Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6397/2020/1
Works approval holder	Water Corporation
ACN	003 434 917
Registered business address	629 Newcastle Street LEEDERVILLE WA 6007
DWER file number	DER2020/000170
Duration	04/08/2020 to 03/08/2025
Date of issue	04/08/2020
Date of amendment	02/04/2024
Premises details	Wickham Wastewater Treatment Plant Lot 120 Point Samson – Roebourne Road WICKHAM WA 6720 Legal description - Crown Reserve 37120 Lot 120 on Plan 214456 Certificate of Title Volume LR3062 Folio 671

Prescribed premises category description (Schedule 1, Environmental Protection Regulations 1987)	Assessed design capacity
Category 54: Sewage facility	950 m^3/day

This works approval is granted to the works approval holder, subject to the attached conditions, on 2 April 2024, by:

Grace Heydon

Digitally signed by Grace Heydon
Date: 2024.04.02 16:23:56 +08'00'

GRACE HEYDON
A/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
04/08/2020	W6397/2020/1	Works approval granted.
30/06/2023	W6397/2020/1	Works approval amended to increase the authorised commissioning period.
02/04/2024	W6397/2020/1	Works approval amended to increase the authorised commissioning period.

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 and install the infrastructure and equipment;

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

(c) at the corresponding infrastructure location;

as set out in Table 1.

Table 1: Design and construction / installation requirements.

Infrastructure and equipment		Design and construction / installation requirements	Infrastructure location

1.	DAF treatment area	• Treatment infrastructure must at a minimum be comprised of:
		  ○ 2 x DAF units;
		  ○ 2 x flocculation tanks;
		  ○ 1 x polymer dosing system;
		  ○ 3 x polymer/flocculation chemical storage tanks provided with bunding of 110% capacity;
		  ○ 1 x clear water tank with overflow pipeline back to the existing plant feed sump;
		  ○ 1 x sludge thickening tank with overflow pipeline back to the existing treatment ponds; and
		  ○ Associated above and below ground pipelines and pumps;
		• Must be connected through a SCADA monitoring system with high level alarms provided on all tanks and transfer sumps;
		• Constructed above a 200 mm concrete hardstand with retaining wall to prevent stormwater runoff entering the treatment area;
		• Provision of drains and subsurface pipelines to direct stormwater falling in the treatment area to the storage ponds;
		• Must direct treated effluent to the existing tertiary treatment plant for further treatment; and
		• Tanks and pipelines must be free from leaks and defects.
			At the location shown in Schedule 1: Figure 2 and in the arrangement shown in Schedule 1: Figure 3

Infrastructure and equipment		Design and construction / installation requirements	Infrastructure location
2.	Solids transfer pump station	• Designed to collect and transport thickened sludge from the DAF treatment area and backwash from the existing tertiary treatment plant; • Must direct DAF sludge and UF back wash to the geobag and loading area; • Pump well must be constructed from concrete to a height of at least 1 metre above surface level; • Pump well must be fitted with a high level alarm connected through a SCADA monitoring system; and • Pump well must be connected with an overflow pipeline located at least 1 metre below surface level to direct overflows back to the existing treatment ponds.	At the location shown in Schedule 1: Figure 2
3.	Geobag dewatering area	• Constructed to prevent intrusion of stormwater runoff; • Comprised of a 200 mm thick concrete hardstand with 200 mm high concrete perimeter bunding and a 1:200 fall towards a 200 mm thick concrete drainage apron; and • The concrete drainage apron must be sloped to fall to a drainage pipeline directing flow back to the facultative pond.	At the 'Geobag area' shown in Schedule 1: Figure 2 and in the arrangement shown in Schedule 1: Figure 4
4.	Geobag desludging area	• Constructed to prevent intrusion of stormwater runoff; • Comprised of a 200 mm thick gravel hardstand compacted to achieve a permeability less than 1 x 10^{-9} m/s with 200 mm high concrete perimeter bunding and a 1:200 fall towards a 200 mm thick concrete drainage apron; and • The concrete drainage apron must be sloped to fall to a drainage pipeline directing flow back to the facultative pond.	At the 'Geobag area' shown in Schedule 1: Figure 2 and in the arrangement shown in Schedule 1: Figure 4
5.	Geobag loading and turning area	• Comprised of a compacted gravel hardstand with a 2% fall towards a 6 m wide stormwater spoon drain; and • The spoon drain must prevent stormwater falling on the turning area from entering the Geobag dewatering and desludging areas.	At the 'Geobag area' shown in Schedule 1: Figure 2 and in the arrangement shown in Schedule 1: Figure 4

2. The works approval holder must not depart from the requirements specified in Table 1 except:

(a) where such departure does not increase risks to public health, public amenity or the environment; and

(b) all other conditions in this works approval are still satisfied.

Compliance reporting

3. The works approval holder must within 30 calendar days of an item of infrastructure required by 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 an Environmental Compliance Report on that compliance.

4. The Environmental Compliance Report required by condition 3, must include as a minimum the following:

(a) certification by a suitably qualified civil engineer that the items of infrastructure or component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;

(b) the results of hydrostatic testing using potable water undertaken on tanks, pipelines and other infrastructure used for containment or conveyance;

(c) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1;

(d) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person; and

(e) where a departure from the requirements in condition 1 occurs and is of a type allowed by condition 2, the works approval holder must provide a description of, and explanation for, the departure.

Environmental commissioning phase

Environmental commissioning requirements and emission limits

5. The works approval holder may only commence environmental commissioning of an item of infrastructure listed in condition 6 once the Environmental Compliance Report has been submitted to the CEO for that item of infrastructure in accordance with condition 3 of this works approval.

6. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 2 may only be carried out:

(a) in accordance with the corresponding commissioning requirements; and

(b) for the corresponding authorised commissioning duration

as set out in Table 2.

Table 2: Environmental commissioning requirements.

Infrastructure		Commissioning requirements	Authorised commissioning duration
1.	DAF treatment area	Treatment throughput must not exceed 950 m^3/day.	For a period not exceeding 1 November 2024
2.	Solids transfer pump station	N/A	
3.	Geobag dewatering area	All leachate must be directed to the facultative pond	

Infrastructure		Commissioning requirements	Authorised commissioning duration
4.	Geobag loading and turning area	N/A	

7. During environmental commissioning, the works approval holder must ensure that the emission specified in Table 3, is discharged only from the corresponding discharge point as specified in Table 3, and only at the corresponding discharge point location as specified in Table 3.

Table 3: Authorised discharge points during commissioning.

Emission		Discharge point	Discharge point location
1.	Treated wastewater	DAF treatment discharge point	As shown in Schedule 1 Figure 3

Monitoring during environmental commissioning

8. The works approval holder must monitor emissions during environmental commissioning in accordance with the requirements specified in Table 4.

Table 4: Emissions and discharge monitoring during environmental commissioning.

Discharge point		Monitoring location	Parameter	Units	Frequency	Method
1	DAF treatment discharge point	DAF treated wastewater sampling point as shown in Schedule 1 Figure 3	Volumetric flow rate (cumulative)[1]	m^3/day	Continuous	AS/NZS 5667.10
			pH[1]	-	Monthly[2]	
			Biological Oxygen Demand (5 days)	mg/L		
			Total Suspended Solids			
			E. coli	cfu/100mL		

Note 1: In-field non-NATA accredited analysis permitted.
Note 2: Monthly monitoring is to be undertaken such there are at least 15 days in between the days on which samples are taken in successive months

9. The works approval holder must ensure that all sample analysis during environmental commissioning is undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters specified in Table 4, unless otherwise specified in Table 4.

10. The works approval holder must record the results of all monitoring activity required by condition 8.

Compliance reporting

11. The works approval 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 2.

12. The works approval holder must ensure the Environmental Commissioning Report required by condition 11 of this works approval includes the following:

(a) a summary of the environmental commissioning activities undertaken, including timeframes and amount of sewage processed;

(b) the results of point-source emissions monitoring conducted in accordance with condition 8;

(c) a summary of the environmental performance of each item of infrastructure or equipment as constructed or installed (as applicable), which at a minimum includes records detailing the:

(i) commissioning of the process control system and high level alarms;
(ii) performance validation of wastewater treatment in the DAF treatment area; and
(iii) performance validation of installed stormwater and leachate controls;

(d) a review of the works approval holder's performance and compliance against the conditions of this works approval; and

(e) where they have not been met, measures proposed to meet the manufacturer's design specifications and the conditions of this works approval, together with timeframes for implementing the proposed measures.

Time limited operations phase

Commencement and duration

13. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 1:

(a) where the item of infrastructure is not authorised to undertake environmental commissioning, the Environmental Compliance Report as required by condition 3 has been submitted by the works approval holder for that item of infrastructure; and

(b) where the item of infrastructure is authorised to undertake environmental commissioning under condition 6, the Environmental Commissioning Report for that item of infrastructure as required by condition 11 has been submitted by the works approval holder.

14. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 15:

(a) for a period not exceeding 90 calendar days from the day the works approval holder meets the requirements of condition 13 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* and only where this occurs prior to 90 calendar days from the day the works approval holder meets the requirements of condition 13 for that item of infrastructure.

Time limited operations requirements

15. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment, and located at the corresponding infrastructure location, as specified in Table 5, is maintained and operated in accordance with the corresponding operational requirement set out in Table 5.

Table 5: Infrastructure and equipment requirements during time limited operations.

Infrastructure and equipment		Operational requirements	Infrastructure location
1.	DAF treatment area	• Treatment throughput must not exceed 950 m^3/day; • Stormwater falling within the treatment area must be directed to the storage ponds; • Stormwater drains and associated pipelines must be maintained free from blockages; and • Tanks and pipelines must be maintained free from leaks and defects.	At the location shown in Schedule 1: Figure 3
2.	Solids transfer pump station	• DAF sludge and UF back wash must be directed to the geobag dewatering area. • Potential overflows from the pump well must be directed to the storage ponds. • Sumps and pipelines must be maintained free from leaks and defects.	At the location shown in Schedule 1: Figure 2
3.	Geobag dewatering area	• Leachate generated through dewatering must be directed to the facultative pond. • Stormwater falling within the dewatering area must be directed to the facultative pond. • Hardstands and pipelines must be maintained free from leaks and defects.	At the location shown in Schedule 1: Figure 4
4.	Geobag loading and turning area	• Stormwater falling within the loading and turning area must be directed away from the geobag dewatering and desludging areas. • Stormwater drains and associated pipelines must be maintained free from blockages.	At the location shown in Schedule 1: Figure 4

16. The works approval holder shall immediately recover, or remove and dispose of, spills of environmentally hazardous materials including fuel, hydrocarbons, or treatment chemicals, whether inside or outside an engineered containment system.

17. The works approval holder shall ensure that all material used for the recovery, removal, and/or disposal of environmentally hazardous materials is stored in an impermeable container prior to disposal at an appropriately authorised facility.

18. The works approval holder is not authorised to conduct pond desludging within the infrastructure listed in Table 5 during time-limited operations.

19. During time limited operations, the works approval holder must ensure that the emission specified in Table 6 is discharged only from the corresponding discharge point and only at the corresponding discharge point location, as specified in Table 6.

Table 6: Emission and discharge points during time limited operations.

Emission		Discharge point	Discharge point location
1.	Treated wastewater	DAF treatment discharge point	As shown in Schedule 1, Figure 3

Monitoring during time limited operations

20. The works approval holder must monitor emissions during time limited operations in accordance with the requirements specified in Table 7.

Table 7: Emissions and discharge monitoring during time limited operations.

Discharge point		Monitoring location	Parameter	Units	Frequency	Method
1.	DAF treatment discharge point	DAF treated wastewater sampling point as shown in Schedule 1, Figure 3	Volumetric flow rate (cumulative)[1]	m^3/day	Continuous	AS/NZS 5667.10
			pH[1]	-	Quarterly[2]	
			Biochemical Oxygen Demand	mg/L		
			Total Suspended Solids			
			Total Dissolved Solids			
			Total Nitrogen			
			Ammonium Nitrogen			
			Nitrate + Nitrite Nitrogen			
			Total Phosphorus			
			E. coli	cfu/100mL		

Note 1: In-field non-NATA accredited analysis permitted.
Note 2: Monitoring is to be 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.

21. The works approval holder must ensure that all sample analysis during time limited operations is undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters specified in Table 7, unless otherwise specified in Table 7.

22. The works approval holder must record the results of all monitoring activity required by condition 20.

Compliance reporting

23. The works approval holder must submit to the CEO a report on time limited operations within 60 calendar days of the completion date of time limited operations or 30 calendar days before the expiration date of the works approval, whichever is the sooner.

24. The works approval holder must ensure the report required by condition 23 includes the following:

(a) a summary of the time limited operations, including timeframes and amount of sewage processed;

(b) the results point-source emissions monitoring conducted in accordance with condition 20; and

(c) a review of performance and compliance against the conditions of the works approval and the Environmental Commissioning Report.

Records and reporting (general)

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

26. 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) any maintenance of infrastructure that is performed in the course of complying with condition 15;

(c) monitoring programmes undertaken in accordance with conditions 8 and 20; and

(d) complaints received under condition 25.

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 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 Table 8 have the meanings defined.

Table 8: Definitions.

Term	Definition
AS/NZS 5667.10	Means the Australian Standard *AS/NZS 5667.10 Water Quality – Sampling Guidance on sampling of waste waters.*
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
DAF	Dissolved air flotation
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 commissioning	means the sequence of activities to be undertaken to test equipment integrity and operation, or to determine the environmental performance, of equipment and infrastructure to establish or test a steady state operation and confirm design specifications.
Environmental Commissioning Report	means a report on any commissioning activities that have taken place and a demonstration that they have concluded, with focus on emissions and discharges, waste containment, and other environmental factors.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).
monthly	means a one-month period from the first day of a month until the last day of that same month.
NATA	National Association of Testing Authorities
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.

Term	Definition
prescribed premises	has the same meaning given to that term under the EP Act.
SCADA	Supervisory Control And Data Acquisition
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.
Quarterly period	means a three-month period commencing from 1 July, 1 October, 1 January or 1 April of each year.
UF	Ultra Filtration
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.

Site plans

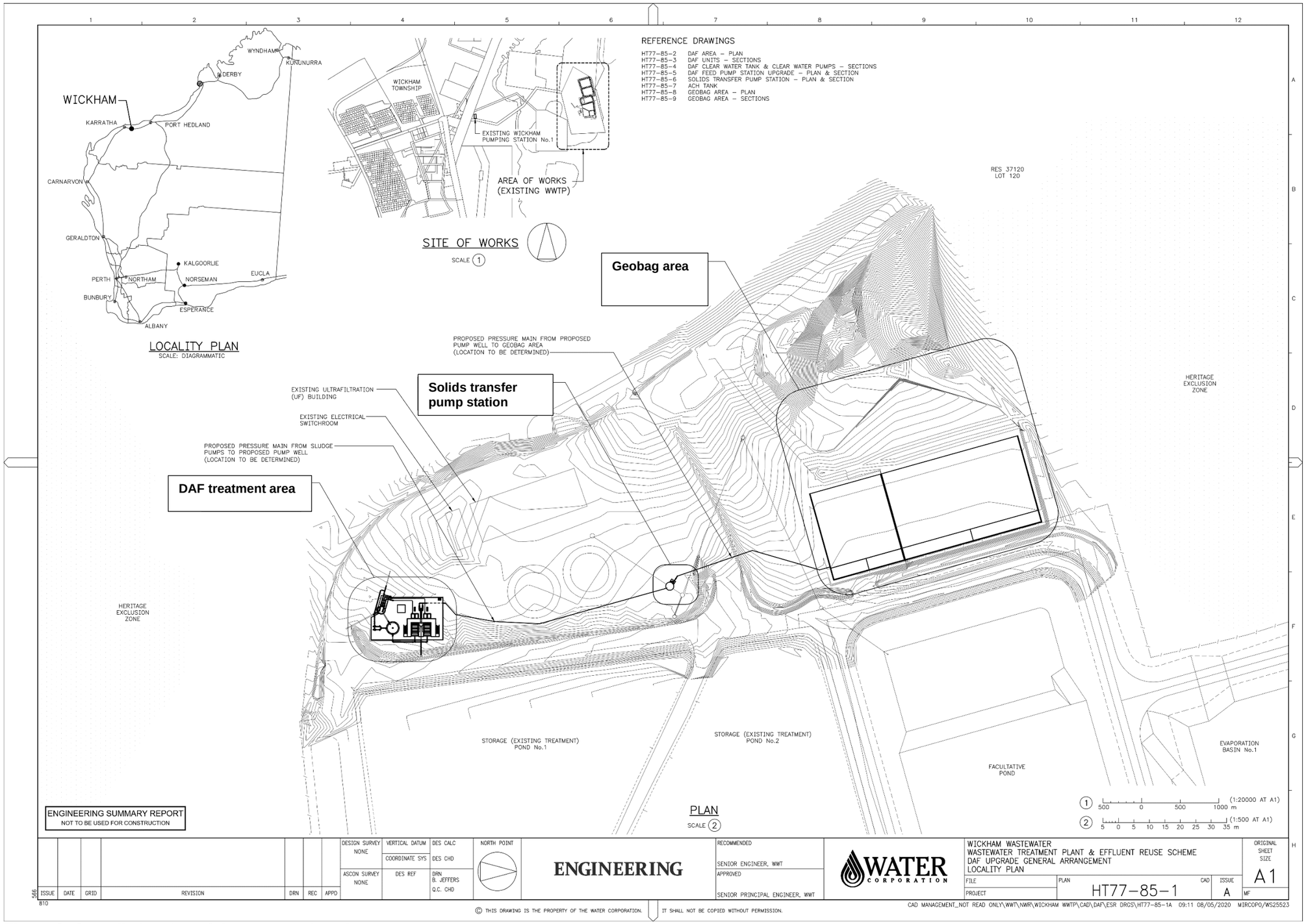

Figure 2: Overall site plan of the proposed works.

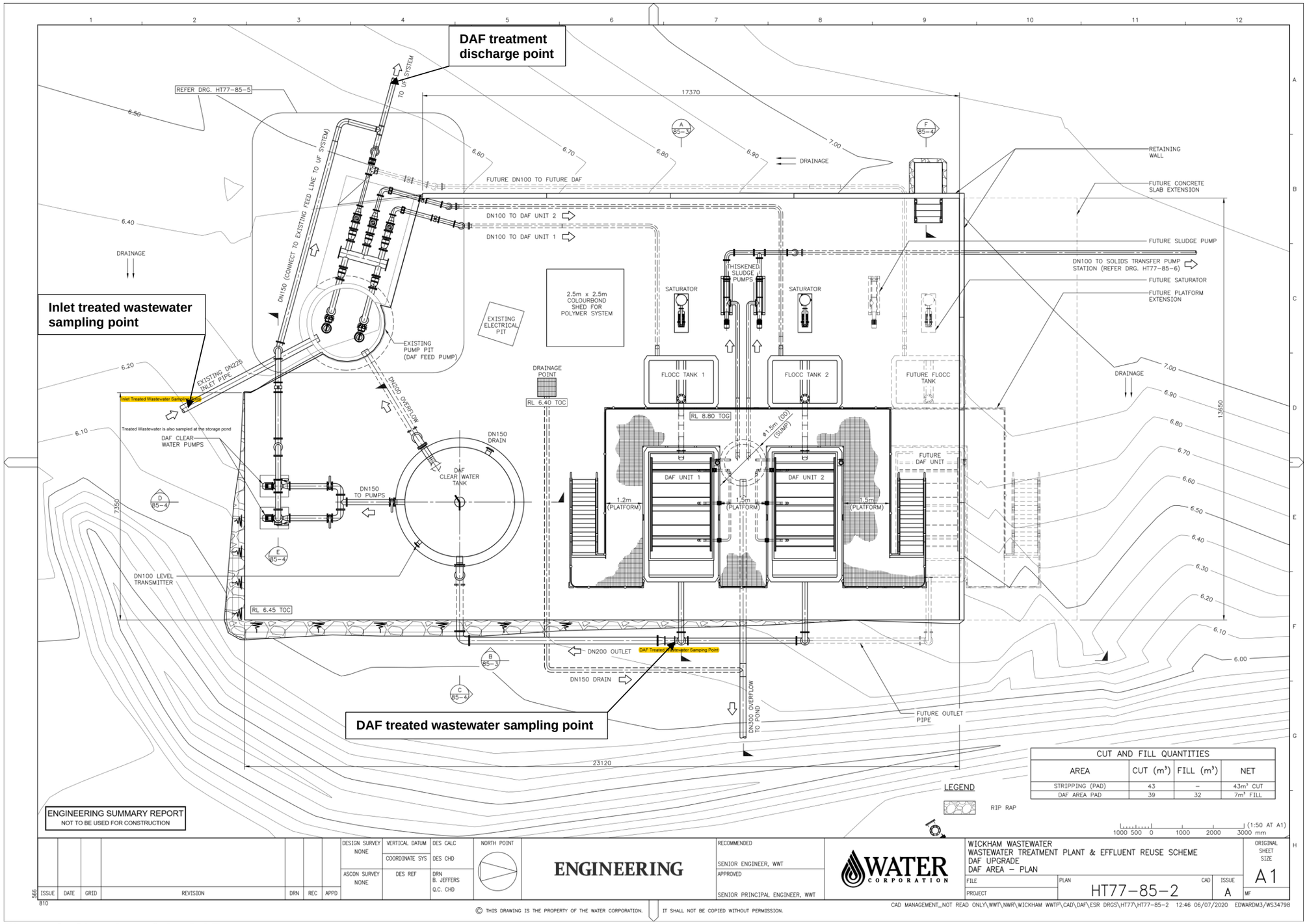

Figure 3: Site plan of the DAF treatment area.

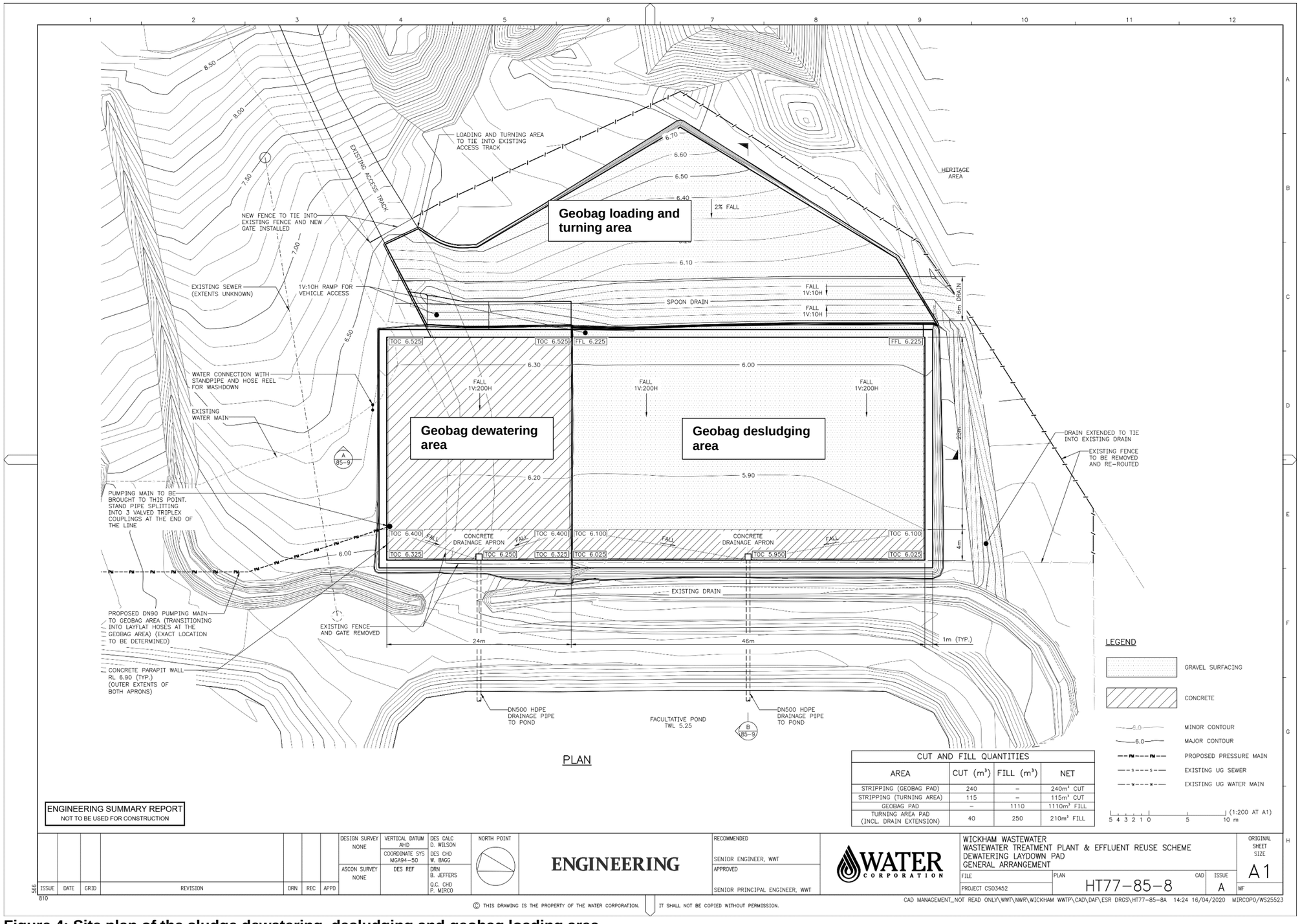

Figure 4: Site plan of the sludge dewatering, desludging and geobag loading area.