.

Table 3: Erosion protection berm placement

Track slope	Berm placement
<2%	Every 50 m
2% - 10%	Every 25 m
10% - 15%	Every 20 m
>15%	Every 10 m

3.2.8 During construction, all watercourse crossings must be adequately protected against erosion by implementing the necessary mitigation measures as determined by a registered person with professional body of South Africa, qualified and independent wetland specialist and ecologist. These measures must be documented.

3.2.9 A fence must be erected during the construction phase between the wetlands, the riparian habitat and the construction activities to prevent entry into the wetlands, and the riparian habitat by construction vehicles and to prevent storing or dumping of topsoil, construction material and other waste in the wetland and riparian habitat (refer also to conditions 3.5.22 & 3.5.26).

3.2.10 All areas affected by construction should be rehabilitated upon completion of the construction phase of the development. Areas should be reseeded with indigenous vegetation species as required, and the use of seedmets is recommended to prevent erosion.

3.2.11 During the construction phase no vehicles must be allowed to drive through any wetland areas.

3.2.12 No construction and vehicles is allowed to drive or dump construction material in any wetland within 500 m radius and within the 1:100 year floodline and/or delineated riparian habitat, whichever is the greatest, or within 500 m radius from the boundary of any wetland unless authorised in this licence.

3.2.13 No structures to be placed within the 1:100 year floodline and/or the delineated riparian areas unless authorised in this licence.

3.2.14 The structure of the pipeline crossing any watercourse (on surface and sub-surface) must be non-erosive, structurally stable and may not induce any flooding (also sub-surface poor drainage). Accumulation of debris, blockage, erosion of abutments and overflow must be inspected regularly and damaged areas must be repaired immediately.

3.2.15 The pipeline should be regularly monitored and maintained (properly logged and records kept for audit purposes) to ensure that any problems with the pipeline are rectified before it can impact any watercourse.

3.2.16 A Plant Species Plan must done by a professional registered person With SACNASP and be submitted for approval to the Provincial Head

3.2.17 Method statement for crossing to be submitted to Provincial Head for approval a month before construction starts.

3.2.18 During river and wetland crossing a professional registered person With SACNASP must supervise works on day to day basis.

3.2.19 Any access roads or crossings must be:

3.2.19.1 Non-erosive, structurally stable and should not induce any flooding or safety hazard;

3.2.19.2 Repaired immediately if damaged to prevent further damage;

3.2.19.3 Non-polluting with respect to silt and litter that can be deposited into a watercourse;

3.2.19.4 Watercourse crossings to facilitate the movement of aquatic and non-aquatic organisms and fauna;

3.2.19.5 Crossing surfaces must be tarred or concreted along the extent of the watercourse and extent at least 100m beyond the extent of the watercourse to minimize impacts on the characteristics of the watercourse;

3.2.19.6 Where any road is within the 100m buffer zone of the watercourse, this portion of the road must be concreted or tarred.

3.2.20 Damage / degradation of the instream habitant. Instream habitant must be proceed in this manner:

3.2.21.1 Developments of activities should start upstream and work downstream, to enhance the ecological recovery process;

3.2.21.2 Boulders and structures removed or destroyed during pipeline construction must be replaced. Rehabilitation of disturbed instream and riparian habitat should commence immediately after construction is completed; and

3.2.21.3 Gravel removed from stream bed during pipeline construction must be replaced with gravel similar consistency and diameter.

3.2.21 The indiscriminate use of machinery within the instream and riparian zones may lead to compaction of soils and vegetation. This must be strictly controlled.

3.2.22 Registered environmental professional like a landscape architect or botanist or wetland specialist to be appointed to perform Mater Planning and site layout at watercourse, supervise work through watercourses and rehabilitation.

3.3 Water Quality

3.3.1 The Licensee must sample the water quality weekly (during construction) and monthly (operation) for the variables as set out in Table 4 at monitoring points

both upstream and downstream of the activities (pipeline crossings sampling only during construction and 3 months thereafter) and report to the Provincial Head within thirty (30) days after the results of each sampling event is received:

Table 4: Water quality parameters relevant for sampling.

Variable	Limit
Temperature (°C)	<10% variation
Ph	6.5 – 8
Electrical conductivity (EC) (mS/m)	<30
Suspended solids (SS) (mg/ℓ)	<25
Dissolved oxygen (mg/ℓ)	≥6.0
Sechi disk depth (m)	≥9.0 cm

The variables may be amended on discretion of the Responsible Authority. Only an accredited (SANS 17025) laboratory to be used for analysis.

3.3.2 Where water quality parameters (Table 4) are not met, the Licensee must indicate to the Provincial Head what the reason(s) for non-compliance is/are and actions taken to meet compliance. This component is part of the reporting condition as stipulated under condition 3.3.1.

3.3.3 Monitoring must continue for three (3) years after the cessation of the activities listed in condition 1.1.

3.3.4 Monitoring must be undertaken as set out in Section 5 of this licence.

3.3.5 Activities that lead to elevated levels of turbidity of any watercourse(s) must be prevented, reduced, or otherwise remediated. Activities must be scheduled to take place during dry seasons when flows are lowest where reasonably possible. If this is not possible and if management measures have not been provided for in the reports submitted to the Responsible Authority, the Licensee must submit such to the Responsible Authority for a written approval before these activities commence. Natural in stream hydrology is to be used to determine which months constitute the low flow months.

3.3.6 The Licensee must ensure that the quality of water to downstream water users does not decrease because of the of the water use activities listed under condition 1.1.

3.3.7 A qualified person must be appointed to assess the quality of water both upstream and downstream of the activities prior to commencement of construction.

3.3.8 Pollution of and disposal/spillage of any material into the watercourse must be prevented, reduced, or otherwise remediated through proper operation, maintenance and effective protective measures.

3.3.9 Vehicles and other machinery must be serviced well above the 1:100 year flood line or delineated riparian habitat, whichever is the greatest. Oils and other potential pollutants must be disposed off at an appropriate licenced site, with the necessary agreement from the owner of such a site.

3.3.10 Any hazardous substances must be handled according to the relevant legislation relating to transport, storage and use of the substance and all storage facilities must be equipped with large, clearly readable material safety data sheets (MSDS).

3.3.11 All reagent storage tanks and reaction units must be supplied with a bunded area built to cater for at least 110% of 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.

3.3.12 Plant search and rescue to be performed. Plant Species Plants must be compiled and implemented.

3.3.13 The Licensee has to indicate to the Responsible Authority within sixty (60) days after issuance of this licence, the strategic placement of bio-swale, bio-filters, silt, litter and hydrocarbon (oil) traps to minimise the risk of pollutants entering the natural drainage system of the area.

3.3.14 No ammonium nitrate dry explosives will be used that has a negative or polluting impact on water quality of a watercourse. The Licensee has to analyse water samples for NH_3 (0.007 mg/l), NH_4 (1.5 mg/l) and NO_3 (6.0 mg/l as N), where the limits are indicated in brackets. Sampling and reporting as part of condition 3.3.1.

3.3.15 The Licensee must actively participate in any Catchment Management Agency's related activity.

3.4 Flow

3.4.1 The Licensee must determine flood lines (1:50 and 1:100 year) prior to construction to ensure risks are adequately managed. Flood lines must be clearly indicated on the site plan(s) and drawings along with all wetland boundaries.

3.4.3 The activities must be conducted in a manner that does not negatively affect catchment yield, hydrology and hydraulics. The Licensee must ensure that the overall magnitude and frequency of flow in the watercourse(s) does not decrease, other than for natural evaporative losses and authorised attenuation volumes.

3.4.4 Flow patterns to mimic the natural flow regime as closely as possible with respect to seasonality and variability, considering flooding events at different magnitudes in order to scour the estuary and provide sufficient stream power for movement of sediments.

3.4.5 Appropriate design and mitigation measures must be developed to minimise impacts on the natural flow regime of the watercourse i.e. through placement of structures/supports and to minimise turbulent flow in the watercourse.

3.4.6 Structures must be designed in a way to prevent the damming of stream/river water and not impact on the flow of the water, during the construction and operational phases of all developments.

3.4.7 The development may not impede natural drainage lines, unless authorised by this licence.

3.4.8 The diversion structures may not restrict river flows by reducing the overall river width or obstructing river flow.

3.4.9 Flow (also applying to the release of sediment) at any outlet works must be constructed as such not to induce increased turbulence and erosion in the downstream receiving watercourse. The instalment of energy dissipaters must be considered.

3.4.10 No energy dissipation is required downstream of the weir structure itself (not referring to sediment outlet) if the bedrock is of good quality. If not, an ogee shaped weir is recommended with a mass concrete roller bucket. The design of structures as referenced in condition 2.1.1 must indicate the preferred design with a motivation (based on the bedrock's competence). Written approval from the Provincial Head must be obtained before construction commences.

3.4.11 Infrastructure (pipeline) must be placed below calculated bank full flow scour depths and allow a safety margin.

3.4.12 Bank filling must restore the channel shape and bed level to pre-construction condition.

3.4.13 Where flow in watercourse is permanent, the trench must be staged across part of the channel to maintain flows. Flows must not be stopped.

3.4.14 All rock and rubble must be removed from the watercourse once construction has been completed. Any rock placed in the watercourse to enhance the dissolved oxygen content of the water must adhere to the same criteria, namely only smooth rock surfaces to be placed within the watercourse.

3.5 Riparian and Instream Habitat (Vegetation and Morphology)

3.5.1 Activities (including spill clean-up) must start up-stream and proceed into a down-stream direction, so that the recovery processes can start immediately, without further disturbance from upstream works.

3.5.2 Operation and storage of equipment must not take place within the 1:100 year flood line or delineated riparian habitat, whichever is the greatest unless authorised in this licence.

3.5.3 Activities must not occur in sensitive riffle habitats, unless authorised in this licence. Impacts on riffle habitats must be mitigated by supporting aquatic life. This must be assessed as part of condition 5.2.

3.5.4 Indigenous riparian vegetation, including dead trees, outside the limits of disturbance indicated in the site plans must not be removed from the area.

3.5.5 Alien and invader vegetation must not be allowed to further colonise the area, and all new alien vegetation recruitment must be sustainably eradicated or controlled.

3.5.6 Existing vegetation composition must be maintained or improved by maintaining the natural variability in flow fluctuations. Rehabilitated areas must have a vegetation basal cover of at least 15% at all times.

3.5.7 Recruitment and maintaining of a range of size classes of dominant riparian species in perennial channels must be stimulated.

3.5.8 Encroachment of additional exotic species and terrestrial species in riparian zones must be discouraged.

3.5.9 Accumulation of woody debris on terraces by periodic flooding must be discouraged.

3.5.10 Existing flood terraces and deposition of sediments on these terraces to ensure optimum growth, spread and recruitment of these species must be maintained.

3.5.11 All reasonable steps must be taken to minimise noise and mechanical vibrations in the vicinity of the watercourses. Noise levels (noise resulting from the construction and abstraction activities) to be below 35dB from 18:00 – 06:00 daily.

3.5.12 Necessary erosion prevention mechanisms must be employed to ensure the sustainability of all structures and activities and to prevent instream sedimentation.

3.5.13 Soils that have become compacted through the water use activities must be loosened to an appropriate depth to allow seed germination.

3.5.14 Slope/bank stabilisation measures must be implemented with a 1:3 ratio or flatter and vegetated with indigenous vegetation immediately after the shaping.

3.5.15 Stockpiling of removed soil and sand must be stored outside of the 1:100 flood line or delineated riparian habitat, whichever is the greater, to prevent being washed into the river and must be covered to prevent wind and rain erosion.

3.5.16 The overall macro-channel structures and mosaic of cobbles and gravels must be maintained by ensuring a balance (equilibrium) between sediment deposition and sediment conveyance maintained. A natural flooding and sedimentation regime must thus be ensured as far as reasonably possible.

3.5.17 As much indigenous vegetation growth as possible should be promoted within the proposed development area in order to protect soil and to reduce the percentage of the surface area which is paved, hardened and/or compacted.

3.5.18 The pipeline servitude through riparian patches must be flanked by spreading canopy trees, with near-complete canopy cover over the open space to enhance ecological connectivity and prevent alien plant species from establishing within the core of these forest patches.

3.5.19 Run-off from paved, hardened and/or compacted surfaces must be slowed down by the strategic placement of berms, grassed swales and energy dissipaters.

3.5.20 Stormwater and run-off must be gently directed towards grasslands from where it migrates to watercourse(s).

3.5.21 All wetland areas and at least a 100m buffer zone around the wetland must be fenced off for access and demarcated as such, but permit the migration of natural flora and small fauna.

3.5.22 Work footprint to be reduced in river, riparian habitat and wetlands to 15m or less.

3.5.23 Any medicinal, sensitive and protected plants that are impacted upon must be assessed by the Responsible Authority and a registered, professional specialist and relocated, if necessary, to a suitable site. This activity must take place within thirty (30) days after the issuance of this licence and proof must be submitted to the Provincial Head for written approval.

3.6 Trenching

3.6.1 A buffer zone of at least 30m must be developed for each wetland and construction within the buffer zone must be restricted to the trench line and working side of the trench (minimise the construction footprint).

3.6.2 Outside bends must be avoided, choose a straight section of the watercourse to cross.

3.6.3 Concrete caps and casings must be chosen at muster depths which must become exposed by bed lowering.

3.6.4 Trench is to be open for minimal length of time and when backfilling, material must be replaced in order.

3.6.5 Trenches must be safe for people and animals and fenced or barricaded when not attended.

3.6.6 Additional disturbances from temporary coffer dams or diverting flows around the work site, vehicle and machinery accessing and crossings, material stockpile, etc. must be minimised.

3.6.7 Adequate bank stabilisation measures must be implemented. Only riparian vegetation in the immediate path of the pipeline must be removed, but large indigenous trees must be left intact and also limit the removal of forest species. Species removal must be done in accordance to the relevant legislation and supervised and documented by a qualified, independent, professional and registered ecologist.

3.6.8 Areas in and around river crossings should not be cleaned, graded and trenched more than a week before pipe laying. Backfilling must be implemented immediately after pipe laying and must restore the channel shape and bed level to pre-construction condition.

3.6.9 Adequate measures must be implemented to prevent in-stream siltation during the construction phase.

3.6.10 Unless authorised by this licence, access roads must not encroach into the extent of the watercourse(s).

3.7 Biota

3.7.1 The Licensee must take all reasonable steps to allow movement of aquatic species, including migratory species.

3.7.2 All reasonable steps must be taken not to disturb the breeding, nesting and/or feeding habitats and natural movement patterns of aquatic biota.

3.7.3 The current level of diversity of biotopes and communities of animals, plants and microorganisms must be maintained.

4 REHABILITATION AND MANAGEMENT

4.1 The Licensee must embark on a systematic long-term rehabilitation programme to restore the watercourse(s) to environmentally acceptable and sustainable conditions after completion of the activities, which must include, but not be limited

to the rehabilitation of disturbed and degraded riparian areas to restore and upgrade the riparian habitat integrity to sustain a bio-diverse riparian ecosystem.

4.2 All disturbed areas must be re-vegetated with an indigenous seed mix in consultation with an indigenous plant expert, ensuring that during rehabilitation only indigenous shrubs, trees and grasses are used in restoring the biodiversity.

4.3 An active campaign for controlling invasive species must be implemented within disturbed zones to ensure that it does not become a conduit for the propagation and spread of invasive exotic plants.

4.4 Wetland Rehabilitation Plan shall be adhere to and Rehabilitation must be concurrent with construction.

4.5 Topsoil must be stripped and redistributed.

4.6 Topsoil of 300 mm to be reduced and re-distributed and compacted areas ripped and scarified along the pipe route parallel to contour.

4.7 Topsoil must be stripped and redistributed. A height restriction of not more than 2.0m must be followed in order to preserve the soil's microbiological and nutrient characteristics. Topsoil must be placed immediately after stripping, if possible, but not stockpiled for longer than three (3) months.

4.8 Compacted and disturbed areas must be shaped to natural forms and to follow the original contour. In general cut and fill slopes and other disturbed areas must not exceed 1:3 (v:h) ratio, it must be protected, vegetated, ripped and scarified parallel with the contour.

4.9 The Provincial Head must sign a release form indicating that rehabilitation was done satisfactory according to specifications as per this licence.

4.10 A photographic record must be kept as follows and submitted with reports as set out in section 5:

4.10.1 Dated photographs of all the sites to be impacted before construction commences;

4.10.2 Dated photographs of all the sites during construction on a monthly basis; and

4.10.3 Dated photographs of all the sites after completion of construction, seasonally.

4.11 Rehabilitation structures must be inspected regularly for the accumulation of debris, blockages instabilities and erosion with concomitant remedial and maintenance actions.

4.12 The original contours must be established over the pipeline. After the backfill has subsided, the contour must follow the surrounding contours to stop irregular flows or blockage of biotic movement.

4.13 A Wetland Management and Rehabilitation Plan must be compiled by a professional, independent, registered and qualified wetland specialist when wetlands are affected and submitted to the Provincial Head for a written approval. The wetland rehabilitation plan must also focus on:

4.13.1 Increasing the footprint of wetland habitat;
4.13.2 Re-establishing a collection of appropriate indigenous species to promote wetland zoning; and
4.13.3 Increase the roughness index of wetlands.

4.14 Wetland crossing(s) must be visited by a professional, independent, registered and qualified wetland specialist prior to construction to determine baseline conditions. This should be repeated during and after rehabilitation measures have been implemented to assess the success of rehabilitation and erosion control measures. Reporting on this condition is part of condition 5.7.

4.15 Registered environmental professional like a landscape architect or botanist or wetland specialist to be appointed to perform master planning and site layout at watercourses, supervise work through water courses and rehabilitation.

4.16 Perform rehabilitation monitoring and auditing of approved EMP as part of rehabilitation, strip topsoil, replace wetland soils profiles, shape to original contours, rip and or scarify pipeline work areas and other compacted areas parallel with contour and replant wetland and other riparian plants and grasses. Harvest surrounding indigenous seeds and plants selectively for replant and seeding

5 MONITORING AND REPORTING

5.1 A comprehensive and appropriate environmental assessment and monitoring programme (including bio-monitoring) to determine the impact, change, deterioration and improvement of the aquatic system associated with the activities listed under condition 1.1 as well as compliance to these water use

licence conditions must be developed and submitted to the Regional Head for written approval before commencement and must subsequently be implemented as directed. The monitoring programme must be compared against the **REC (Recommended Ecological Class) for each watercourse as stated in Table 5.**

Table 5: REC for various watercourses impacted by the activities

Activity	Property and Title Deed	Description/Name of Watercourse and Dimensions of the activity	REC	Coordinates
ATTENUATION STRUCTURES				
Storm water Attenuation storage	Portion 1 of the farm lot 21 NO. 1529 T8490/1990	A6 Channelled valley bottom wetland Length: 9m	E	Start 29° 42' 20.7"S; 31° 03' 27.5"E End

Activity	Property and Title Deed	Description/Name of Watercourse and Dimensions of the activity	REC	Coordinates
		Width : 51,7m Area : 466m²		29° 42' 20.5"S; 31° 03' 27.6"E
CONSTRUCTION WITHIN WETLAND AND RIPARIAN ZONE				
Infilling of the entire wetland for the Cornubia Retail Park earth-worked platforms	Portion 1 of the farm lot 21 NO. 1529 T8490/1990	AB6 Channelled valley bottom wetland. Length: 96m Width: 15,8m Area:1 525m²	E	Start 29° 42' 22.8"S 31° 03' 16.6"E End 29° 42' 23.0"S 31° 03' 19.0"E
Infilling of the entire wetland for the Cornubia Retail Park earth-worked platforms	Portion 0 of the Erf Cornubia 27 T16526/1994	A6C Valley head seep and un-channelled valley bottom wetland Length:139m Width :21,4m Area: 2 975m²	D	Start 29° 42' 22.4"S; 31° 03' 10.0"E End 29° 42' 22.0"S; 31° 03' 15.0"E
Infilling of the entire wetland for the Cornubia Retail Park earth-worked platforms wetland	Portion 0 of Erf Cornubia 27 T16526/1994	A7 un-channelled valley bottom wetland Length:256m Width: 36,1m Area: 9 260m²	E	Start 29° 42' 29.5"S 31° 03' 15.6"E End 29° 42' 22.2"S 31° 03' 20.5"E
Infilling of the entire wetland for the Cornubia Retail Park earth-worked platforms	Portion 1 of the farm Lot 21 NO. 1529 T8490/1990	A7A Valley head seep Length: 70m Width: 27,4m Area: 1 918m²	D	Start 29° 42' 31.0"S; 31° 03' 19.6"E End 29° 42' 28.9"S; 31° 03' 18.6"E
Infilling of the entire wetland for the Cornubia Retail Park earth-worked platforms	Portion 0 of Erf Cornubia 27 T16526/1994	A7B Valley head seep Length: 83m Width: 18,4m Area: 1 533m²	D	Start 29° 42' 34.0"S; 31° 03' 15.2"E End 29° 42' 31.4"S; 31° 03' 14.6"E
Partial infilling	Portion 4 of the	A11A	D	Start

Activity	Property and Title Deed	Description/Name of Watercourse and Dimensions of the activity	REC	Coordinates
of the entire wetland for the Cornubia Retail Park earth-worked platforms	farm LOT 31 NO. 1560 T8510/1990	Valley head seep Length: 53m Width : 25m Area: 1 325m²		29° 42' 45.0"S 31° 03' 20.5"E End 29° 42' 44.3"S; 31° 03' 18.7"E
Infilling of the entire wetland for the Cornubia Retail Park earth-worked platforms	Portion 0 of Erf Cornubia 27 T16526/1994	B1 Valley head seep Area :9 677m²	E	Start 29° 42' 31.4"S; 31° 03' 06.8"E End 29° 42' 33.5"S; 31° 03' 0.4"E
TEMPORAL ACCESS ROAD				
Temporal access road crossing for construction	Portion 1 of the farm LOT 21 NO. 1529 T8490/1990	A5 Channelled valley bottom wetland Length:133m Width: 20m Area: 2 660m²	D	Start 29° 42' 20.6"S; 31° 03' 31.3"E End 29° 42' 20.6"S; 31° 03' 40.5"E
Temporal access road crossing for construction	Portion 1 of the farm LOT 21 NO. 1529 T8490/1990	A8 Channelled valley bottom wetland Length: 125m Width : 35m Area : 4 375m²	D	Start 29° 42' 20.6"S; 31° 03' 36.0"E End 29° 42' 18.8"S; 31° 03' 40.5"E
SEWERLINE				
Sewer line crossing	Portion 2 of the farm Lot 21 No. 1529 T9530/2011	A3D Un-channelled valley bottom wetland Length:105m Width : 3m Area : 315m²	E	Start 29° 42' 0.2"S; 31° 03' 30.0"E End 29° 42' 0.1"S; 31° 03' 27.5"E
Sewer line crossing	Portion 1 of the farm Lot 21 No. 1529	A6 Channelled valley bottom wetland	C	Start 29° 42' 21.7"S; 31° 03' 23.3"E End

Activity	Property and Title Deed	Description/Name of Watercourse and Dimensions of the activity	REC	Coordinates
	T8490/1990	Length: 53m Width : 3m Area :159m²		29° 42' 20.7"S; 31° 03' 24.3"E
Sewer line crossing	Portion 13 of the farm Lot 31 NO. 1560 T8496/1990	A9 Channelled valley bottom wetland Length: 15m Width : 3m Area : 45m	D	Start 29° 42' 32.4"S; 31° 03' 31.9"E End 29° 42' 32.1"S; 31° 03' 31.4"E

5.2 After construction a six (6) monthly monitoring reports must be submitted to the Regional Head.

5.3 A qualified and responsible scientist must be retained by the Licensee who must give effect to the various licence conditions and to ensure compliance thereof pertaining to all activities impeding and/or diverting flow of watercourses as well as alterations to watercourses on the properties as set out in condition 1.1.

5.4 The Licensee must conduct on an annual basis an internal audit on compliance with the conditions this licence. A report on the audit must be submitted to the Regional Head within one month of the finalisation of the audit. A qualified independent auditor must undertake this audit.

5.5 The audit reports must include but are not limited to:

5.5.1 Reporting in respect of the monitoring programme referred to in condition 5.2 and all other reporting and compliance conditions outlined in this licence;

5.5.2 A record of implementation of all mitigation measures including a record of corrective actions;

5.5.3 Compensation measures for damage where mitigation measures have failed to adequately protect the in-stream and riparian habitat or any other characteristic of the watercourses; and

5.5.4 Provide information on any unauthorised activities and the reasons thereof.

5.6 The Licensee must apply in writing to the Regional Head for alternative reporting arrangements for which written approval must be provided.

5.7 A professional, independent, registered and qualified wetland specialist must be appointed to monitor the compliance to the wetland management and rehabilitation plan and conditions in this licence pertaining to impacts on wetlands

and provide specialist advise for corrective actions and compile audit reports which must be submitted to the Regional Head. Reporting on this condition is part of conditions 5.2 & 5.5 and taking cognisance of all relevant wetland conditions contained in this licence.

6 OTHER WATER USERS

6.1 The Licensee must attempt to prevent adverse effect on other water users. All complaints must be investigated by a suitable qualified person and if investigations prove that the Licensee has impaired the rights of other water users, the Licensee must initiate suitable compensative measures.

7. POLLUTION PREVENTION, INCIDENTS AND MALFUNCTIONS

7.1 Any incident that may cause pollution of any water resource must immediately be reported to the Regional Head.

7.2 If surface and/or groundwater pollution has occurred or may possibly occur, the Licensee must conduct, and/or appoint specialists to conduct the necessary investigations and implement additional monitoring, pollution prevention and remediation measures to the satisfaction of the Regional Head.

7.3 The Licensee must keep all records relating to the compliance or non-compliance with the conditions of this licence in good order. Such records must be made available to the Regional Head within 14 (fourteen) days of receipt of a written request by the Department for such records.

7.4 The Licensee must keep an incident report and complaints register, which must be made available to any external auditors and the Department.

8. WETLAND OFFSETS

8.1 The Licensee must do a wetland offset and wetland rehabilitation and management as per wetland reports conducted for Cornubia project. The conditions of wetlands must be greater than or equal to the REC of the offset wetlands.

8.2

8.3 There must be no any development on the offset wetlands and fencing or any means must be provided to prevent littering and further damages to theses wetlands.

8.4 The licensee must start rehabilitation on the disturbed areas or streams or wetlands as the project continues, and rehabilitation of wetlands for offsets must at least start while the project is at 60% of its completion. Table 6 detail wetlands offsets.

Table 6: Wetland Loss and Offset Calculations for Cornubia

Phase	Wetland Area (ha)	Wetland Loss (ha)	Required Wetland Area to be Rehabilitated at the 1:3 offset Ratio (ha)	Wetland Area for Rehabilitation
Cornubia Phase 1	53.9	7.54	22.62	46.36
Cornubia Phase 2	123.3	24.05	72.15	99.25
Cornubia Retail	3.54	3.54	10.62	0

Phase	Wetland Area (ha)	Wetland Loss (ha)	Required Wetland Area to be Rehabilitated at the 1:3 offset Ratio (ha)	Wetland Area for Rehabilitation
Park				
Combined Cornubia Phase 2 and Retail Park	126.84	30.53	91.59	96.31

9 BUDGETARY PROVISIONS

9.1 The Licensee must ensure that there is a budget sufficient to complete and maintain the water use and for successful implementation of the rehabilitation programme as set out in this licence.

9.2 The Regional Head may at any stage of the process request proof of budgetary provisions for rehabilitation and closure of project.

9.3 The Licensee is fully responsible and accountable for any negative impacts on the watercourse(s) and the modeling, monitoring and mitigation thereof; until such time that no negative impacts are experienced and/or foreseen.

END OF LICENCE