



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 Acting Director-General in the Department of Water and Sanitation and acting under authority of the powers delegated to me by the Minister of Human Settlements, Water and Sanitation, hereby authorises the amendment of licences dated **08 November 2017** of Licence No. **07/A42H/IIG/6425**

SIGNED: 

DATE: 08/12/2020

LICENCE NO: 07/A42H/IIG/6425
FILE NO: 27/2/A842/6/5
VERSION: 01-2020

1. **Licensee:** Eskom Holding Soc (Pty) Ltd: Medupi Power Station
Postal Address: Private Bag x 7502
Lephalale
0555
2. **Water Uses**
 - 2.1 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.
 - 2.2 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.
 - 2.3 Section 21 (g) of the Act: Disposing of waste in a manner which may detrimentally impact on a water resource.
3. **Properties in respect of which this licence is issued**
 - 3.1 Farm Eenzaamheid 687 LQ
 - 3.2 Farm Naawontkomen 509 LQ

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4. Registered owners of the Properties

Table 1: Registered owners of the Properties

Property Name	Property Owner	Title deeds number
Farm Eenzaamheid 687 LQ	Eskom Holding SOC Limited	T163156/2007 PTA
Farm Naawontkomen 509 LQ	Eskom Holding SOC Limited	T154755/2007 PTA

5. Licence and Review Period

This licence is valid for a period of seventeen (17) years from the date of issuance and it may be reviewed at intervals of not more than five (05) years.

6. Definitions

Any 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.

“The Provincial Head” means the Head of Provincial Operations: Limpopo.

“Extent of the watercourse” means the outer edge of the 1:100 year floodline or the delineated riparian habitat, whichever is the greatest.

“Regulated area of a wetland” is the use of water for section 21 c and i water uses within 500m radius from the boundary of any wetland.

A wetland means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.

The characteristics of a watercourse/s mean the flow regime, water quality, habitat (including the physical structure of the watercourse/s and associated vegetation) and biota found within the extent of the watercourse/s. The Resource Quality characteristics as defined in the National Water Act, 1998 (Act 36 of 1998).

7. Description of activity

This licence authorises **Eskom Holding SOC (Pty) Ltd: Medupi Power Station** for the water use in terms of section 21(c), (i) and(g)water uses in terms of the National Water Act, 1998 (Act 36 of 1998). Eskom Holdings (SOC) Limited is a State Owned Company: Medupi Power Station and the its activity is for production of electricity.

Eskom Holdings SOC Limited is authorised in terms of a bulk water use licence to abstract 14,5 Mm³/a from Mokolo Dam Water Scheme in October 2011 for both Medupi and Matimba Power Stations. The abstracted water for Medupi Power Station is stored into 800 000 m³ capacity raw water reservoirs from where it is used in the Power Station processes. Pollution Control Dams are erected to contain process effluent and storm water runoff from dirty areas.

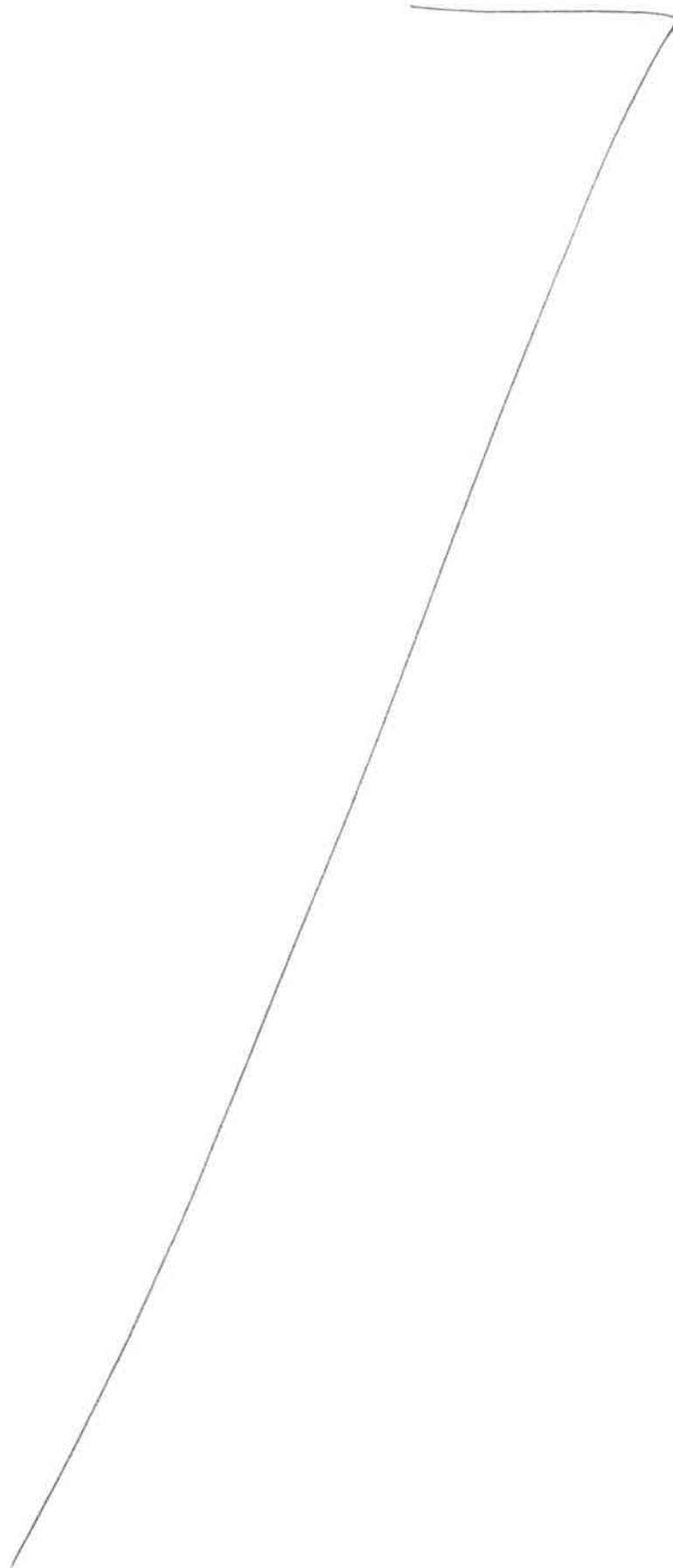
APPENDIX I

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 within 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 the Association is compulsory. Rules, regulations and water management stipulation of such association must be adhered to.
6. The Licensee shall be responsible for any water use charges and/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 lower confidence determination of the Reserve has been used in issuance of this licence, the licence conditions may be amended should a higher confidence reserve be conducted.
8. The licence shall 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 provisions of the Act, as amended from time to time.
10. The Licensee shall conduct an annual internal audit on compliance with the conditions of this licence. A report on the audit shall be submitted to the Provincial Head within one month of the finalization of the audit.
11. The Licensee shall appoint an independent external auditor to conduct an annual external 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 six (6) month of the issuance of this licence. A report on the audit shall be submitted to the Provincial Head within one month of the finalization 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 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 a designated representative within 24 hours.



- 14 This water use licence supersedes the water use licence dated **08 November 2017** of Licence No: **07/A42H/IIG/6425** of file number **27/2/2/A842/6/5**.



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Appendix II

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 Eskom Holding Soc Pty (Ltd): Medupi Power Station Power Station for Section 21(c) and (i) water use activities for the facilities as set out in Table 2 and in the water use licence application reports submitted to the Department of Provincial Head.

Table 2. Location and Coordinates of where the water resource is altered

Water uses	Purpose	Dimensions of structure	Property	Coordinates:
Section 21(c)and(i)				
Impeding or diverting the flow of water in a watercourse Altering the bed banks, course or characteristics of a watercourse	Construction of an ADF within the buffer zone area of a pan system(depression point)	4200-length	Eenzaamheid 687 LQ	S 23° 42' 19.1" E 27° 32' 27.7"
	Cleaning and dirty dam constructed within 500m semi Ephemeral wash and depressions		Naawontkomen 509 LQ	S 23° 72' 36.8" E 27° 51' 23.5"
Impeding or diverting the flow of water in a watercourse Altering the bed banks, course or characteristics of a watercourse	Pollution control Dams Servicing Excess Coal Stockyard phase 1 and 2		Eenzaamheid 687 LQ	S 23° 71' 27.5" E 27° 52' 41.8"
	Raw water pipeline and power island and associated infrastructures	1000m-length	Kuipersbult 511LQ	S 23° 42' 44.20" E 27° 51' 57.96"
	Construction of Pollution Control Dams(PPCD 6,7 and 8)	500m-length	Eenzaamheid 687 LQ	S 23° 72' 36.8" E 27° 51' 23.5"
	Ash dump facility PCD1,PCD 2 and PCD2B		Eenzaamheid 687 LQ	S 23° 71' 27.55" E 27° 52' 41.85"

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2. CONSTRUCTION, OPERATION AND MAINTENANCE

- 2.1 The Licensee shall carry out and complete all the activities according to the following:
- 2.1.1 Report(s) submitted to the Department or the Responsible Authority
 - 2.1.2 Conditions of this licence and
 - 2.1.3 Any written direction issued by the Provincial Head in relation to this licence
- 2.4 The conditions of the authorisation shall be brought to the attention of all persons (employees, sub-consultants, contractors etc.) associated with undertaking of the activity and the licensee shall take such measures that are necessary to bind such persons to the conditions of this licence.
- 2.5 A copy of the water use licence must be on site at all times
- 2.6 A suitably qualified person, appointed by the Licensee and approved in writing by Provincial Head, He/she must be responsible for ensuring that the activities are undertaken in compliance with specifications as set out in reports submitted to the Department or Responsible Authority and the conditions of this licence.
- 2.7 The Licensee must ensure that the existing boreholes sited and drilled up gradient of the ash disposal facility should always be used for groundwater monitoring.



APPENDIX III

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

2. CONSTRUCTION AND OPERATION AND MAINTAINANCE

2.1 This Licensee is authorised to dispose waste in a manner which may detrimentally impact on a water resource as per the activities detailed in Table 3.

Table 3: Water use activities

Water uses	Purpose	Volume(m ³ /a)	Property	Coordinates:
Section 21(c)and(i)				
Disposing of waste in a manner which may detrimentally impact on a water resource	Construction of Pollution control Dam 6	138 632	Eenzaamheid 687 LQ	S 23° 72' 36.8" E 27° 32' 23.5"
	Construction of Pollution control Dam 7	151 724	Eenzaamheid 687 LQ	S 23° 72' 36.8" E 27° 51' 23.5"
	Construction of Pollution control Dam 8	151 724	Eenzaamheid 687 LQ	S 23° 72' 36.8" E 27° 51' 23.5"

3. DISPOSAL/STORAGE OF WATER CONTAINING WASTE

- 3.1 The quantity of waste/wastewater authorised to be disposed of in terms of this licence must not be exceeded without prior authorisation by the Minister or delegated authority as indicated in Table 3.
- 3.2 Licensee shall confirm the barrier system and global stability including laboratory test determining interface shear and materials strength parameters as well compressive creep collapse for the service of the ash facility prior the commencement of activity.
- 3.3 The licence must ensure any spills from PCD are reported as incidents
- 3.4 The Licensee shall confirm the standard specifications for performance of natural and synthetic material and allow for the products equivalent performance prior commencement of the activity.
- 3.5 The Licensee must ensure that monitoring borehole that can be used for pollution interception should be installed down-gradient of the existing disposal facility to minimize the water quality impacts in the boreholes used by other groundwater users.
- 3.6 The Licensee must ensure that boreholes are sited, drilled and constructed in such that they do not unnecessary penetrate impermeable layers that could possibly create conduits for the migration of leachate pollution to groundwater.
- 3.7 The Licensee must ensure that groundwater monitoring boreholes must be properly sealed at the surface to prevent surface pollution into groundwater system.

- 3.8 The Licensee must ensure groundwater monitoring programme defining the frequency of measurements, parameters to be monitored, database and reporting must be developed and implemented
- 3.9 The groundwater quality (including the private borehole if exist adjacent to the existing ash disposal facility) must be monitored by the licensee on quarterly basis by using approved groundwater sampling techniques and analysed by an accredited laboratory. Undue long-term trends in the quality of water will indicate remediation actions.
- 3.10 All boreholes for groundwater levels to be used for monitoring purposes must be monitored on quarterly basis
- 3.11 The Licensee should construct, calibrate a numerical model and used it adequately to assess the monitoring results and possible impacts detection.
- 3.12 During the operational phase the Licensee must ensure local aquifers are not artificially recharged by the seepage emanating from the ash disposal facility.
- 3.13 In the event dewatering deemed to be the best option to intercept contaminated plume, the Licensee should always ensure that the boreholes are not depleted to a level where the static water level reaches the main water strike.
- 3.14 The Licensee must ensure that dewatering volumes must be recorded and groundwater levels be monitored especially during dewatering to avoid exploitation of groundwater within the area
- 3.15 The Licensee must ensure that the contaminated water must be treated to meet the minimum legal standards and should be rejected (after authorisation) back to aquifer system
- 3.16 In the event that groundwater users become affected by ash disposal activities due to unacceptable water quality as result of contamination plume migrating and emanating from the ash disposal facility, the community must be compensated with portable water.
- 3.17 The Licensee must manage groundwater recharge from waste disposal facility and the water level in the facilities be monitored and kept to a minimum level to avoid decant of poor quality water or effluent into surface resources and ensure that surface streams do not act as secondary sources of contamination during operational decommissioning and closure phases.
- 3.18 Any subsided surface adjacent to the ash disposal facility should be rehabilitated to minimize ingress of surface water into ash disposal facility

4. STORMWATER MANAGEMENT OF ALL FACILITIES

- 4.1 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 of a combination thereof which is produced, used, stored dumped or spilled on the premises.
- 4.2 Increased runoff due to vegetation clearance and 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 streams.

- 4.3 Where necessary works must be constructed to attenuate the velocity of any storm water discharge and to protect the affected watercourses.
- 4.4 Storm water control works must be constructed, operated and maintained in a sustainable manner throughout the impacted area.
- 4.5 The polluted storm water system shall be designed and implemented to provide suitable routing and pumping capacity of the contaminated storm water from the associated infrastructure to the respective storm water dam(s) in accordance with the design specifications as contained in the Integrated Water Use License Application Report.
- 4.6 An updated storm water management plan of all associated Industry activities should be implemented within and around ash disposal facilities
- 4.7 The Licensee must protect the side slope of ash facility and rehabilitated or revegetate the affected areas
- 4.8 The Licensee must design a storm water management channel as natural as possible with rock, topsoil and vegetation
- 4.9 All storm water that would naturally run across the pollution areas must be diverted via channels and trapezoidal drains designed to contain the 1:50 year flood event.
- 4.10 The clean storm water must be discharged into attenuation structure outside the drainage line and Sandloop river
- 3.12 The Licensee must maintain the hydrological and connectivity along the drainage line
- 4.11 The licensee must maintain the hydrological and connectivity along the drainage line.

5. MALFUNCTIONS/ABNORMAL CONDITIONS

- 5.1 Accurate and up-to-date records must be kept of all system malfunctions resulting in non-compliance with the requirements of this licence. The records must be available for inspection by the Provincial Head upon request.
- 5.2 The records shall be tabulated under the following headings with a full explanation of all the contributory circumstances:
 - 5.2.1 Operating errors
 - 5.2.2 Mechanical failures (including design, installation or maintenance)
 - 5.2.3 Environmental factors (e.g. floods)
 - 5.2.4 Loss of supply services (e.g. power failure)
 - 5.2.5 Other causes
- 5.3 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:
 - 4.3.1 Correct the impacts resulting from the incident;
 - 4.3.2 Prevent the incident from causing any further impacts; and
 - 4.3.3 Prevent a recurrence of a similar incident.

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

6. CONTINGENCY PLANS AND INCIDENT REPORTING

6.1 The Licensee must develop and implement an Emergency and Contingency Plan.

6.2 The Licensee must implement and promote an environmental call and reporting centre where the following can be reported:

6.2.1 Illegal disposals of waste and/or littering;

6.2.2 Broken, ruptured or leaking pipelines wasting potable water;

6.2.3 Open or leaking taps on the property of the Licensee;

6.2.4 Open manholes;

6.2.5 Leaking or broken sewerage lines and pipes;

6.2.6 Overflowing manholes and pump stations;

6.2.7 Possible offenders of any environmental regulations, by-laws and/or ordinances; and

6.2.8 Any other aspect that might hamper the effective management of the water resources.

6.3 The Licensee must compile an environmental call and reporting centre protocol, that must be included in the Plan, and which will investigate every complaint within 24 hours of it being reported.

6.4 The Licensee must rectify all valid issues reported within 7 days of the issue being reported to the Licensee. All incidents shall be recorded in an incident register which will include reasons for non-rectification of issues raised.

6.5 Statistical summary of malfunctions and incidents shall be included in the Annual Report.

7. ACCESS CONTROL, FENCING AND NOTICES

7.1 The sites must be adequately fenced to prevent entry of animals and unauthorised persons.

7.2 Strict access procedures must be followed in order to gain access to property. Access must be limited to authorised employees of the Licensee and their Contractors only.

7.3 Notices manufactured of durable weatherproof material prohibiting unauthorised entry and warning against the use of water containing waste for drinking and washing purposes must be displayed at prominent places along all fences and at entrance gates. Such notices must be worded in the official languages applicable in the area.

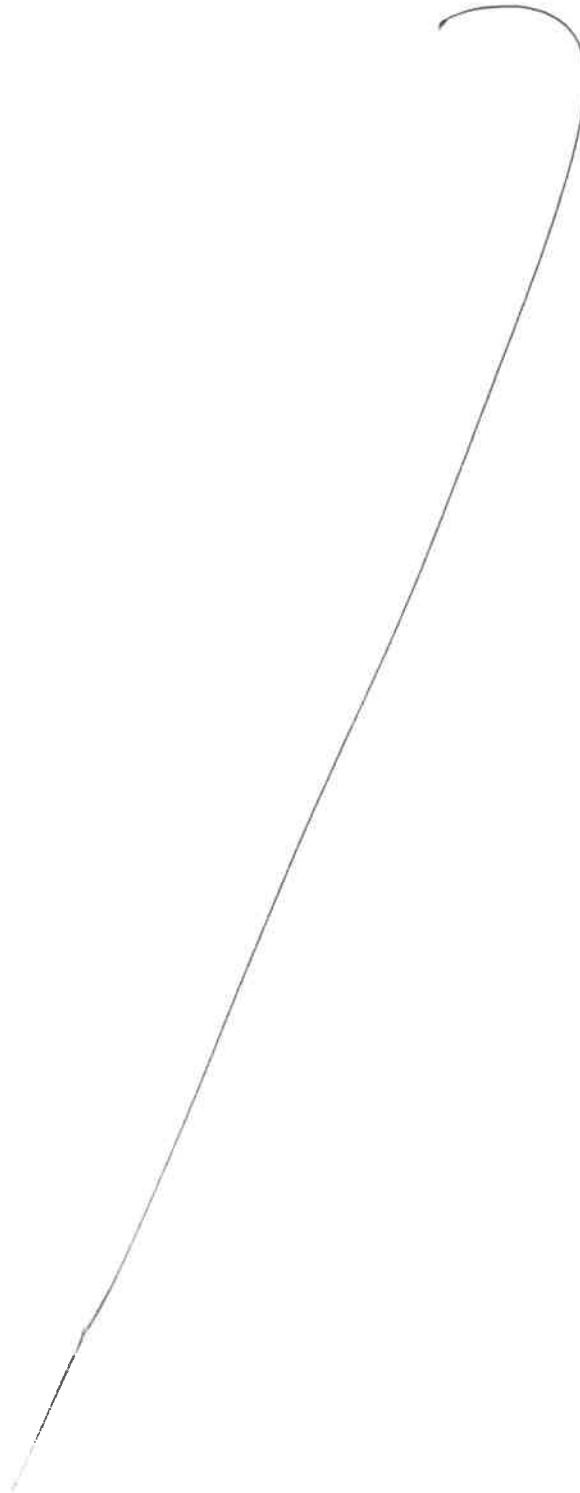
8 INTERGRATED WATER AND WASTE MANAGEMENT

8.1 The licensee must update an integrated Water and Waste Management Plan (IWWWMP), 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.

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

END OF LICENCE

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