



Licence Number	L9195/2019/1
Licence Holder	Kirkalocka Gold SPV Pty Ltd
ACN	626 160 816
Registered business address	Level 3 140 St Georges Terrace PERTH WA 6000
DWER file Number	DER2018/001608
Duration	10/05/2019 to 09/05/2029
Date of issue	10/05/2019
Date of Amendment	29/09/2021
Premises	Kirkalocka Gold Mine Part of Mining Lease M59/233 and Mining Lease M59/234. DAGGAR HILLS WA 6638 As defined by the coordinates in Schedule 1 Figure 1 of the Licence

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production / design capacity
Category 5 - Processing or beneficiation of metallic or non-metallic ore	2,500,000 tonnes per year
Category 6 - Mine dewatering	1,500,000 tonnes per year
Category 85 - Sewage facility	Not more than 50 m ³ per day
Category 89: Putrescible landfill	35 tonnes per year

This amended Licence is granted to the Licence Holder, subject to the following conditions,
on 29 September 2021, by:

MELANIE BRUCKBERGER
A/MANAGER, RESOURCE INDUSTRIES
REGULATORY SERVICES

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

Licence history

Date	Reference number	Summary of changes
10/05/2019	L9195/2019/1	Licence granted for category 85.
19/10/2020	L9195/2019/1	Amended to add category 5 (see W6190/2018/1), category 6 (see W6249/2019/1) and category 89 (see W6191/2018/1).
02/11/2020	L9195/2019/1	Amended to add construction and operation of a replacement 50 m ³ /day WWTP and spray field.
22/12/2020	L9195/2019/1	Amended to add three additional External Ore Sources
10/09/2021	L9195/2019/1	Amended to include the self-assessment of future external ore sources for acceptance and processing onsite, by the Licence Holder, installation of additional WWTP infrastructure and actions required to manage seepage at the TSF1. Transfer of ownership from Adaman Resources Pty Ltd to Kirkalocka Gold SPV Pty Ltd.

Interpretation

In this licence:

- (a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;
- (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:
 - (i) if dated, refers to that particular version; and
 - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Conditions

Additional works

1. The Licence Holder must construct and/or install the infrastructure listed in Table 1, 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 1.

Table 1: Design and construction requirements / installation requirements

Infrastructure	Design and construction requirement / installation requirement	Infrastructure location	Timeframe
Tailings Storage Facility (TSF1)	<p>2.5 m upstream embankment raises as follows:</p> <ul style="list-style-type: none"> • Lift 2 from embankment crest level of RL363 m to crest level of RL365.5 m with a storage capacity of 1.78 Mt • Lift 3 from embankment crest level of RL365.5 m to crest level of RL368 m with a storage capacity of 1.7 Mt; • Lift 4 from embankment crest level of RL368 m to crest level of RL370.5 m with a storage capacity of 1.63 Mt; • Lift 5 from embankment crest level of RL370.5 m to crest level of RL373 m with a storage capacity of 1.57 Mt; and • Lift 6 from embankment crest level of RL373 m to crest level of RL375.5 m with a storage capacity of 1.5 Mt. <p>Each lift shall be constructed:</p> <ul style="list-style-type: none"> • with capacity to contain rainfall associated with a 1 in 100-year ARI 72 hour storm event; and • with a central decant tower with independent decant pump. 	<p>Schedule 1: Figure 1</p> <p>Schedule 2: Site Plans 1 and 2</p>	-
Spigots	70 tailings discharge spigots distributed equally around the perimeter of the TSF(1) with each lift.	Schedule 2: Site plan 3	Each Lift.
WWTP 'Tristar tertiary Ultra filtration system'	<p>Design capacity 50 m³/d.</p> <p>Located within a 6m long insulated and air-conditioned container.</p> <p>Connected to a 50 m³ Buffer Tank which is connected to the Tristar Batch Reactor.</p> <p>Discharge to a 50 m³ Treated Water Tank prior to discharge to the spray field area or process water pond.</p>	<p>Schedule 1: Figures 1 and 2</p> <p>Schedule 2: Site Plan 5</p>	-

	<p>Designed to achieve the following final effluent standards:</p> <ul style="list-style-type: none"> - BOD <20 mg/L - TSS <30 mg/L - TN <30 mg/L - TP <8 m/L - pH 6.5 – 8.5 pH units - E Coli <10 cfu/100ml - Chlorine 0.2 – 2.0 m/L 		
--	---	--	--

Works compliance reporting

2. Subject to Condition 1, within 60 days of the completion of the Works specified in Table 1 (or part there-of), and prior to operation of the Works, the Licence Holder must provide to the CEO an Environmental Compliance Report certified by a suitably qualified professional engineer that:
 - (a) lists and describes the completed works and any associated items of infrastructure and equipment listed in Table 1;
 - (b) certifies whether or not each item of infrastructure or component of infrastructure specified in Table 1 has been constructed with no material defects and to the requirements specified in Table 1;
 - (c) contains 'as constructed' plans for each item of infrastructure or component of infrastructure specified in Table 1; and
 - (d) is signed by a person authorised by the Licence Holder and contains the printed name and position of that person within the company.
3. Subject to condition 2, where an item of infrastructure or component of infrastructure has been certified as not being constructed, or does not comply with the corresponding requirements, or contains material defects, the Licence Holder must:
 - (a) Correct the non-compliant or defective works, prior to re-certifying in accordance with condition 2(b) or;
 - (b) Provide to the CEO a description of, and explanation for, any departures from the requirements specified in Table 1 that do not require rectification and do not constitute a material defect along with the report required by condition 2.

Infrastructure and equipment

4. The Licence Holder must ensure that the site infrastructure and equipment listed in Table 2 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 2.

Table 2: Infrastructure and equipment requirements

Site infrastructure and equipment	Operational requirement	Infrastructure location
Ore Handling Plant	<p>Dust suppression water sprays fitted to crushing and screening circuits, conveyor transfer points, tipping areas and stockpiles.</p> <p>Kirkalocka mill feed stockpiled on the ROM consisting of the following:</p> <ul style="list-style-type: none"> • Kirkalocka Oxide Ore (Premises mined ore); • Specified External Ore Sources: <ul style="list-style-type: none"> - Cue sands; - A-Zone mine site; - Golden Grove Oxide (Crown); - Mixy; - Golden Grove Pyrite (Amity); and - Geko Gold Project; <p>and</p> <ul style="list-style-type: none"> • Other External Ore Sources collected from locations within a maximum radius of 150km from the Premises. <p>Stockpiled External Ore Sources are contained within a bunded area which is designed to prevent stockpile run-off escaping the ROM pad area.</p> <p>External Ore Sources must contribute a maximum of 5% of the total annual throughput at the Kirkalocka mill and be blended at a maximum instantaneous rate of 15 % of the mill feed.</p> <p>Record:</p> <ul style="list-style-type: none"> • Source and volume in tonnes for each External Ore Sources received and processed at the Premises, with dates, and each External Ore Source to Kirkalocka Oxide Ore process ratio. 	Schedule 1: Figures 1 and 6
Wet processing	6 x 1,250m ³ Carbon in Pulp Tanks situated	Schedule 1:

Site infrastructure and equipment	Operational requirement	Infrastructure location
	<p>within an impervious concrete pad with a containment capacity equivalent to 110% of the capacity one of the tanks.</p> <p>All wet slurry containing facilities situated within impervious bunded concrete areas.</p>	Figure 1
Process Water Pond	<p>Lined with HDPE to achieve a permeability of at least 2×10^{-9} m/s or equivalent.</p> <p>Fitted with level sensor.</p> <p>A minimum freeboard of 0.5 m is maintained at all times.</p>	-
Tailings Storage Facility (TSF1)	A minimum freeboard of 0.9 m is maintained at all times.	Schedule 1: Figure 1
Spigots	70 tailings discharge spigots distributed equally around the perimeter of the TSF.	Schedule 1: Figure 1
Tailings slurry pipelines	<p>Fitted with flow meters to allow detection of loss of content.</p> <p>Situated within an unlined V trench with sufficient capacity to ensure all solids and liquors are captured within the trench.</p>	Schedule 1: Figure 5
Decant return pipelines		
Dewatering pipelines	<p>Fitted with isolation valve switches and flow meters to direct water to the discharge locations.</p> <p>Anchored to prevent movement.</p>	Schedule 1: Figure 5
North WRL Sprinkler Bank 1; and TSF2 Sprinkler Bank 2.	The sprinkler banks must have a minimum separation distance of 100 m between each sprinkler and the outer perimeter of future NWRL2 and future TSF2 footprints.	Schedule 1: Figure 3
Dewatering discharge outlets to Points A, B and C	<p>Dewatering discharge to be alternated between discharge point A, B and C.</p> <p>Dewatering water to be discharged for one out of three days at each discharge point A, B and C.</p>	Schedule 1: Figure 3
WWTP - Pond 1	<p>Lined with HDPE liner with a permeability of at least 2×10^{-10} m/s.</p> <p>0.5 m freeboard maintained at all times.</p>	Schedule 1: Figures 1 and 2
WWTP - Pond 2		
WWTP - Spray field	Maintained and operated so that treated wastewater does not discharge beyond the	Schedule 1: Figures 1 and 2

Site infrastructure and equipment	Operational requirement	Infrastructure location
	boundary of the spray field. Maintained and operated to minimise pooling.	Schedule 2: Site Plan 4
Landfill	<p>Located within area marked "Landfill" in Schedule 1: Figure 1.</p> <p>Landfill cells/trenches 5 m wide, 40 m long and up to 4 m deep.</p> <p>A tipping face not greater than 5 m in length and 2 m in height.</p> <p>Tonnage of each load buried in the landfill cells recorded in cubic metres and calculated tonnes.</p> <p>Stormwater directed around the landfill area by bunding and windrows to ensure no ingress of stormwater into the landfill.</p> <p>Signage installed detailing the types of waste that can be accepted.</p> <p>Waste must be covered on at least a monthly basis.</p> <p>Windblown waste shall be collected from outside the landfill and returned to the tipping face on at least a monthly basis.</p>	Schedule 1: Figure 1

Infrastructure - inspection

5. The Licence Holder must undertake visual inspections of the infrastructure specified in Table 3:
- (a) of the type; and
 - (b) at the corresponding frequency;
- as set out in Table 3.

Table 3: Inspections of infrastructure

Infrastructure (refer to Schedule 1: Figures 1, 2 and 3)	Type of inspection	Frequency
Kirkalocka ROM pad - External Ore Source stockpiles	For visual integrity of the earthen bunding	Weekly and after high rainfall events
Tailings delivery pipelines	For visual integrity and leak detection.	Twice daily
Tailings decant water return pipelines		

Infrastructure (refer to Schedule 1: Figures 1, 2 and 3)	Type of inspection	Frequency
Tailings Storage Facility (TSF1) embankment freeboard	To confirm required freeboard capacity is available	Daily
HDPE dewatering pipelines	For visual integrity and leak detection.	Twice daily
North WRL Sprinkler Bank 1 and TSF2 Sprinkler Bank 2. Dewatering discharge outlets to Points A, B and C	For visual integrity of the discharge systems.	Twice daily when discharging
Dewatering discharge outlets to Points A, B and C.	To determine the level of scouring and/or erosion at the discharge locations.	Weekly
WWTP	For visual integrity and leak detection.	Daily
WWTP spray field area	Visual, to confirm treated wastewater has not discharged beyond the boundary of the spray field area	Weekly and after high rainfall events

6. The Licence Holder must maintain a written log for each inspection activity required by condition 5, with the record of each inspection signed by the responsible person.

Landfill

7. The Licence Holder must only dispose of the waste types and amounts specified in Table 4 and using the disposal method specified.

Table 4: Waste disposal

Waste Type	Waste amount	Disposal method
Inert Waste Type 1 and Type 2 (plastics only)	Not more than 35 tonnes total per year	Disposed to landfill cell/trenches as specified in Table 2.
Putrescible Waste		

Emissions and discharges

Process wastes

8. The Licence Holder must ensure that the process wastes specified in Table are discharged:
- only from the specified discharge point; and
 - only at the correspondence discharge point location

as set out in Table.

Table 5: Authorised discharge points

Waste type	Discharge point	Discharge point location
Tailings	TSF	As shown in Schedule 1: Figure 5
Tailings return water	Process Water Pond (WAD2)	

9. The Licence Holder must ensure that process waste discharged from the discharge point listed in Table 6 for the corresponding parameter do not exceed the corresponding limit when monitored in accordance with condition 15.

Table 6: Process limit

Discharge point	Parameter	Limit
TSF	CN _{WAD}	50mg/L
WAD2		

Discharges to land and surface water

10. The Licence Holder must ensure that the emissions specified in Table 7 are discharged only from the corresponding discharge point and only at the corresponding discharge point location.

Table 7: Authorised discharge points

Emission	Discharge point	Discharge point location
Dewater from Curura pit to allow mining of ore.	North WRL Sprinkler Bank 1 and TSF2 Sprinkler Bank 2. Dewatering discharge outlets to Points A, B and C.	As shown in Schedule 1: Figure 3
Treated sewage from the Tristar WWTP	WWTP spray field	As shown in Schedule 1: Figure 2

11. The Licence Holder must ensure that emissions from the discharge points listed in Table 8 for the corresponding parameter do not exceed the corresponding limit when monitored in accordance with conditions 17 and 19.

Table 8: Emission limits

Discharge point	Parameter	Limit
Spray field area and process water storage pond (Schedule 1: Figure 2)	pH	6.5 – 8.5
	Biochemical oxygen demand, 5-day	20 mg/L
	Total suspended solids	30 mg/L
	Total nitrogen	30 mg/L

	Total phosphorus	8 mg/L
	Faecal coliforms	10 CFU/100mL
	Chlorine	0.2 - 2.0 mg/L
North WRL Sprinkler Bank 1 and TSF2 Sprinkler Bank 2. Dewatering discharge outlets to Points A, B and C.	Tonnes of dewater from Curura pit to allow mining of ore.	1,500,000 tonnes per year

Monitoring

Monitoring general

12. The Licence Holder must ensure that:
 - (a) monitoring is undertaken in each weekly period such that there are at least 4 days in between the days on which samples are taken in successive weeks;
 - (b) 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; and
 - (c) monitoring is undertaken in each quarterly period such that there are at least 45 days in between the days on which samples are taken in successive quarters.
13. The Licence Holder must ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.
14. The Licence Holder must ensure that all laboratory samples collected in accordance with conditions 15, 17, 19, and 20 are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.

Process monitoring

15. The Licence Holder must monitor the process waste:
 - (a) at the corresponding monitoring location;
 - (b) for the corresponding parameter;
 - (c) at no less that the corresponding frequency;
 - (d) for the corresponding averaging period;
 - (e) in the corresponding unit; and
 - (f) using the corresponding method,
as set out in Table 9.

Table 9: Monitoring of process waste

Monitoring location	Parameter	Frequency	Averaging period	Unit	Method
Supernatant pond (WAD1) & Process Water Pond (WAD2) Schedule 1 Figure 5	pH ¹	Monthly	Spot sample	-	AS/NZS 5667.1
	CN _{WAD}			mg/L	AS/NZS 5667.10

Note 1: In-field non-NATA accredited analysis permitted.

Monitoring of TSF water balance

- 16.** The Licence Holder must undertake monitoring of the water balance for the TSF1 each monthly period, and (as a minimum) record the following information:
- (a) site rainfall;
 - (b) evaporation rate;
 - (c) decant water recovery volumes;
 - (d) volume of tailings deposited; and
 - (e) estimate of seepage losses.

Monitoring of mine dewater discharge and vegetation

- 17.** 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 10.

Table 10: Monitoring of dewater and vegetation

Monitoring point or location	Parameter	Frequency	Averaging period	Unit	Method
					Sampling
Dewatering discharged to the North WRL Sprinkler Bank 1 and TSF2 Sprinkler Bank 2 Dewatering discharged to Points A, B and C As depicted in Schedule 1: figure 3	Volumetric flow	Continuous	24 hours	tonnes	-
	pH ¹	Monthly	Spot sample	-	AS/NZS 5667.1
	Total dissolved solids	Monthly	Spot sample	mg/L	
	Total Recoverable Hydrocarbons				
	Nitrate				
Vegetation monitoring quadrants MMS08, MMS20, MMS29R, MMS11 and MMS14 as depicted in Schedule 1: Figure 4; and that required by Condition 1 Table 1.	Mulga health and vegetation health at each quadrant. A photograph from a designated point at each monitoring quadrant to be taken upon each monitoring event, so can be compared to subsequent and/or previous photographs to record vegetation health.	Monthly when actively discharging, then weekly if changes are observed. Quarterly when not actively discharging	-	-	Health rating based on that documented in <i>Section 7.1.2 of Kirkalocka Gold Project Strategy</i> , prepared by Preston Consulting Pty Ltd, 15 February 2019

Note 1: In-field non-NATA accredited analysis permitted.

- 18.** The Licence Holder must, in the event of a parameter in Table 10 exceeding the corresponding trigger value(s) in Table 11, undertake the management action(s) that correspond with the relevant parameter(s) and corresponding monitoring location(s) within the corresponding timeframe(s) as specified in Table 11.

Table 11: Management actions required in the event of trigger value exceedance

Monitoring location	Parameter	Trigger	Management action
Vegetation monitoring quadrants MMS08, MMS20, MMS29R, MMS11 and MMS14 as depicted in Schedule 1: Figure 4; and required by Condition 1, Table 1.	Mulga and vegetation health	Tips of Mulga branches stressed or dying; or signs of stress in many individuals or several species.	Investigate and assess outside of the quadrat areas (Table 10) and confirm from further assessment of Mulga health (inside and outside of wet area) if water discharge is causing the triggered vegetation decline. If water discharge is confirmed to be causing decline, immediately adjust discharge regime to allow longer duration without discharge. Continue to assess vegetation health against sampling method in Table 10 and maintain a record of all management actions.

Emissions to land monitoring - WWTP

- 19.** 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 12.

Table 12: Emissions to land monitoring

Monitoring point or location	Parameter	Frequency	Averaging period	Unit	Method
					Sampling
Spray Field Schedule 1: Figure 2	Volumetric flow rate (cumulative)	Continuous	Quarterly	L/second m ³ /day	-
	pH ¹	Quarterly	Spot sample	-	AS/NZS 5667.1 and AS/NZS 5667.10
	Biochemical oxygen demand, 5-day			mg/L	
	Total suspended solids				
	Total nitrogen				
	Total phosphorus				

Monitoring point or location	Parameter	Frequency	Averaging period	Unit	Method
					Sampling
	Chlorine				
	Faecal coliforms (<i>E.coli</i>)			CFU/100mL	

Note 1: In-field non-NATA accredited analysis permitted.

Ambient groundwater monitoring

20. The Licence Holder must monitor the groundwater for concentrations of the parameter listed in Table 13:

- (a) at the corresponding monitoring location;
- (b) in the corresponding unit;
- (c) at no less that the corresponding frequency;
- (d) for the corresponding averaging period; and
- (e) using the corresponding method.

Table 13: Monitoring of ambient groundwater

Parameter ^[1]	Monitoring location	Unit	Reportable Limit	Frequency	Averaging period	Method
Standing water level	Schedule 1 Map 5: TDP1, TDP2, TDP3, TDP4, TDP5, TDP6, TDP7, TDP8, TDP9, TDP10, TDP11, TDP12, and TDP13.	mbgl	5 mbgl	Monthly	Spot sample	AS/NZS 5667.1 AS/NZS 5667.11
Electrical conductivity ^[2]		µS/cm	-	Quarterly		
Total dissolved solids		mg/L				
pH ^[2]		-				
CN _{WAD}		mg/L				
Ammonia		µg/L				
Arsenic						
Cadmium						
Chromium (VI)						
Cobalt						
Copper						
Iron						
Lead						
Molybdenum						
Nickel						
Selenium						
Thallium						

Parameter ^[1]	Monitoring location	Unit	Reportable Limit	Frequency	Averaging period	Method
Uranium						
Vanadium						
Zinc						
Nitrate (NO ₃ ⁻)						
Potassium (K ⁺)						
Sodium (Na ⁺)						
Calcium (Ca ²⁺)						
Magnesium (Mg ²⁺)						
Sulfate (SO ₄ ²⁻)						
Chloride (Cl ⁻)						
Bicarbonate (HCO ₃ ⁻)						
Fluoride (F ⁻)						

Note 1: All metals to be analysed as "Dissolved" metals except Iron which must be analysed as "Total Iron" and "Dissolved Iron"

Note 2: In-field non-NATA accredited analysis permitted.

Specified Actions

21. The Licence Holder must submit to the CEO the monitoring result of Condition 20 for standing water level, each month, for at least six consecutive months after 2 November 2020.
22. The Licence Holder must submit to the CEO by 31 October 2021, an updated seepage management plan for TSF1 which includes:
 - (a) A detailed water balance for the Premises to determine the current seepage rate;
 - (b) A detailed description of the geological and geophysical systems at the Premises;
 - (c) An assessment of the existing TSF1 groundwater monitoring bore network to determine if the location of the bores are adequately sited on structural features that are likely to be significant conduits for groundwater flow;
 - (d) A program of works including timelines for implementation, for the installation of shallow groundwater monitoring bores at the TSF1, for the purpose of identifying the formation of a perched aquifer beneath the TSF1;
 - (e) Methods for increasing the rate of water recovery from the TSF1 including timelines for implementation;
 - (f) Appropriate trigger levels to protect receptors;
 - (g) Management actions including the use of pumped bores and/or drains for the recovery of seepage at the TSF1; and
 - (h) revised disposal option(s) where required to prevent impacts

with timelines for implementation.

Record-keeping

- 23.** The Licence Holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:
- (a) the name and contact details of the complainant, (if provided).
 - (b) the time and date of the complaint;
 - (c) the complete details of the complaint and any other concerns or other issues raised; and
 - (d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.
- 24.** 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.
- 25.** 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 14, and which provides information in accordance with the corresponding requirement set out in Table 14.

Table 14: Annual Environmental Report

Condition	Requirement
-	Laboratory results from the assessment of the geochemical characteristics of each External Ore Source processed at the Kirkalocka mill. The results shall be presented in a tabulated form and compared against Kirkalocka ore values and geological abundance index (GAI).
4	Tailings slurry % solids content range.
4	% of External Ore Source in relation to total annual ore processed; ore source and composition of each ore type processed.
15 Monitoring of Process waste	Tabulated monitoring data results for each monitoring location showing concentrations of all parameters. 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.
16 TSF water balance	TSF water balance information, tabulated. Details of calculations/methods used.

<p>17 and 18 Monitoring of mine dewater and vegetation</p>	<p>Tabulated monitoring data results and time-series graphs in Microsoft Excel format for each dewater discharge monitoring location showing all parameters over a minimum three year period (where sufficient data allows).</p> <p>An interpretation of the monitoring data including comparison to historical trends and emission limits (where applicable).</p> <p>Copies of original monitoring, laboratory and analysis reports submitted to the Licence Holder by third parties.</p> <p>Summary of mulga and vegetation health and changes observed at each quadrat, including triggers and management actions taken where applicable.</p>
<p>19 Monitoring of WWTP emissions</p>	<p>Tabulated monitoring data results for each monitoring location showing concentrations of all parameters.</p> <p>An interpretation of the monitoring data including comparison to historical trends, emission limits or expected manufacturer's maximum specifications.</p> <p>Copies of original monitoring, laboratory and analysis reports submitted to the Licence Holder by third parties.</p>
<p>20 Groundwater monitoring</p>	<p>Tabulated monitoring data results for each monitoring location showing concentrations of all parameters.</p> <p>Time-series graphs in Microsoft Excel format for each monitoring location for standing water levels in mbgl, since at least September 2019.</p> <p>An interpretation of the monitoring data including comparison to historical trends and emission limits (where applicable).</p> <p>Copies of original monitoring, laboratory and analysis reports submitted to the Works Approval Holder from third parties</p>

- 26.** The Licence Holder must maintain accurate and auditable books that include the following records, information, reports, and data required by this licence:
- (a) the calculation of fees payable in respect of this licence;
 - (b) the works conducted in accordance with condition 1 of this licence;
 - (c) any maintenance of infrastructure that is performed in the course of complying with condition 2 of this licence;
 - (d) monitoring programmes undertaken in accordance with conditions 15, 16, 17, 18, 19, 20 of this licence; and
 - (e) complaints received under condition 23 of this licence.
- 27.** The books specified under condition 26 must:
- (a) be legible;
 - (b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;
 - (c) be retained by the licence holder for the duration of the licence; and
 - (d) be available to be produced to an inspector or the CEO as required.
- 28.** 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.

- 29.** The Licence Holder must, within seven days of becoming aware of any non-compliance with an emission limit specified in conditions 9 and 11 of the Licence, notify the CEO in writing of that non-compliance and include in that notification the following information:
- (a) which emission limit was not complied with;
 - (b) the time and date when the non-compliance occurred;
 - (c) if any environmental impact occurred as a result of the non-compliance and if so what that impact is and where the impact occurred;
 - (d) the details and result of any investigation undertaken into the cause of the non-compliance;
 - (e) what action has been taken and the date on which it was taken to prevent the non-compliance occurring again; and
 - (f) what action will be taken and the date by which it will be taken to prevent the non-compliance occurring again.
- 30.** The Licence Holder must, within seven days of becoming aware of an occurrence of the reportable limit specified in condition 20, notify the CEO in writing and include in that notification the following information:
- (a) The monitoring location, date and result; and
 - (b) what action will be taken and the date by which it will be taken to prevent the reportable limit occurring again.

Commissioning

- 31.** The Licence Holder may only commence environmental commissioning of an item of infrastructure listed in condition 32 once the Environmental Compliance Report has been submitted for that item of infrastructure in accordance with conditions 2 and 3 of this Licence.
- 32.** Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 15 may only be carried out:
- (a) in accordance with the corresponding commissioning requirements; and
 - (b) for the corresponding authorised commissioning duration.

Table 15: Environmental commissioning requirements

Infrastructure	Commissioning requirements	Authorised commissioning duration
WWTP 'Tristar tertiary Ultra filtration system'	Commissioning	For a period not exceeding 90 calendar days in aggregate.

- 33.** The Licence Holder must monitor emissions during environmental commissioning in accordance with Table 16.

Table 16: Emissions and discharge monitoring during environmental commissioning

Emission and monitoring point or location	Parameter	Frequency	Averaging period	Unit	Expected maximum	Method
Treated effluent from the WWTP 'Tristar tertiary Ultra filtration system' discharged to the Spray Field Area (Schedule 1: Figure 2)	pH ¹	Not specified.	Spot sample	-	6.5-8.5	AS/NZS 5667.1 AS/NZS 5667.10
	Biochemical oxygen demand, 5-day	Commissioning is complete when the plant is operating under normal conditions, and two consecutive samples more than 24 hours apart are within the expected range for all parameters		mg/L	20 mg/L	
	Total suspended solids				30 mg/L	
	Total nitrogen				30 mg/L	
	Total phosphorus				8mg/L	
	Chlorine				2.0 mg/L	
	Faecal coliform units (CFU)				CFU per 100 ml	

Note 1: In-field non-NATA accredited analysis permitted.

- 34.** The Licence Holder must record the results of all monitoring activity required by condition 33.
- 35.** The Licence Holder must submit to the CEO an Environmental Commissioning Report within 30 calendar days of the completion date of environmental commissioning for each item of infrastructure specified in Table 15.
- 36.** The Licence Holder must ensure the Environmental Commissioning Report required by condition 35 of this licence includes the following:
- (a) a summary of the environmental commissioning activities undertaken, including time-frames;
 - (b) the emissions monitoring results recorded in accordance with condition 35; and where they have not been met, measures proposed to meet the expected maximum/s together with timeframes for implementing the proposed measures; and
 - (c) copies of original monitoring, laboratory and analysis reports submitted to the Licence Holder by third parties.
- 37.** The Licence Holder must notify the CEO within seven days of:
- (a) the commencement of commissioning; and
 - (b) the completion of commissioning.

Definitions

In this licence, the terms in Table 17 have the meanings defined.

Table 17: Definitions

Term	Definition
ACN	Australian Company Number
Annual Period	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>
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 <i>Water Quality – Sampling – Guidance on sampling of groundwaters</i>
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
CIL	Carbon in leach
CN _{WAD}	Weak Acid Dissociable Cyanide
CFU	Colony-forming unit
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	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Licence Holder

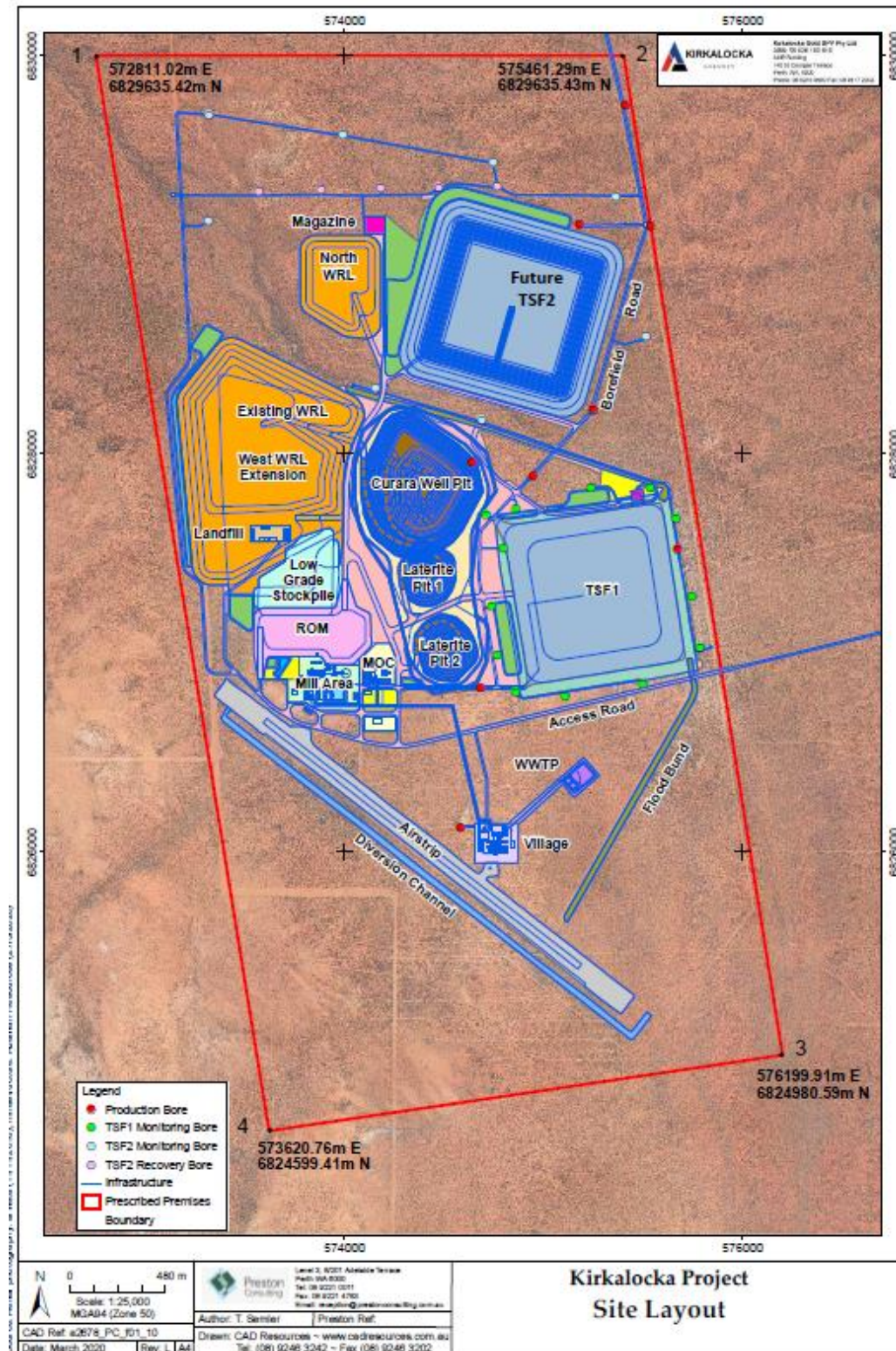
Term	Definition
Request	in writing and sent to the Licence Holder's address for notifications, as described at the front of this Licence, in relation to: <ul style="list-style-type: none"> (a) compliance with the EP Act or this licence; (b) the Books or other sources of information maintained in accordance 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
HDPE	Means high-density polyethylene
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.
Inert waste type 1	has the same meaning given to that term in the Landfill waste classification and waste definitions 1996 (as amended 2018)
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	means metres

Term	Definition
m/s	means metres per second
mbgl	means metres below ground level
m/s	means metres per second
Mt	Million tonnes
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.
EOS	External Ore Source
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.
Putrescible wastes	has the same meaning given to that term in the <i>Landfill waste classification and waste definitions 1996 (as amended 2018)</i>
RL	means Reduced Level
ROM	Run of Mine
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.
WWTP	Waste Water Treatment Plant

Schedule 1: Maps

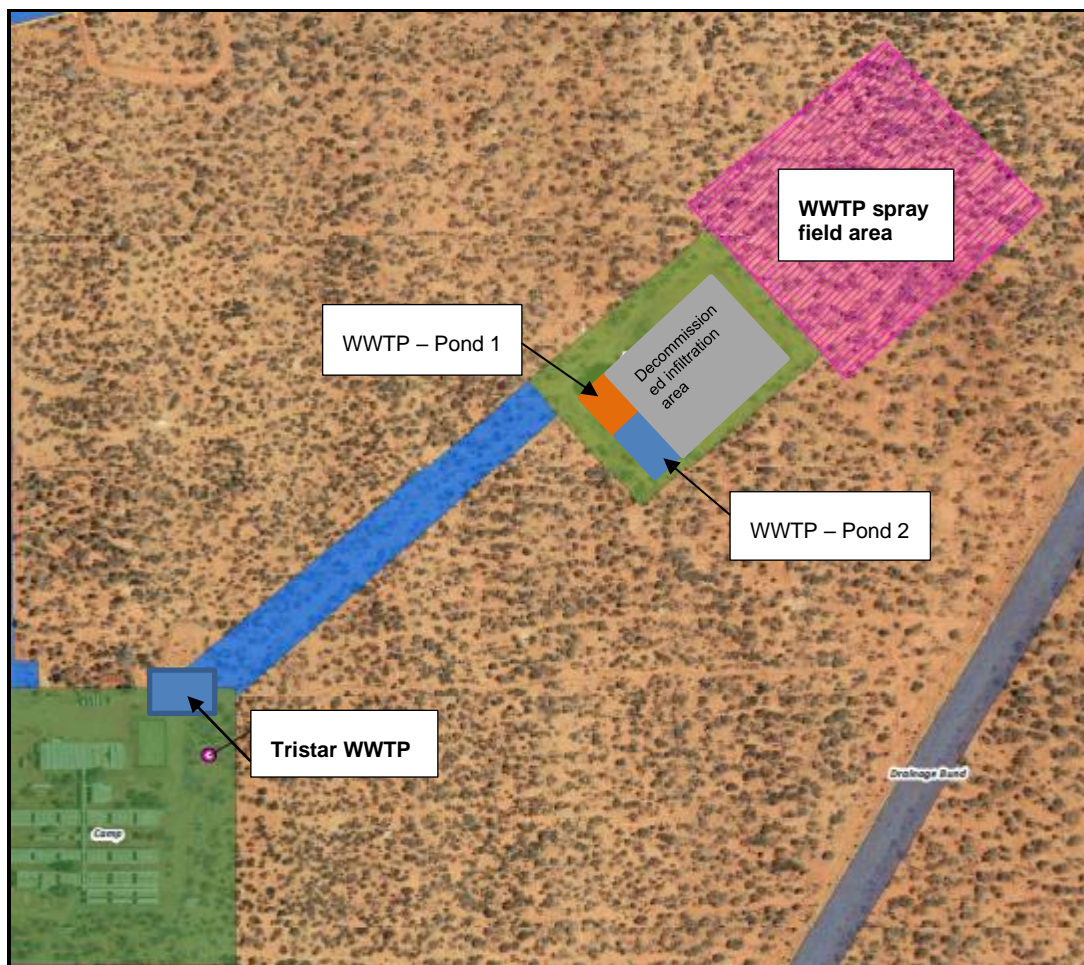
Premises map

Figure 1: Map of the boundary of the prescribed premises and key infrastructure



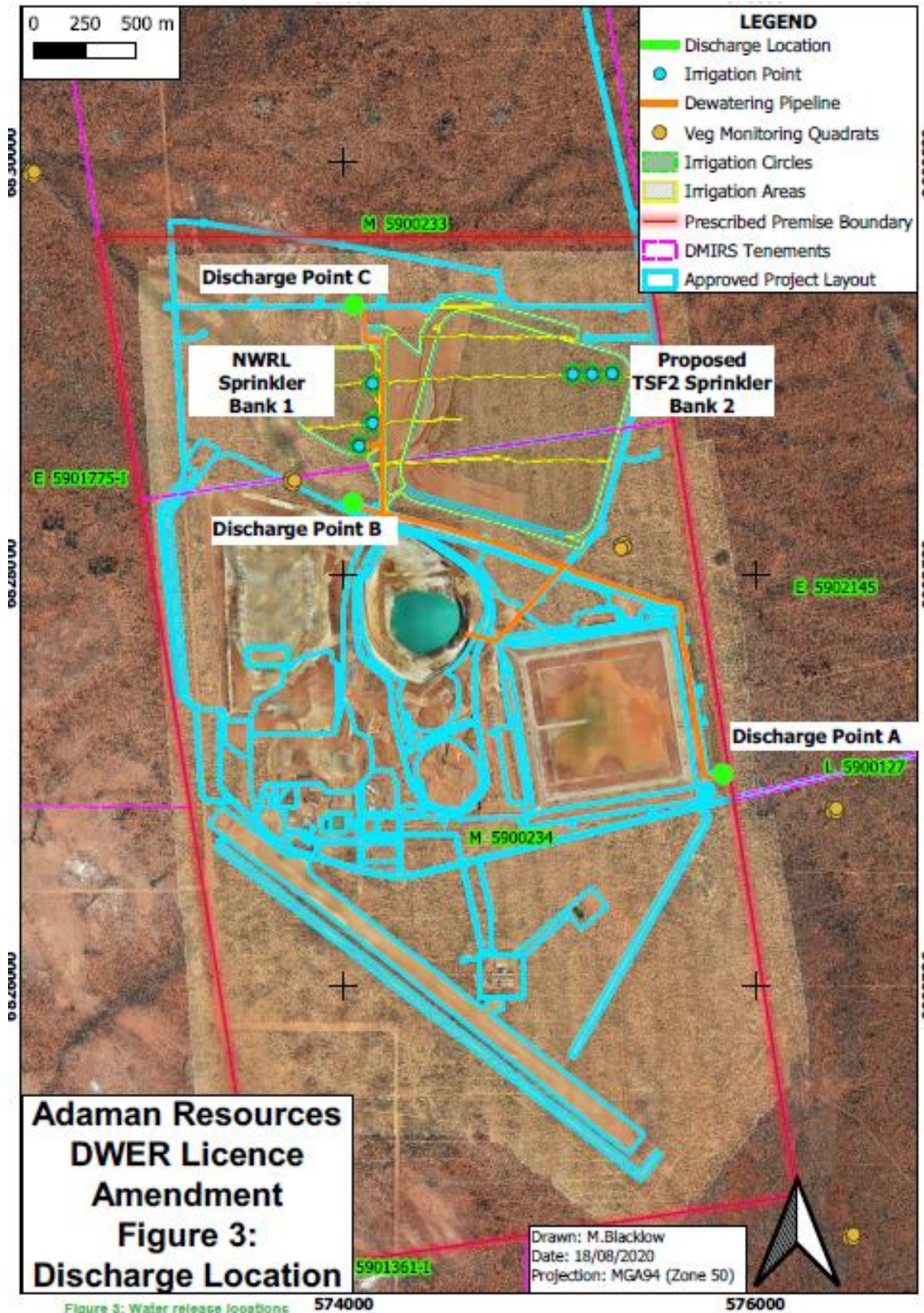
WWTP discharge

Figure 2: Tristar WWTP, WWTP ponds and spray field area



Dewater Discharge

Figure 3: Location of dewater sprinkler fields and discharge points



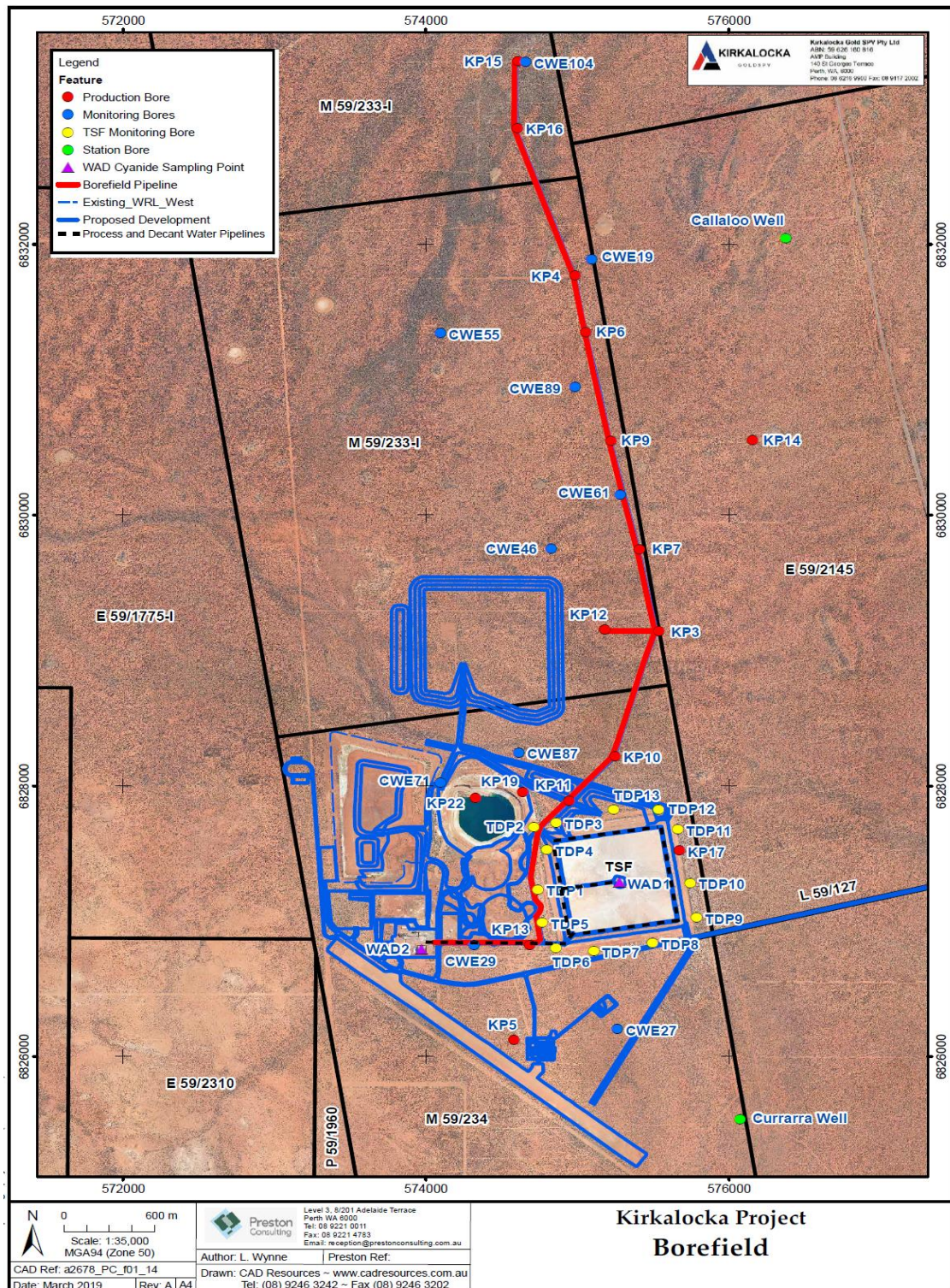
Vegetation monitoring locations

Figure 4: Vegetation monitoring locations



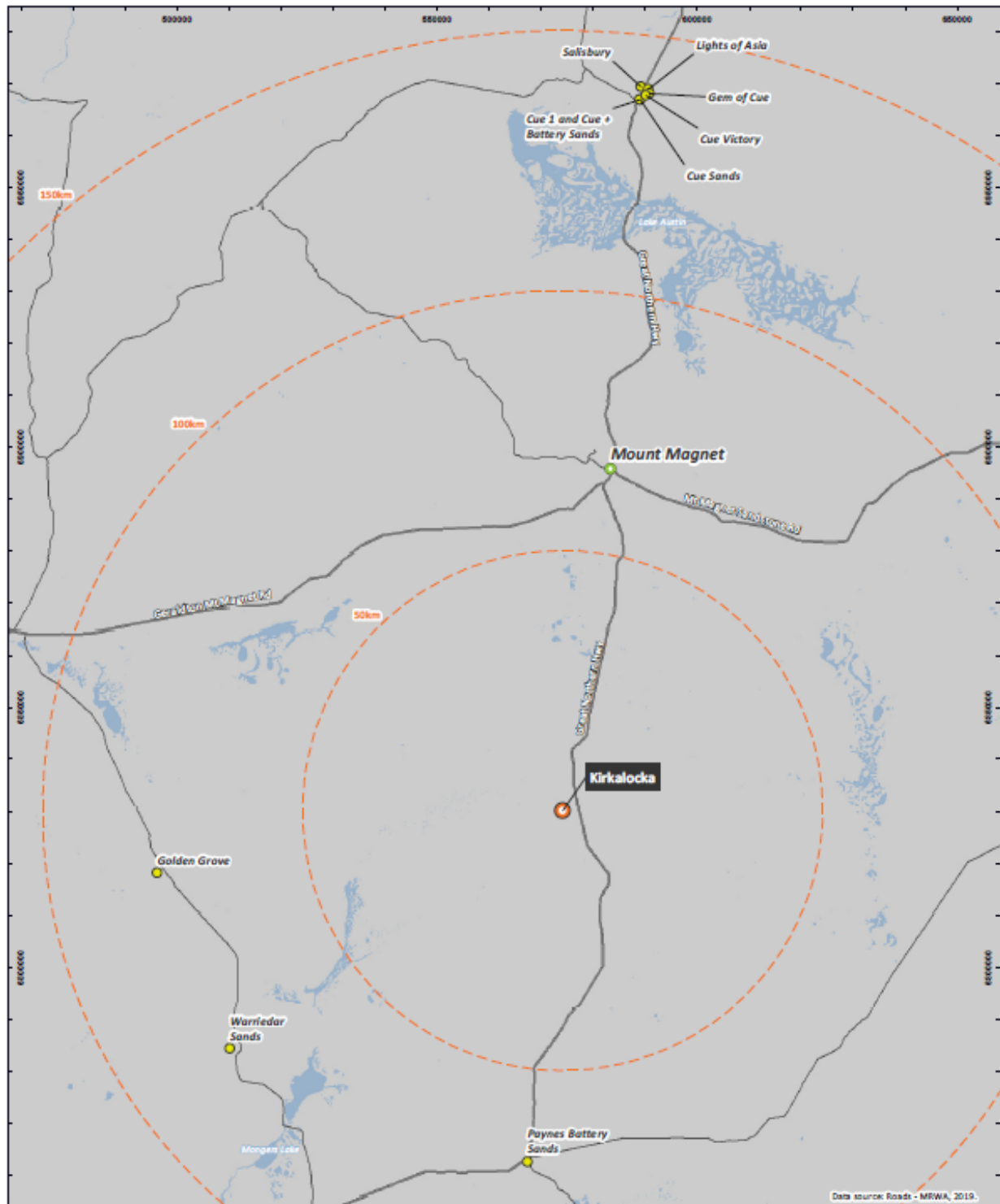
TSF monitoring

Figure 5: TSF monitoring sites



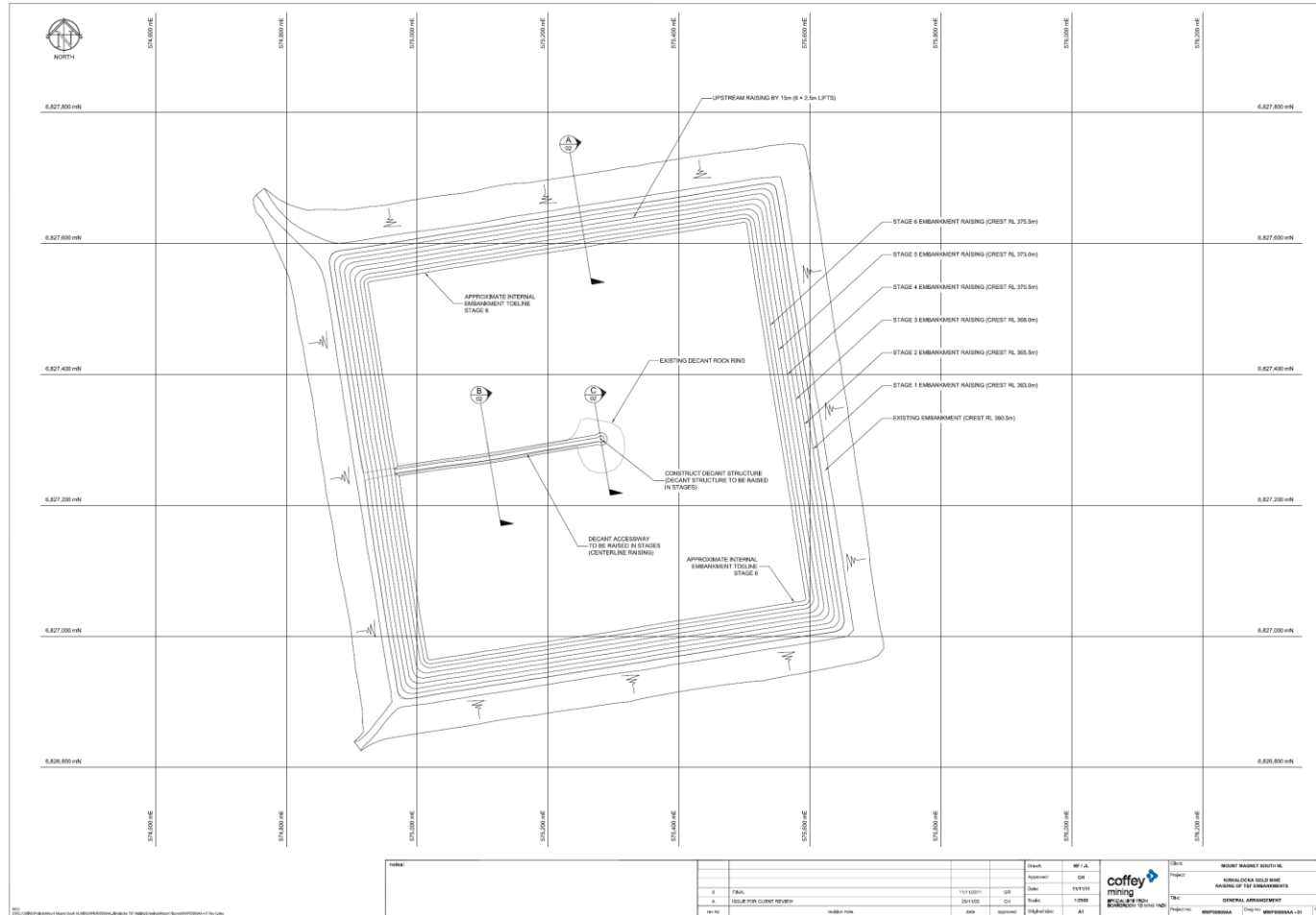
External Ore Sources

Figure 6: Location of External Ore Sources

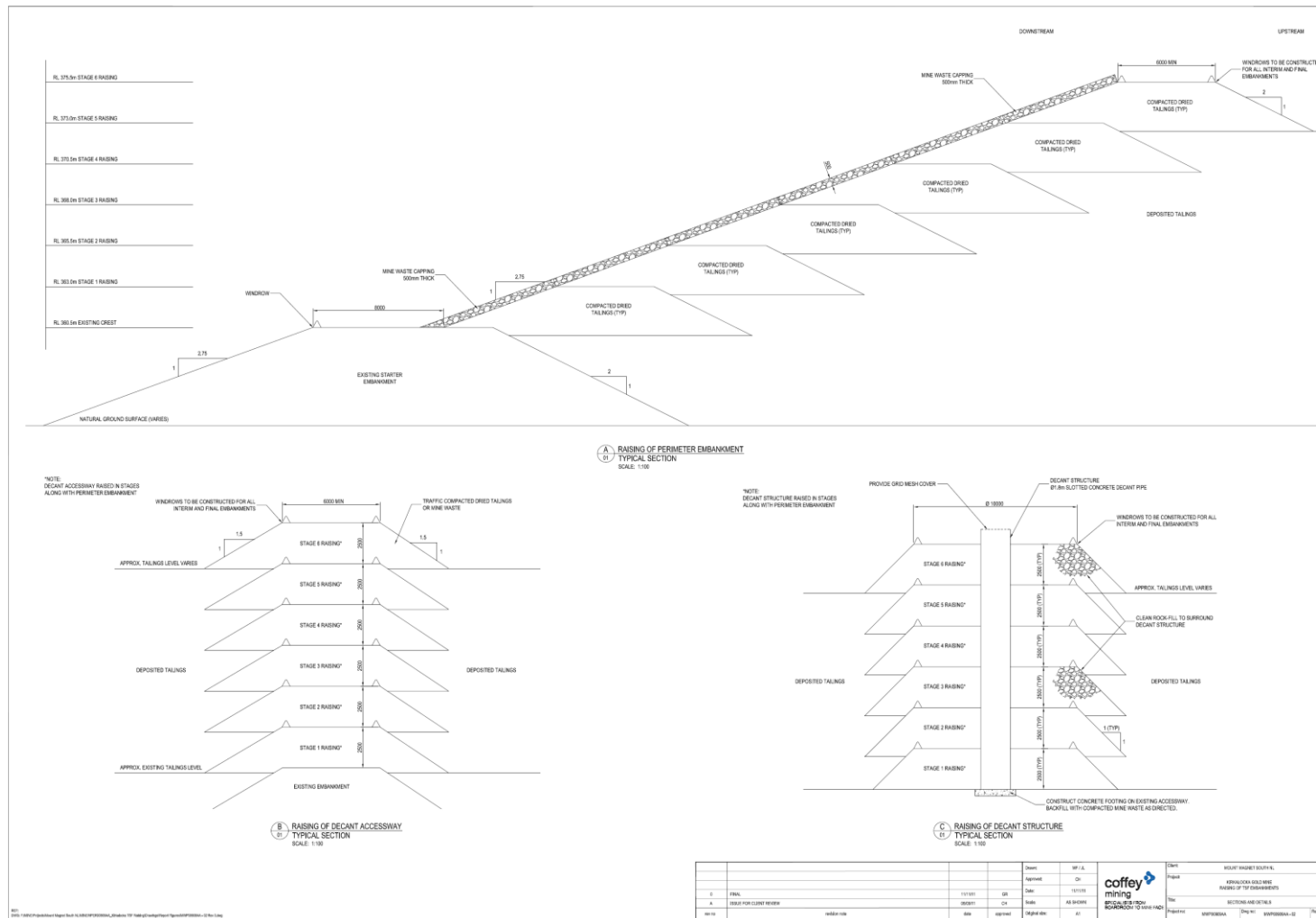


Schedule 2: Site Plans

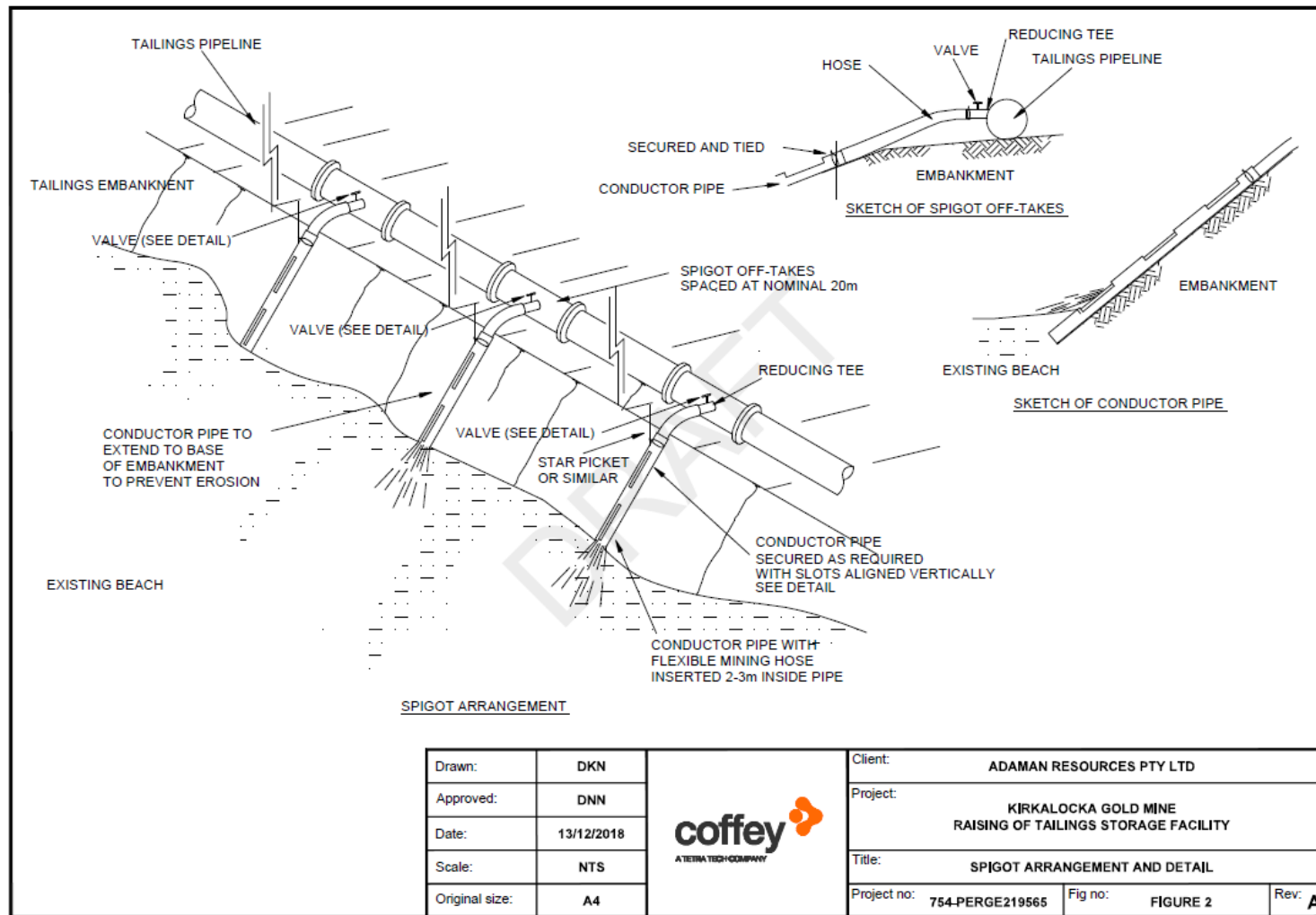
Site Plan 1: TSF general arrangement – Starter embankment and lifts.



Site Plan 2: TSF starter embankment and lift design



Site Plan 3: TSF design for pipeline and spigots



Site Plan 4: Tristar WWTP and sprinkler layout

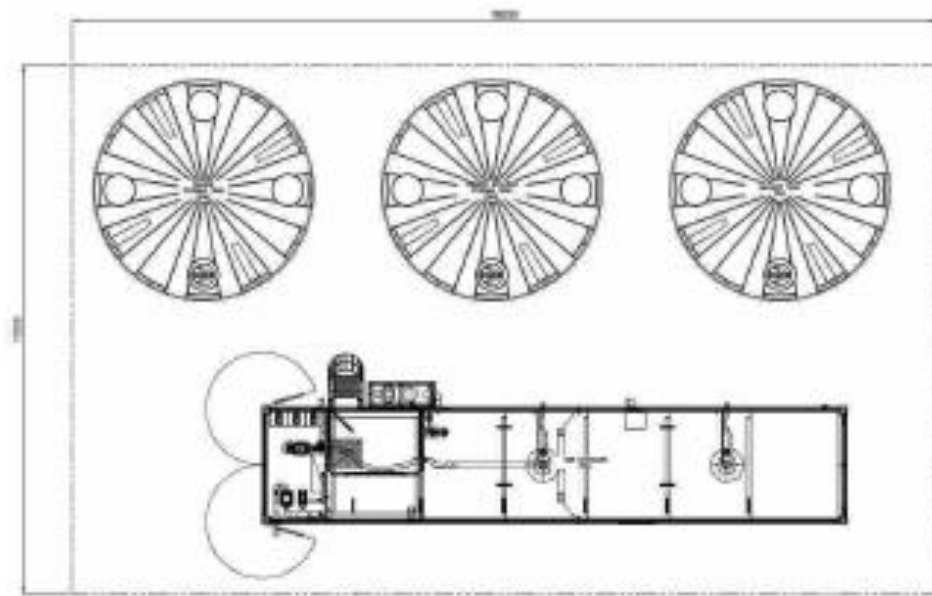


Diagram 1: Proposed Tristar WWTP container and tank system layout

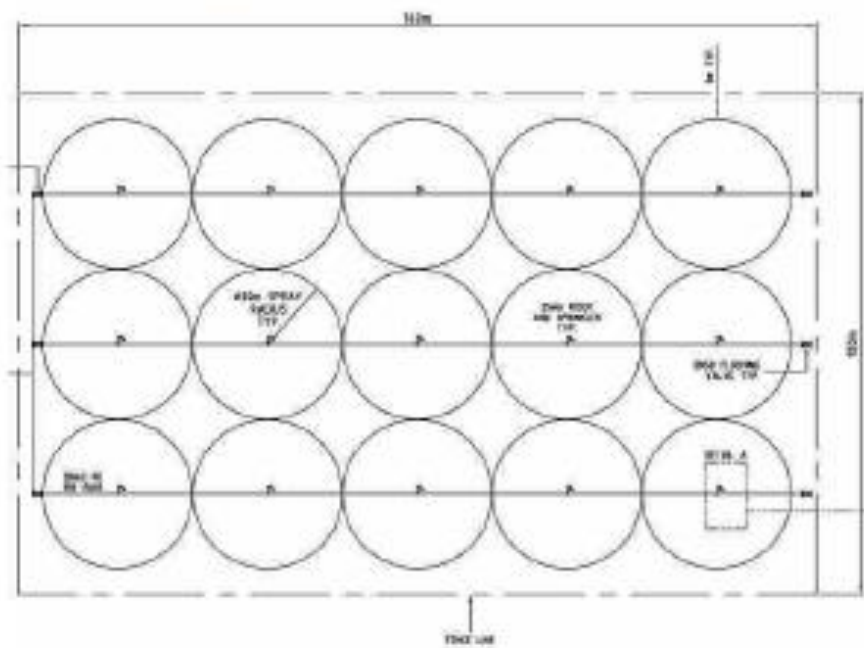


Diagram 2: Proposed Spray Field layout

Site Plan 5: Tristar WWTP Ultra Filtration layout

