Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6942/2024/1
Works approval holder	Shire of Coolgardie
ACN	883 388 617
Registered business address	Council Chambers Irish Mulga Drive KAMBALDA WA 6429
DWER file number	DER2024/000237
Duration	09/09/2024 to 08/09/2029
Date of issue	06/09/2024
Premises details	Coolgardie Wastewater Treatment Plant Lot 2144 on Plan 184160 Crown Reserve 37045, Lot 2140 on Plan 91726 Crown Reserve 37045, Lot 53 on Plan 91726 Crown Reserve 37045, Lot 31 on Plan 91280 Crown Reserve 31983, Lot 2435 on Plan 107089, and Lot 500 on Plan 64352 Crown Reserve 34285, Bayley Street COOLGARDIE WA 6429

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production / design capacity**
Category 54: Sewage facility	*1,000 m^3 per day*
Category 61: Liquid waste facility	

This works approval is granted to the works approval holder, subject to the attached conditions, on 6 September 2024, by:

Adam Harbeck

Digitally signed by Adam Harbeck
Date: 2024.09.06 15:55:46 +08'00'

ACTING MANAGER WASTE INDUSTRIES
REGULATORY SERVICES

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

Works approval history

Date	Reference number	Summary of changes
06/09/2024	W6942/2024/1	Works approval granted.

Interpretation

In this works approval:

(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 works approval:

(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 works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

Works approval conditions

The works approval holder must ensure that the following conditions are complied with:

Construction phase

Infrastructure and equipment

1. The works approval holder must:

(a) construct the critical containment infrastructure;

(b) in accordance with the corresponding design and construction / installation requirements; and

(c) at the corresponding infrastructure location;

(d) as set out in Table 1.

Table 1: Design and construction / installation requirements.

	Infrastructure	Design and construction / installation requirements	Drawing reference
Stage One: Refurbishment of Pond Train B (ponds B1 and B2)			
1.	Earthworks and connector pipe works.	Ensure the redevelopment and connector pipe works are carried out in accordance with the drawings (figures) provided in Schedule 2. The following works must be undertaken: • Ponds A1 and A2 will be operational during pond B1 and B2 construction works. • Constructed as per the drawings (figures) provided in Schedule 2. • Pond emptying and removal of sludge from B1 and B2. • Engage Geotechnical Inspection and Testing Authority (GITA) to undertake all testing, inspections and supervision of earthworks compaction quality assurance as specified. • Trim all remnant vegetation, any shade cloth and rocks from the embankments, and dispose of spoil material to a designated landfill. • Excavate pond floors (tested as friable rock) to specified levels. • Test material for compliance with embankment fill material specification and retain for earthworks fill where suitable. • Import fill material and blend with moisture conditioned cut material for embankment construction in 250 mm compacted lifts. • Raise top of embankment with compacted fill between ponds B1 and B2.	Schedule 2, Figure 2, Figure 3, Figure 4, Figure 5, and Figure 6

	Infrastructure	Design and construction / installation requirements	Drawing reference
		• Final trim of pond floor to be graded at 2% toward inlet pipe end (eastern end) of ponds. • Install DN250 PE connector pipes including inlet pipe from access chamber AC1, and connector pipes between ponds B1 to B2, and B2 to C. • Install concrete filled DN600 PE vertical pipe on upstream pipe ends and concrete encasement on downstream pipe ends of each pipe. • Complete final embankment trim and 100mm subgrade installation. • Internal batters cut to 1:3 (V:H). • Proof roll entire footprint including pond floor and embankments. • Ponds designed to maintain a freeboard of no less than 300 mm. • The facultative pond must provide a minimum operational storage capacity of 11,850 m^3. • Ponds must have capacity to store a 24-hour duration, 1 in 20-year ARI critical rainfall event without overflow. CQA activities must be undertaken according to the Construction Quality Assurance Plan. The GITA is required to provide an As-Constructed Report (ACR), setting out the inspections and compliance results of all sampling and testing, including the test locations.	

2.	Lining system	Installation of the liner shall be undertaken following delivery to the premises and in accordance with the drawings (figures) provided in Schedule 2.
		The following works must be undertaken:
		• Ensure supply panel layout plan, product roll test sheets, safety plans and other preliminaries as specified.
		• Supply and installation of non-woven geotextile underlay to HDPE liner,
		• Lined with 2.0 mm double sided, textured HDPE to achieve a permeability of <1 x 10^{-9} m/sec, as specified in Schedule 2 including:
		  ○ Panel seam welds to specification;
		  ○ Excavation, liner install, backfill and compaction of anchor trenches at top of
			Schedule 2,
			Figure 7

	Infrastructure	Design and construction / installation requirements	Drawing reference
		embankment; ○ Liner boot and weld to existing DN250 PE connector pipes • To extend over the entire pond base and up the side embankments. • Maintain final trim of pond floor graded at 2% toward inlet pipe end (eastern end) of ponds. • Must be uniform and free of pin holes, blisters, blemishes, bubbles, roughness, contaminants, and permanently attached raw materials. • Must be completely sealed and waterproof along all joins and seams with heat welded joints. Leak detection survey to be carried out following installation. Install sand filled bags on floor perimeter if ponds are not immediately filled with water, subject to superintendent approval. Provide all quality testing and records to the CEO for commissioning of the ponds.	
Stage Two: Refurbishment of Pond Train A (ponds A1 and A2)			
3.	Earthworks and connector pipe works.	Ensure the redevelopment and connector pipe works are carried out in accordance with the drawings (figures) provided in Schedule 2. The following works must be undertaken: • Ponds B1 and B2 will be operational during pond A1 and A2 construction works. • Pond emptying and removal of sludge from A1 and A2. • Engage Geotechnical Inspection and Testing Authority (GITA) to undertake all testing, inspections and supervision of earthworks compaction quality assurance as specified. • Trim all remnant vegetation and rocks from the embankments and dispose of spoil material at a designated landfill. • Excavate pond floors to specified levels. Test material for compliance with embankment fill material specification and retain for earthworks fill where suitable. • Import fill material and blend with moisture conditioned cut material for embankment construction in 250 mm compacted lifts. Raise	Schedule 2, Figure 2, Figure 3, Figure 4, Figure 5, and Figure 6

	Infrastructure	Design and construction / installation requirements	Drawing reference
		top of embankment with compacted fill between ponds A1 and A2. • Final trim of pond floor to be graded at 2% toward inlet pipe end (eastern end) of ponds. • Install DN250 PE connector pipes including inlet pipe from access chamber AC3, and connector pipes between ponds A1 to A2, and A2 to C. • Install concrete filled DN600 PE vertical pipe on upstream pipe ends and concrete encasement on downstream pipe ends of each pipe. • Complete final embankment trim and 100 mm subgrade installation. • Internal batters cut to 1:3 (V:H). • Proof roll entire footprint including pond floor and embankments. • Ponds designed to maintain a freeboard of no less than 300 mm. • The facultative pond must provide a minimum operational storage capacity of 10,350 m^3. • Capacity to store a 24-hour duration, 1 in 20-year ARI critical rainfall event without overflow; CQA activities must be undertaken according to the Construction Quality Assurance Plan; The GITA is required to provide an As-Constructed Report (ACR), setting out the inspections and compliance results of all sampling and testing, including the test locations.	
4.	Liner System	Installation of the liner shall be undertaken following delivery to the premises and in accordance with the drawings (figures) provided in Schedule 2. The following works must be undertaken: • Ensure supply panel layout plan, product roll test sheets, safety plans and other preliminaries as specified. • Supply and installation of non-woven geotextile underlay to HDPE liner, • Lined with 2.0 mm double sided, textured HDPE to achieve a permeability of <1 x 10^{-9} m/sec, as specified in Schedule 2 including: ○ Panel seam welds to specification; ○ Excavation, liner install, backfill and compaction of anchor trenches at top of	Schedule 2, Figure 7

	Infrastructure	Design and construction / installation requirements	Drawing reference
		embankment; ○ Liner boot and weld to existing DN250 PE connector pipes • To extend over the entire pond base and up the side embankments. • Maintain final trim of pond floor graded at 2% toward inlet pipe end (eastern end) of ponds. • Must be uniform and free of pin holes, blisters, blemishes, bubbles, roughness, contaminants, and permanently attached raw materials. • Must be completely sealed and waterproof along all joins and seams with heat welded joints. Leak detection survey to be carried out following installation. Install sand filled bags on floor perimeter if ponds are not immediately filled with water, subject to superintendent approval. Provide all quality testing and records to the CEO for commissioning of the ponds.	
Stage Three: Installation of septic tanks			
5.	Installation of Septic tanks	Installation of the septic tanks must be undertaken in accordance with the drawings (figures) provided in Schedule 2. The following works must be undertaken: Install six (6) 31,000 litre LLDPE septic tanks with welded baffles and with a total capacity of 186,000L. The tanks must be placed within excavated trenches and lined with cleaned compacted sand to provide a firm base for tank installation. Construct one access chamber at the entrance and another at the exit of the septic tanks.	Schedules 1 and 2, Figure 1, Figure 8, and Figure 9

Construction environmental compliance reporting

2. The works approval holder must within 30 days of completion of each of the staged works, being all items of infrastructure or equipment required under each stage as outlined in condition 1 being constructed and/or installed:

(a) undertake an audit of their compliance with the requirements of condition 1; and
(b) prepare and submit to the CEO and Environmental Compliance Report on that compliance.

3. The Environmental Compliance Report required by condition 2, must include as a

minimum the following:

(a) certification by the Geotechnical Inspection and Testing Authority (GITA) or a suitably qualified professional engineer that the items of infrastructure or components(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;
(b) as constructed plans, photographs and a detailed premises plan showing each item of infrastructure or component of infrastructure specified in condition 1;
(c) details of any infrastructure decommissioned as part of the works specified in condition 1; and
(d) be signed by a person authorised to represent the works approval holder and containing the printed name and position of that person within the company.

4. For each of the staged works specified in condition 1, the Environmental Compliance Report required by condition 2 must be accompanied by a Construction Quality Assurance Validation Report that:

(a) is certified by the same body that has certified the Environmental Compliance Report required in condition 2;
(b) documents all repairs to subgrade and liner materials, including those resulting from non-destructive weld testing;
(c) certifies that the constructed infrastructure is free of fault of defect, built to the design specification and fit for the intended purpose; and
(d) includes copies of drawings, inspection, monitoring, and testing results required by the corresponding Design and construction / installation requirements reference in Table 1.

Time limited operations phase

Commencement and duration

5. The works approval holder shall not commence time limited operations for an item of infrastructure specified in Table 1 until:

(a) the documents required under condition 2 and condition 4 after the completion of each stage of work have been submitted to the CEO; and
(b) return correspondence is received by the works approval holder from the CEO indicating that the construction and reporting requirements have been met.

6. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 1:

(a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 5 for that item of infrastructure; or

(b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*, if one is granted before the end of the period specified in condition 6(a).

7. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 2and positioned 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.

	Infrastructure and equipment	Operational requirement	Infrastructure location
Stage 1: Operation of Pond Train B			
1.	Facultative and Evaporation Pond Sewage (K130) - Waste accepted through sewer inflow(s) Septage Wastes (K210) - Received at the premises via road transport and discharged directly into the facultative ponds.	(a) The facultative pond must consist of the following lining system: i. a 2.0 mm double sided, textured High Density Polyethylene (HDPE) Geomembrane; and ii. Lining system to achieve a permeability of less than $1x10^{-9}$ metres per second or equivalent. (b) Must maintain a freeboard of no less than 300 mm. (c) The facultative pond must provide a minimum operational storage capacity of 11,850 m^3 for ponds B1 and B2. (d) The evaporation pond must provide a minimum operational storage capacity of 20,475 m^3 for pond C. (e) A minimum vertical separation distance of 1.0 m must be maintained between the base of the surface water pond and the highest groundwater level (including seasonal perched aquifers). *Note 1: Operational capacity assumes that a 300 mm freeboard is maintained within the capacity of the pond.*	As specified in Schedule 2, Figure 2 and Figure 3
Stage 2: Operation of Pond Train A and Pond Train B			

	Infrastructure and equipment	Operational requirement	Infrastructure location
2.	Facultative and Evaporation Pond Sewage (K130) - Waste accepted through sewer inflow(s) Septage Wastes (K210) - Received at the premises via road transport and discharged directly into the facultative ponds.	(a) The facultative pond must consist of the following lining system: i. a 2.0 mm double sided, textured High Density Polyethylene (HDPE) Geomembrane; and ii. Lining system to achieve a permeability of less than $1x10^{-9}$ metres per second or equivalent. (b) Must maintain a freeboard of no less than 300 mm. (c) The facultative pond must provide a minimum operational storage capacity of 10,350 m^3 for ponds A1 and A2. (d) The facultative pond must provide a minimum operational storage capacity[1] of 11,850 m^3 for ponds B1 and B2. (e) The evaporation pond must provide a minimum operational capacity of 20,475 m^3 for pond C. (f) A minimum vertical separation distance of 1.0 m must be maintained between the base of the surface water pond and the highest groundwater level (including seasonal perched aquifers). (g) The integrity of the pond liners must be assessed following any mechanical desludging and any damage noted must be effectively repaired. *Note 1: Operational capacity assumes that a 500 mm freeboard is maintained within the capacity of the pond.*	As specified in Schedule 2, Figure 2 and Figure 3
Stage 3: 6 x 31,000 Litres LLDPE septic tanks to Pond Train A and Pond Train B			
3	Septic tanks Sewage (K130) - Waste accepted through sewer inflow(s)	(a) Ensure the septic tanks are rotational moulded LLDPE with welded baffles to enhance residence time. (b) The septic tanks must operate in parallel in sets of three.	As specified in Schedule 2, Figure 8 and Figure 9

8. During time limited operations, the works approval holder must only accept onto the premises waste of a waste type that does not exceed the corresponding rate at which waste is received, and that meets the corresponding acceptance specification set out in Table 3.

Table 3: Types of waste authorised to be accepted onto the premises.

Waste type	Controlled waste code	Rate at which waste is received	Acceptance specification
Sewage	n/a	1, 000 cubic metres per day	Waste accepted through sewer inflow(s)
Sewage waste	K130		Received at the premises via

from the reticulated sewerage system			road transport and discharged directly into the facultative ponds.
Septage Wastes	K210		

Monitoring during time limited operations

9. The works approval holder must undertake monitoring during time limited operations in accordance with the requirements specified in Table 4.

Table 4: Monitoring.

Monitoring point reference	Parameter	Units	Frequency
Inlet	Volumetric flow	L/s m^3/day	Continuous
Prior to discharge to irrigation area/Treatment plant outlet pipe	Freeboard	metres below crest level	Monthly
	Volumetric flow	L/s m^3/day	Continuous
	pH	pH units	Monthly
	Total Dissolved Solids (TDS)	mg/L	
	Total Suspended Solids		
	Total Nitrogen		
	Total Phosphorus		
	Ammonia Nitrogen		
	Escherichia coli	Cfu/100mL	

10. The works approval holder must record the results of all monitoring activity required by condition 9. Within 30 days of the end of the time limited operations period, the works approval holder shall submit a report to the CEO detailing the assessment of the monitoring records.

Records and reporting (general)

11. The works approval holder must record the following information in relation to complaints received by the works approval 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;

(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 works approval holder to investigate or respond to any complaint.

12. The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:

(a) the works conducted in accordance with condition 1;

(b) complaints received under condition 11.

13. The books specified under condition 12 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 works approval holder for the duration of the works approval; and

(d) be available to be produced to an inspector or the CEO as required.

Definitions

In this works approval, the terms in have the meanings defined.

Table 5: Definitions.

Term	Definition
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 *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
CQA Validation Report	means a final certification report by the CQA Consultant, the minimum requirements of which are set out in the relevant CQA Plan.
department	means the department 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 EP Act.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure has been constructed in accordance with the works approval.
EP Act	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).
Geotechnical Inspection and Testing Authority (GITA)	means a party meeting the requirements set out in AS3798-2007: Guidelines on earthworks for commercial and residential developments.
premises	the premises to which this works approval applies, as specified at the front of this works approval and as shown on the premises map (Figure 1) in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
Suitably Qualified Professional Engineer	means a person who: (a) Holds a Bachelor of Engineering recognised by Engineers

Term	Definition
	Australia, (b) Has a minimum of five years of experience working in a supervisory area of civil, structural or environmental engineering, and (c) Is a third party to the principal.
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
waste	has the same meaning given to that term under the EP Act.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.

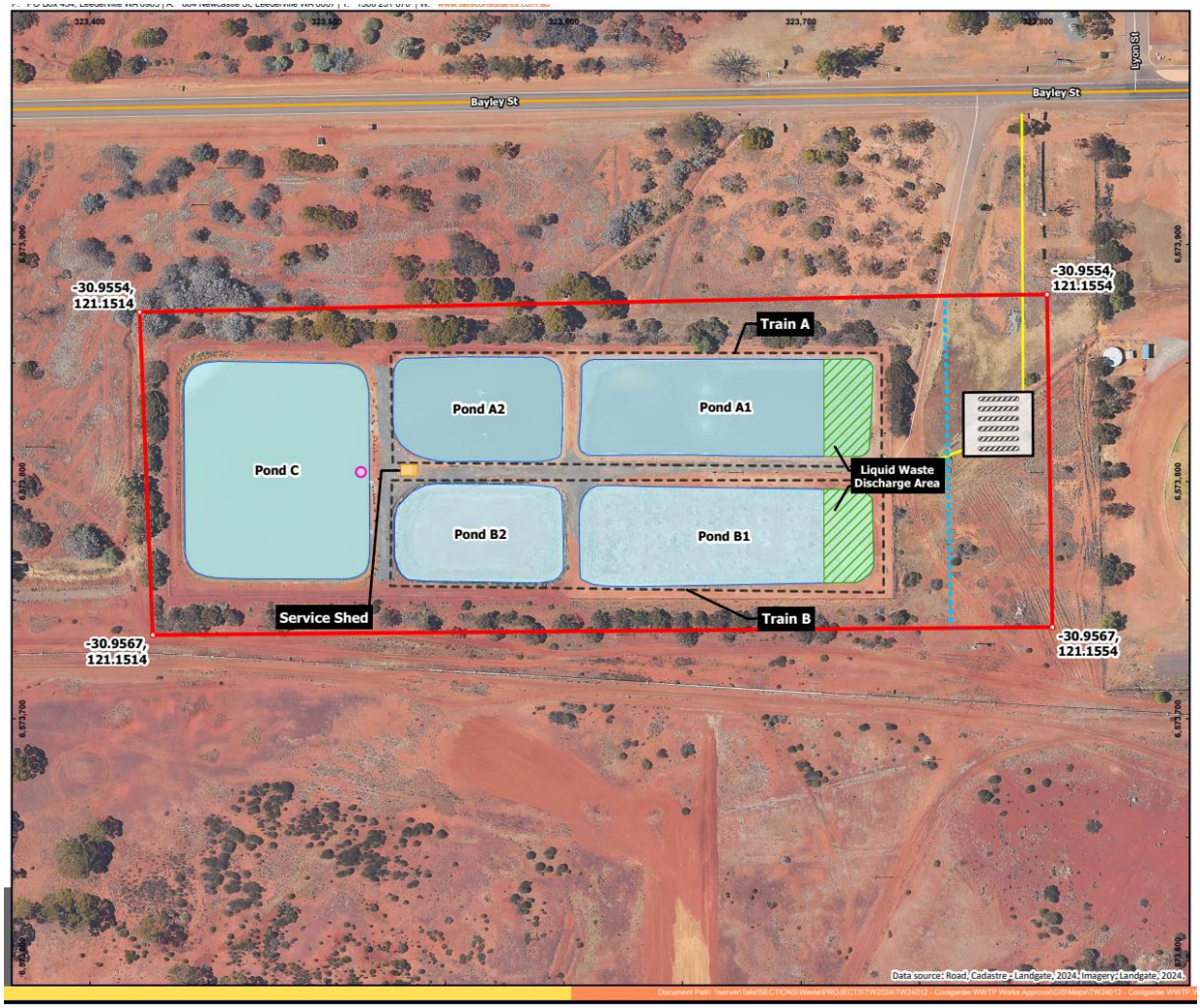
END OF CONDITIONS

Schedule 1: Maps

Premises map

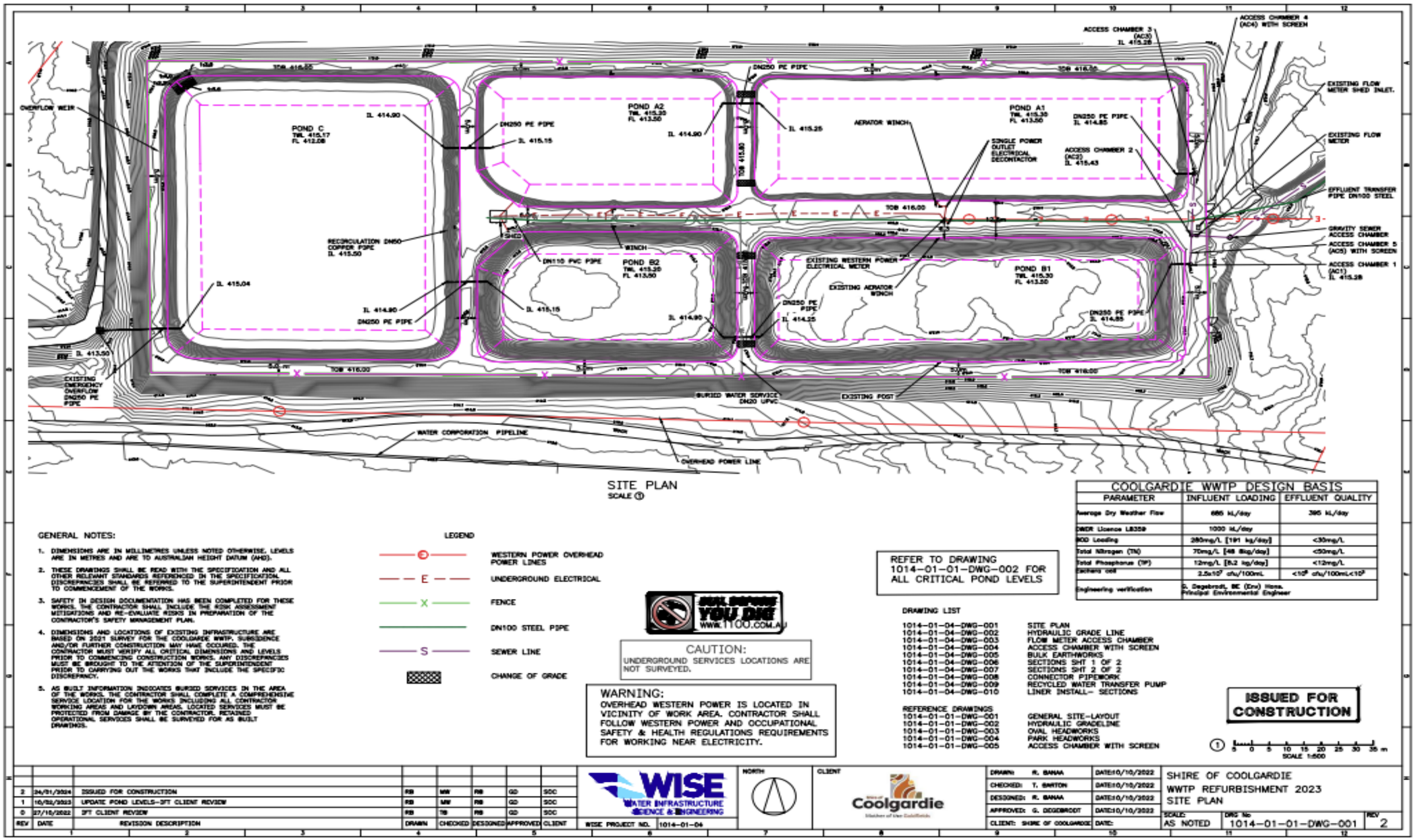
The boundary of the prescribed premises is shown in the map below (Figure 1).

Figure 1: Map of the boundary of the prescribed premises.



Schedule 2 : Drawings

Figure 2: Premises layout.



SITE PLAN
SCALE 1

GENERAL NOTES:

1. DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. LEVELS ARE IN METRES AND ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
2. THESE DRAWINGS SHALL BE READ WITH THE SPECIFICATION AND ALL OTHER RELEVANT STANDARDS REFERENCED IN THE SPECIFICATION. DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF THE WORKS.
3. SAFETY IN DESIGN DOCUMENTATION HAS BEEN COMPLETED FOR THESE WORKS. THE CONTRACTOR SHALL INCLUDE THE RISK ASSESSMENT MITIGATIONS AND RE-EVALUATE RISKS IN PREPARATION OF THE CONTRACTOR'S SAFETY MANAGEMENT PLAN.
4. DIMENSIONS AND LOCATIONS OF EXISTING INFRASTRUCTURE ARE BASED ON 2021 SURVEY FOR THE COOLGARDIE WWTP. SUBSIDENCE AND/OR FURTHER CONSTRUCTION MAY HAVE OCCURRED. THE CONTRACTOR MUST VERIFY ALL CRITICAL DIMENSIONS AND LEVELS PRIOR TO COMMENCING CONSTRUCTION WORKS. ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE SUPERINTENDENT PRIOR TO CARRYING OUT THE WORKS THAT INCLUDE THE SPECIFIC DISCREPANCY.
5. AS BUILT INFORMATION INDICATES BURIED SERVICES IN THE AREA OF THE WORKS. THE CONTRACTOR SHALL COMPLETE A COMPREHENSIVE SERVICE LOCATION FOR THE WORKS INCLUDING ALL CONTRACTOR WORKING AREAS AND LAYDOWN AREAS. LOCATED SERVICES MUST BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. RETAINED OPERATIONAL SERVICES SHALL BE SURVEYED FOR AS BUILT DRAWINGS.

LEGEND

- OHE — WESTERN POWER OVERHEAD POWER LINES
- E — UNDERGROUND ELECTRICAL
- X — FENCE
- DN100 STEEL PIPE
- S — SEWER LINE
- CHANGE OF GRADE

1100 DIAL BEFORE YOU DIG www.1100.com.au

CAUTION:
UNDERGROUND SERVICES LOCATIONS ARE NOT SURVEYED.

WARNING:
OVERHEAD WESTERN POWER IS LOCATED IN VICINITY OF WORK AREA. CONTRACTOR SHALL FOLLOW WESTERN POWER AND OCCUPATIONAL SAFETY & HEALTH REGULATIONS REQUIREMENTS FOR WORKING NEAR ELECTRICITY.

REFER TO DRAWING 1014-01-01-DWG-002 FOR ALL CRITICAL POND LEVELS

COOLGARDIE WWTP DESIGN BASIS

PARAMETER	INFLUENT LOADING	EFFLUENT QUALITY
Average Dry Weather Flow	685 kL/day	395 kL/day
DWER Licence L8359	1000 kL/day	
BOD Loading	280mg/L [191 kg/day]	<30mg/L
Total Nitrogen (TN)	70mg/L [48 8kg/day]	<50mg/L
Total Phosphorus (TP)	12mg/L [8.2 kg/day]	<12mg/L
Enterics cfu	$2.5x10^7$ cfu/100mL	$<10^8$ cfu/100mL$<10^3$
Engineering verification	S. Degebrodt, BE (Env) Hons. Principal Environmental Engineer	

DRAWING LIST

1014-01-04-DWG-001	SITE PLAN
1014-01-04-DWG-002	HYDRAULIC GRADE LINE
1014-01-04-DWG-003	FLOW METER ACCESS CHAMBER
1014-01-04-DWG-004	ACCESS CHAMBER WITH SCREEN
1014-01-04-DWG-005	BULK EARTHWORKS
1014-01-04-DWG-006	SECTIONS SHT 1 OF 2
1014-01-04-DWG-007	SECTIONS SHT 2 OF 2
1014-01-04-DWG-008	CONNECTOR PIPEWORK
1014-01-04-DWG-009	RECYCLED WATER TRANSFER PUMP
1014-01-04-DWG-010	LINER INSTALL- SECTIONS

REFERENCE DRAWINGS

1014-01-01-DWG-001	GENERAL SITE-LAYOUT
1014-01-01-DWG-002	HYDRAULIC GRADELINE
1014-01-01-DWG-003	OVAL HEADWORKS
1014-01-01-DWG-004	PARK HEADWORKS
1014-01-01-DWG-005	ACCESS CHAMBER WITH SCREEN

ISSUED FOR CONSTRUCTION

1 SCALE 1:500

REV	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	DESIGNED	APPROVED	CLIENT
2	24/01/2024	ISSUED FOR CONSTRUCTION	RB	MW	RB	GD	SOC
1	10/02/2023	UPDATE POND LEVELS-3FT CLIENT REVIEW	RB	MW	RB	GD	SOC
0	27/10/2022	3FT CLIENT REVIEW	RB	TB	RB	GD	SOC

WISE WATER INFRASTRUCTURE SCIENCE & ENGINEERING
WISE PROJECT NO. 1014-01-04

NORTH

CLIENT: Shire of Coolgardie

DRAWN:	R. BANAA	DATE:10/10/2022
CHECKED:	T. BARTON	DATE:10/10/2022
DESIGNED:	R. BANAA	DATE:10/10/2022
APPROVED:	G. DEGEBRODT	DATE:10/10/2022
CLIENT:	SHIRE OF COOLGARDIE	DATE:

SHIRE OF COOLGARDIE
WWTP REFURBISHMENT 2023
SITE PLAN

SCALE: AS NOTED | DRG No: 1014-01-01-DWG-001 | REV: 2

Figure 3: Pipeworks.

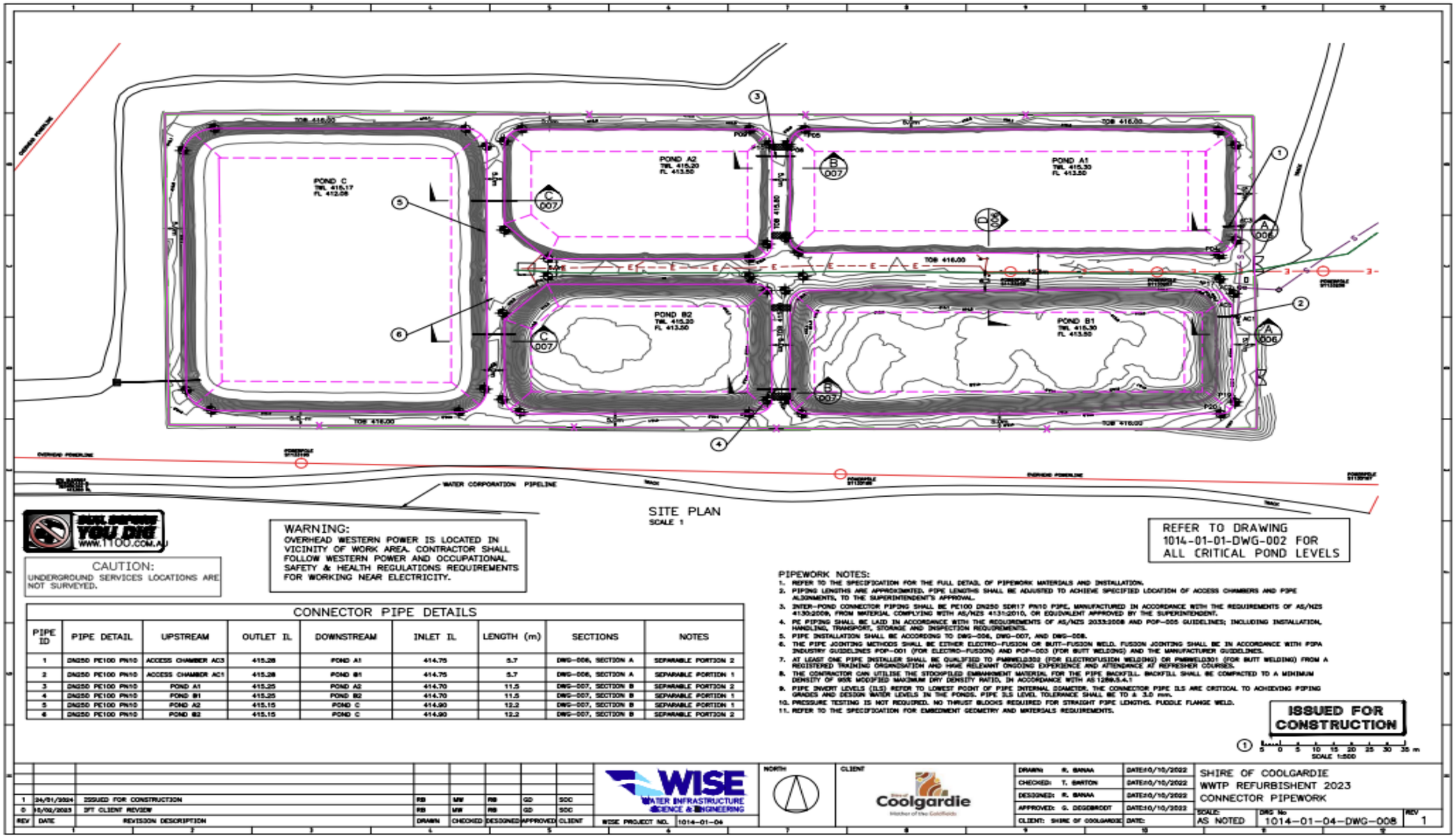


Figure 4: Earthworks.

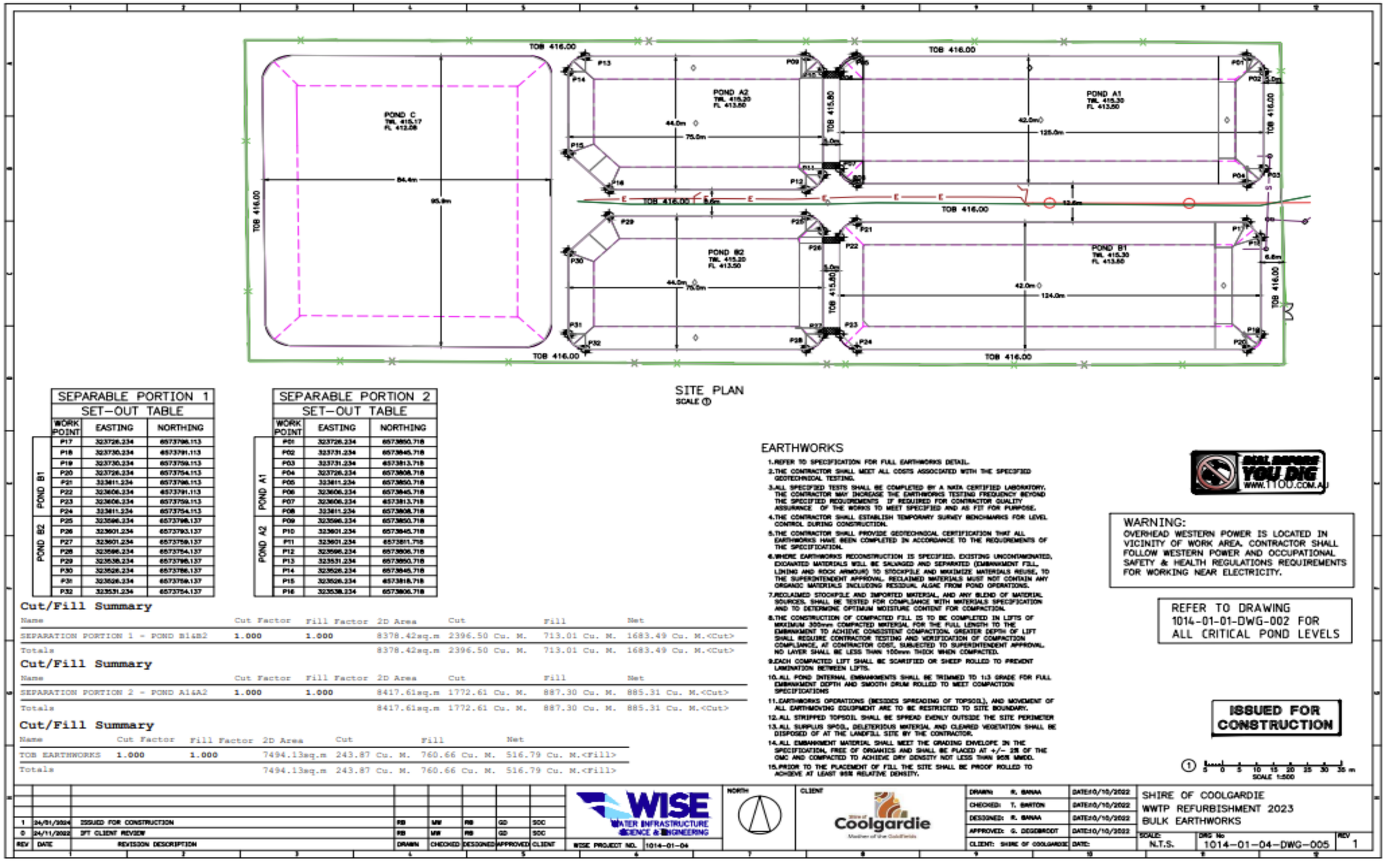


Figure 5: Embankments.

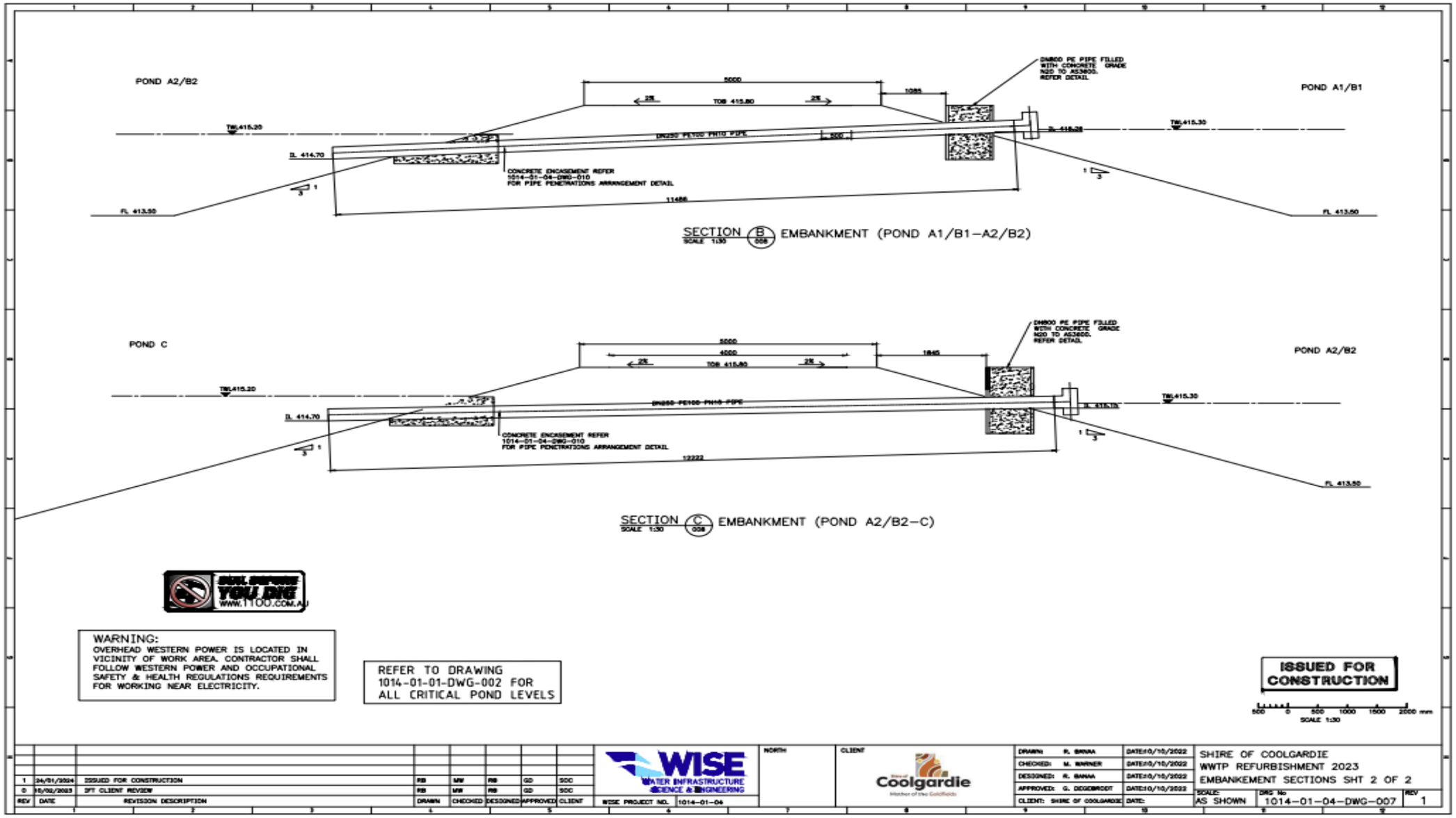
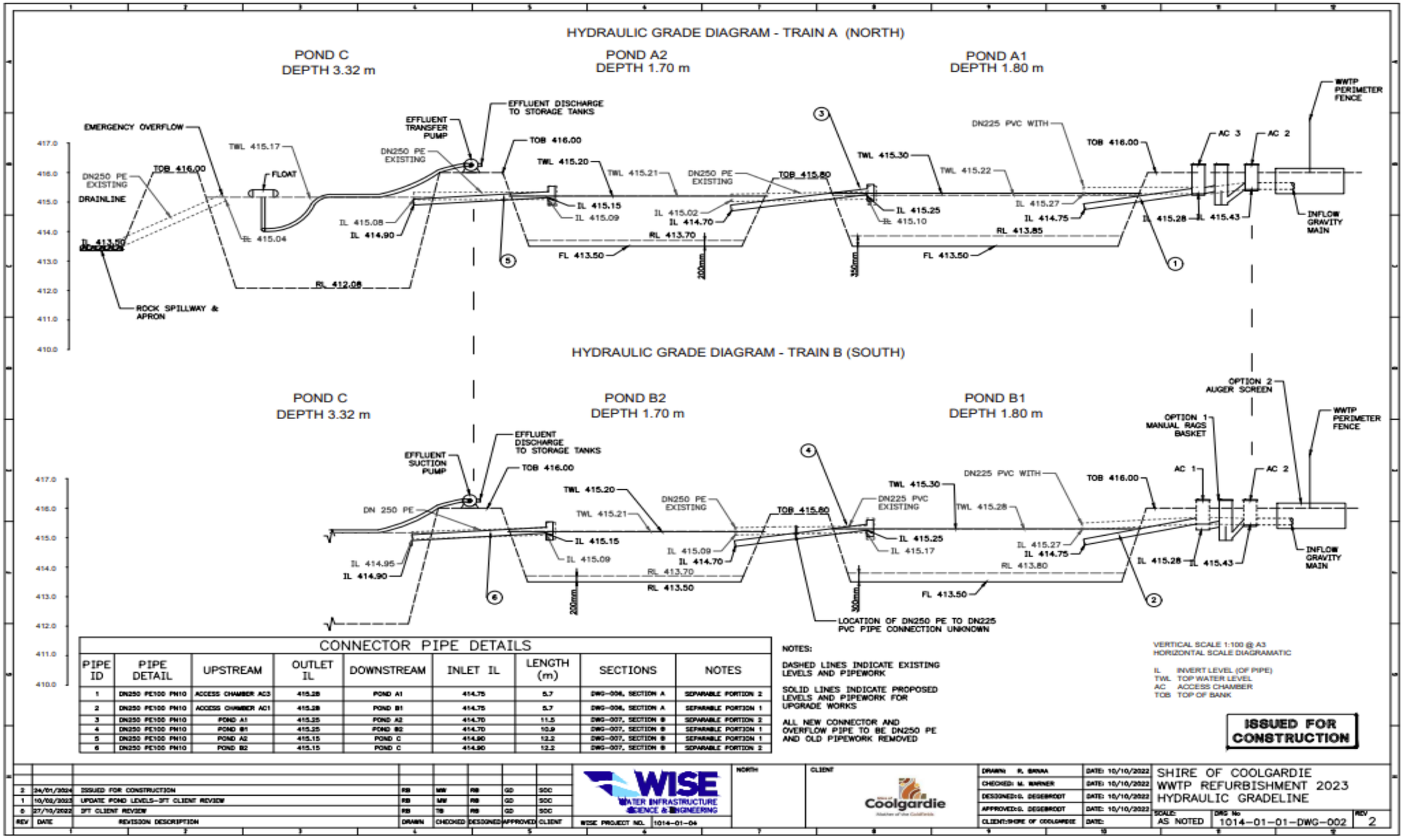


Figure 6: Hydraulic gradeline.



CONNECTOR PIPE DETAILS

PIPE ID	PIPE DETAIL	UPSTREAM	OUTLET IL	DOWNSTREAM	INLET IL	LENGTH (m)	SECTIONS	NOTES
1	DN250 PE100 PN10	ACCESS CHAMBER AC3	415.28	POND A1	414.75	5.7	DWG-006, SECTION A	SEPARABLE PORTION 2
2	DN250 PE100 PN10	ACCESS CHAMBER AC1	415.28	POND B1	414.75	5.7	DWG-006, SECTION A	SEPARABLE PORTION 1
3	DN250 PE100 PN10	POND A1	415.25	POND A2	414.70	11.5	DWG-007, SECTION B	SEPARABLE PORTION 2
4	DN250 PE100 PN10	POND B1	415.25	POND B2	414.70	10.9	DWG-007, SECTION B	SEPARABLE PORTION 1
5	DN250 PE100 PN10	POND A2	415.15	POND C	414.90	12.2	DWG-007, SECTION B	SEPARABLE PORTION 1
6	DN250 PE100 PN10	POND B2	415.15	POND C	414.90	12.2	DWG-007, SECTION B	SEPARABLE PORTION 2

NOTES:

DASHED LINES INDICATE EXISTING LEVELS AND PIPEWORK

SOLID LINES INDICATE PROPOSED LEVELS AND PIPEWORK FOR UPGRADE WORKS

ALL NEW CONNECTOR AND OVERFLOW PIPE TO BE DN250 PE AND OLD PIPEWORK REMOVED

VERTICAL SCALE 1:100 @ A3
HORIZONTAL SCALE DIAGRAMATIC

IL INVERT LEVEL (OF PIPE)
TWL TOP WATER LEVEL
AC ACCESS CHAMBER
TOB TOP OF BANK

ISSUED FOR CONSTRUCTION

REV	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	DESIGNED	APPROVED	CLIENT
2	24/01/2024	ISSUED FOR CONSTRUCTION	RB	MW	RB	GD	SOC
1	10/02/2023	UPDATE POND LEVELS-3FT CLIENT REVIEW	RB	MW	RB	GD	SOC
0	27/10/2022	3FT CLIENT REVIEW	RB	TB	RB	GD	SOC

WISE WATER INFRASTRUCTURE SCIENCE & ENGINEERING
WISE PROJECT NO. 1014-01-04

NORTH

CLIENT: Shire of Coolgardie

DRAWN: R. BANAA	DATE: 10/10/2022	SHIRE OF COOLGARDIE
CHECKED: M. WARNER	DATE: 10/10/2022	WWTP REFURBISHMENT 2023
DESIGNED: G. DEGEBRODT	DATE: 10/10/2022	HYDRAULIC GRADELINE
APPROVED: G. DEGEBRODT	DATE: 10/10/2022	SCALE: AS NOTED · DWG No 1014-01-01-DWG-002 · REV 2
CLIENT: SHIRE OF COOLGARDIE	DATE:	

Figure 7: Liner sytem.

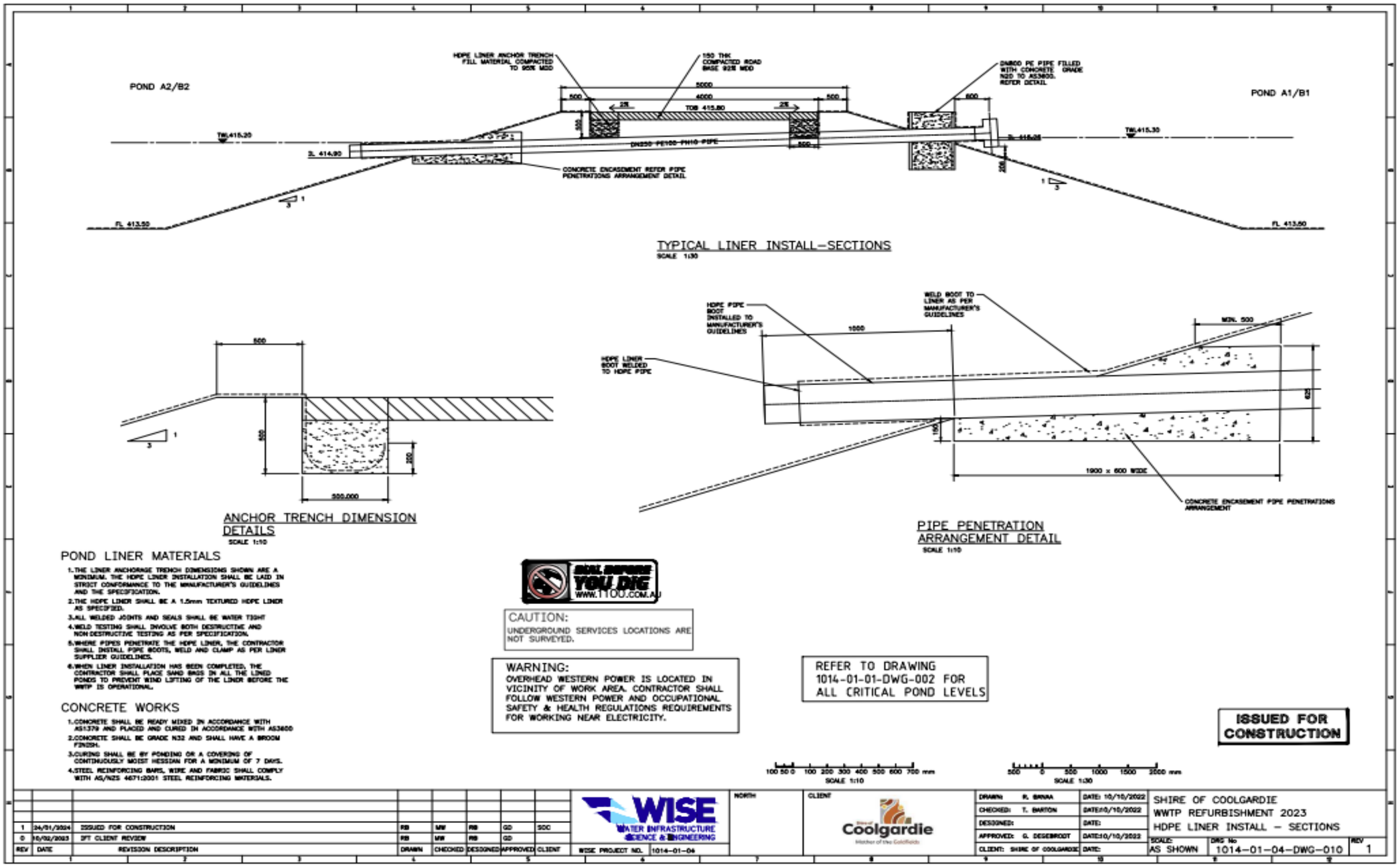


Figure 8: Septic tanks.

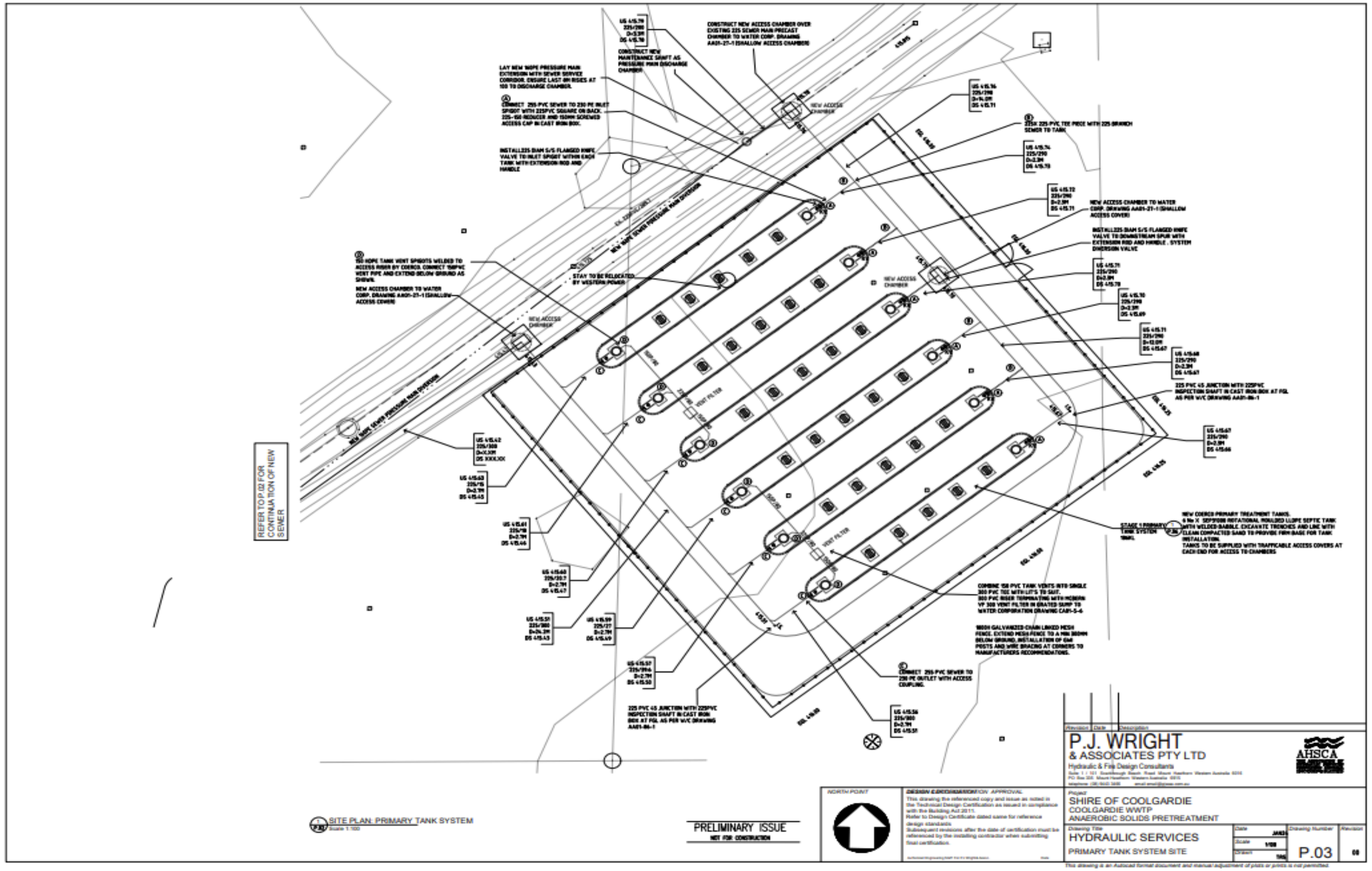


Figure 9: Septic tank elevations.