



Licence Number	L9195/2019/1	
Licence Holder	Adaman Resources Pty Ltd	
ACN	620 314 007	
Registered business address	Level 3 140 St Georges Terrace PERTH WA 6000	
File Number	DER2018/001608	
Duration	10/05/2019 to	09/05/2029
Date of issue	10/05/2019	
Prescribed Premises	Category 85 – Sewage facility	
Premises	Kirkalocka Gold Mine Part of Mining Lease M59/234 DAGGAR HILLS WA 6638 As defined by the coordinates in Schedule 1 of the Licence	

This Licence is granted to the Licence Holder, subject to the following conditions, on 10 May 2019, by:

Manager, Process Industries

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Explanatory notes

These explanatory notes do not form part of this Licence.

Defined terms

Definition of terms used in this Licence can be found at the start of this Licence. Terms which are defined have the first letter of each word capitalised throughout this Licence.

Department of Water and Environmental Regulation

The Department of Water and Environmental Regulation (DWER) is established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the *Environmental Protection Act 1986* (WA) (EP Act). The Department also monitors and audits compliance with licences, takes enforcement action and develops and implements licensing and industry regulation policy.

Licence

Section 56 of the EP Act provides that an occupier of Prescribed Premises commits an offence if Emissions are caused or increased, or permitted to be caused or increased, or Waste, noise, odour or electromagnetic radiation is altered, or permitted to be altered, from Prescribed Premises, except in accordance with a works approval or licence.

Categories of Prescribed Premises are defined in Schedule 1 of the *Environment Protection Regulations 1987* (WA) (EP Regulations).

This Licence does not authorise any activity which may be a breach of the requirements of another statutory authority including, but not limited to the following:

- conditions imposed by the Minister for Environment under Part IV of the EP Act;
- conditions imposed by DWER for the clearing of native vegetation under Part V, Division 2 of the EP Act;
- any requirements under the *Waste Avoidance and Resource Recovery Act 2007*;
- any requirements under the *Environmental Protection (Controlled Waste) Regulations 2004*; and
- any other requirements specified through State legislation.

It is the responsibility of the Licence Holder to ensure that any action or activity referred to in this Licence is permitted by, and is carried out in compliance with, other statutory requirements.

The Licence Holder must comply with the Licence. Contravening a Licence Condition is an offence under s.58 of the EP Act.

Responsibilities of a Licence Holder

Separate to the requirements of this Licence, general obligations of Licence Holders are set out in the EP Act and the regulations made under the EP Act. For example, the Licence Holder must comply with the following provisions of the EP Act:

- the duties of an occupier under section 61; and
- restrictions on making certain changes to Prescribed Premises unless the changes are in accordance with a works approval, Licence, closure notice or environmental protection notice (s.53).

Strict penalties apply for offences under the EP Act.

Reporting of incidents

The Licence Holder has a duty to report to DWER all discharges of waste that have caused or are likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

Offences and defences

The EP Act and its regulations set out a number of offences, including:

- Offence of emitting an Unreasonable Emission from any Premises under s.49.
- Offence of causing Pollution under s.49.
- Offence of dumping Waste under s.49A.
- Offence of discharging Waste in circumstances likely to cause Pollution under s.50.
- Offence of causing Serious Environmental Harm (s.50A) or Material Environmental Harm (s.50B).
- Offence of causing Emissions which do not comply with prescribed standards (s.51).
- Offences relating to Emissions or Discharges under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)*.
- Offences relating to noise under the *Environmental Protection (Noise) Regulations 1997 (WA)*.

Section 53 of the EP Act provides that a Licence Holder commits an offence if Emissions are caused, or altered from a Prescribed Premises unless done in accordance with a Works Approval, Licence or the requirements of a Closure Notice or an Environmental Protection Notice.

Defences to certain offences may be available to a Licence Holder and these are set out in the EP Act. Section 74A(b)(iv) provides that it is a defence to an offence for causing Pollution, in respect of an Emission, or for causing Serious Environmental Harm or Material Environmental Harm, or for discharging or abandoning Waste in water to which the public has access, if the Licence Holder can prove that an Emission or Discharge occurred in accordance with a Licence.

This Licence specifies the Emissions and Discharges, and the limits and Conditions which must be satisfied in respect of Specified Emissions and Discharges, in order for the defence to offence provision to be available.

Authorised Emissions and Discharges

The Specified and General Emissions and Discharges from Primary Activities conducted on the Prescribed Premises are authorised to be conducted in accordance with the Conditions of this Licence.

Emissions and Discharges caused from other activities not related to the Primary Activities at the Premises have not been Conditioned in this Licence. Emissions and Discharges from other activities at the Premises are subject to the general provisions of the EP Act.

Amendment of licence

The Licence Holder can apply to amend the Conditions of this Licence under s.59 of the EP Act. An application form for this purpose is available from DWER.

The CEO may also amend the Conditions of this Licence at any time on the initiative of the CEO without an application being made.

Amendment Notices constitute written notice of the amendment in accordance with s.59B(9) of the EP Act.

Duration of Licence

The Licence will remain in force for the duration set out on the first page of this Licence or until it is surrendered, suspended or revoked in accordance with s.59A of the EP Act.

Suspension or revocation

The CEO may suspend or revoke this Licence in accordance with s.59A of the EP Act.

Fees

The Licence Holder must pay an annual licence fee. Late payment of annual licence fees may result in the licence ceasing to have effect.

Definitions and interpretation

Definitions

In this Licence, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Annual Period	means a 12 month period commencing from 1 January until 31 December.
Approved form	The AACR Form template approved by the CEO for use and available via DWER's external website.
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 <i>Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples</i>
AS/NZS 5667.10	means the Australian Standard AS/NZS 5667.10 <i>Water Quality – Sampling – Guidance on sampling of waste waters</i>
Condition	means a condition to which this Licence is subject under s.62 of the EP Act.
Books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 JOONDALUP DC 6919 info@dwer.wa.gov.au
Compliance Report	means a report in a format approved by the CEO as presented by the Licence Holder or as specified by the CEO (guidelines and templates may be available on the Department's website).
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Licence Holder in writing and sent to the Licence Holder's address for notifications, as described at the front of this Licence, in relation to:

Term	Definition
	<ul style="list-style-type: none"> (a) compliance with the EP Act or this Licence; (b) the Books or other sources of information maintained in accordance with this Licence; or (c) the Books or other sources of information relating to Emissions from the Premises.
Discharge	has the same meaning given to that term under the EP Act.
DWER	Department of Water and Environmental Regulation.
Emission	has the same meaning given to that term under the EP Act.
Environmental Harm	has the same meaning given to that term under the EP Act.
EP Act	means the <i>Environmental Protection Act 1986</i> (WA).
EP Regulations	means the <i>Environmental Protection Regulations 1987</i> (WA).
Freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
Licence	refers to this document, which evidences the grant of a Licence by the CEO under s.57 of the EP Act, subject to the Conditions.
Licence Holder	refers to the occupier of the premises being the person to whom this Licence has been granted, as specified at the front of this Licence.
Material Environmental Harm	has the same meaning given to that term under the EP Act.
m/s	means metres per second
NATA	means the National Association of Testing Authorities, Australia.
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis.
Operation	means the acceptance of sewage into Pond 1 or Pond 2

Term	Definition
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the map in Schedule 1 to this Licence.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Primary Activities	refers to the Prescribed Premises activities listed on the front of this Licence as described in Schedule 2, at the locations shown in Schedule 1.
Reportable Event	means an exceedance above the target limit specified in Column 4 of Table 6, in Schedule 3.
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
Unreasonable Emission	has the same meaning given to that term under the EP Act.
Waste	has the same meaning given to that term under the EP Act.

Interpretation

In this Licence:

- (a) the words 'including', 'includes' and 'include' will be read as if followed by the words 'without limitation';
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a Condition, each row in a table constitutes a separate Condition;
- (d) any reference to an Australian or other standard, guideline or code of practice in this Licence means the version of the standard, guideline or code of practice in force at the time of granting of this Licence and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Licence; and
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

Conditions

Works

1. The Licence Holder must construct and/or install the infrastructure listed in Table 2, in accordance with:
 - (a) the corresponding design and construction requirement / installation requirement; and
 - (b) at the corresponding infrastructure location; and
 - (c) within the corresponding timeframe,as set out in Table 2.

Table 2: Design and construction requirements / installation requirements

Infrastructure	Design and construction requirement / installation requirement	Infrastructure location	Timeframe
Infiltration channels	Consisting of: <ul style="list-style-type: none">• a discharge pipe from Pond 2 that directs wastewater to the head channel;• a head channel that is 60m in length and 300mm deep at the centre (where the discharge pipe is located), increasing to 500mm deep towards the ends; and• 6 x sub-channels that are each 60m in length and vary in depth from 300mm – 500mm (corresponding to the depth of the head channel) and increase to 600mm depth.	Refer to Schedule 1: Premises Map	Prior to commencement of discharge from Pond 2

2. The Licence Holder must not depart from the requirements specified in Table 2 except:
 - (a) where such departure does not increase risks to public health, public amenity or the environment; and
 - (b) all other Conditions in this Licence are still satisfied.
3. Subject to Condition 2, and prior to the commencement of discharge from Pond 2, the Licence Holder must provide to the CEO written confirmation (including photographic evidence) confirming each item of infrastructure or component of infrastructure specified in Table 2 has been constructed with no material defects and to the requirements specified.
4. Where a departure from the requirements specified in Table 2 occurs and is of a type allowed by Condition 2, the Works Approval Holder must provide to the CEO a description of, and explanation for, the departure along with the certification required by Condition 3.

Emissions

5. The Licence Holder must not cause any Emissions from the Primary Activities on the Premises except for specified Emissions and general Emissions described in Table 3 subject to the exclusions, limitations or requirements specified in Table 3.

Table 3: Authorised Emissions table

Emission type	Exclusions/Limitations/Requirements
Specified Emissions	
Discharges to land	Subject to compliance with Conditions 6, 7, 8, 9, 10, 11, 12 and 13
General Emissions (excluding Specified Emissions)	
Emissions which arise from the Primary Activities set out in Schedule 2	<p>Emissions excluded from General Emissions are:</p> <ul style="list-style-type: none"> • Unreasonable Emissions; or • Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or • Discharges of Waste in circumstances likely to cause Pollution; or • Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or • Emissions or Discharges which do not comply with an Approved Policy; or • Emissions or Discharges which do not comply with a prescribed standard; or • Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or • Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.

Infrastructure and equipment

6. The Licence Holder must ensure that the infrastructure and equipment listed in Column 1 of Table 3 is maintained in good working order and operated in accordance with the requirements set out in Table 3.

Table 4: Infrastructure and equipment controls table

Site infrastructure and equipment	Operational requirements
Pond 1	Lined with HDPE liner with a permeability of at least 2×10^{-10} m/s 0.5m freeboard maintained at all times
Pond 2	
Infiltration area	Maintained so that treated wastewater does not discharge beyond the boundary of the Infiltration Area as defined in Schedule 1: Premises Map.

7. Prior to commencement of Operation, the Licence Holder must provide to the CEO a report from a suitably qualified professional engineer confirming that the HDPE liners on Pond 1 and Pond 2 meet have no material defects and meet the permeability requirements specified in Table 4.

Emissions (discharges to land)

8. The Licence Holder must ensure that the emissions specified in Table 5 are discharged only from the corresponding discharge point and only at the corresponding discharge point location.

Table 5: Authorised discharge points

Emission	Discharge point	Discharge point location
Treated sewage	L1 –Discharge from Pond 2 into the Infiltration Area	As shown in Schedule 1: Premises map

9. The Licence Holder must ensure that emissions from the discharge point listed in Table 6 for the corresponding parameter do not exceed the corresponding limit when monitored in accordance with condition 10.

Table 6: Emission limits

Discharge point	Parameter	Limit
L1	pH	6 – 9
	Biochemical oxygen demand, 5-day	20 mg/L
	Total suspended solids	30 mg/L
	Total nitrogen	75 mg/L
	Total phosphorus	25 mg/L
	Faecal coliforms	10 organisms/100mL
	Total dissolved solids	800 mg/L

Monitoring

- 10.** The Licence Holder must monitor emissions:
- (a) from each discharge point;
 - (b) at the corresponding monitoring location;
 - (c) for the corresponding parameter;
 - (d) at the corresponding frequency;
 - (e) for the corresponding averaging period;
 - (f) in the corresponding unit; and
 - (g) using the corresponding method,
- as set out in Table 7.

Table 7: Emissions and discharge monitoring

Monitoring point	Parameter	Frequency	Averaging period	Unit	Method
					Sampling
Schedule 1: Premises map M1	pH ^[1]	Monthly	Spot sample	-	AS/NZS 5667.1 and AS/NZS 5667.10
	Biochemical oxygen demand, 5-day			mg/L	
	Total suspended solids			mg/L	
	Total nitrogen			mg/L	
	Total phosphorus			mg/L	
	Faecal coliforms			Organisms/100 mL	
	Total dissolved solids			mg/L	

Note 1: In-field, non-NATA sampling permitted.

- 11.** The Licence Holder must ensure that monitoring is undertaken in each monthly period such that there are at least 15 days in between the days on which samples are taken in successive months.
- 12.** The Licence Holder must ensure that all laboratory samples collected in accordance with condition 10 are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.

Specified Actions

- 13.** The Licence Holder must determine the volume of wastewater discharged via Discharge Pond L1 on a daily basis.

Record-keeping

- 14.** The Licence Holder must maintain accurate and auditable Books including the following records, information, reports and data required by this Licence:
- (a) the calculation of fees payable in respect of this Licence;
 - (b) the maintenance of infrastructure required to ensure that it is kept in good working order in accordance with Condition 6 of this Licence; and
 - (c) monitoring undertaken in accordance with Conditions 10 of this Licence.
- In addition, the Books must:
- (d) be legible;
 - (e) if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;
 - (f) be retained for at least 3 years from the date the Books were made; and
 - (g) be available to be produced to an Inspector or the CEO.
- 15.** The Licence Holder must:
- (a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and
 - (b) prepare and submit to the CEO by no later than 90 days after the end of that annual period an Annual Audit Compliance Report in the approved form.
- 16.** The Licence Holder must submit to the CEO by no later than 90 days after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 8, and which provides information in accordance with the corresponding requirement set out in Table 8.

Table 8: Annual Environmental Report

Condition	Requirement
6 Monitoring	Tabulated monitoring data results and time-series graphs in Microsoft Excel format for each monitoring location showing concentrations of all parameters over a minimum three year period (where sufficient data allows). An interpretation of the monitoring data including comparison to historical trends and emission limits (where applicable) Copies of original monitoring, laboratory and analysis reports submitted to the Licence Holder by third parties.
9 Specified actions	Tabulated data showing the calculated daily discharge rates including details of calculations/methods used.

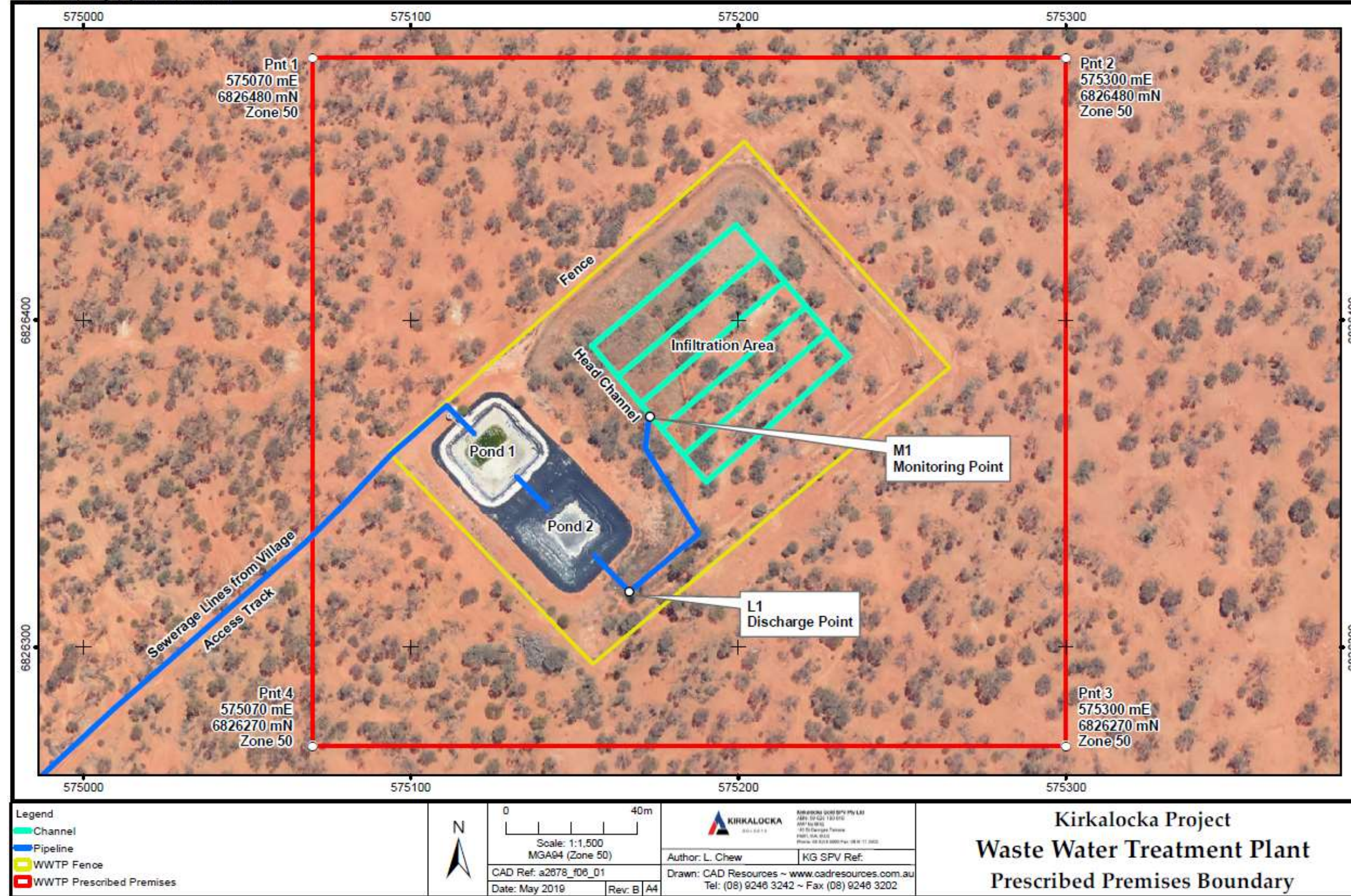
- 17.** The Licence Holder must comply with a Department Request, within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

Schedule 1: Maps

Premises map

The Premises are shown in the map below.

Source: Aerial photography: arvista (11/11/2018)



Premises boundary

The Premises boundary is defined by the coordinates in Table 9.

Table 9: Premises boundary coordinates

Easting	Northing
575 070 mE	6 826 480 mN
575 300 mE	6 826 480 mN
575 300 mE	6 826 270 mN
575 070 mE	6 826 270 mN

Schedule 2: Primary Activities

At the time of assessment, Emissions and Discharges from the following Primary Activities were considered in the determination of the risk and related Conditions for the Premises.

The Primary Activities are listed in Table 10:

Table 10: Primary Activities

Primary Activity	Premises nominated throughput
Category 85 - Sewage facility: premises – (a) On which sewage is treated (excluding septic tanks); or (b) From which treated sewage is discharged onto land or into waters.	Not more than 23 m ³ per day

Infrastructure and equipment

The Primary Activity infrastructure and equipment situated on the Premises is listed in Table 4.

Site layout

The Primary Activity infrastructure and equipment is set out on the Premises in accordance with the site layout specified on the Premises map in Schedule 1.