Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6696/2022/1
Works approval holder	Inghams Enterprises Pty Ltd
ACN	008 447 345
Registered business address	Level 4/ 1 Julius Avenue North Ryde NSW 2113
DWER file number	DER2022/000279
Duration	16/01/2023 to 15/01/2026
Date of amendment	15/11/2024
Premises details	Inghams Enterprises Pty Ltd 9 Baden Street Legal description - Lot 68 on Diagram 98482 Osborne Park WA 6017 Certificate of Title Volume 2172 Folio 927

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	Assessed production capacity
Category 15: Abattoir: premises on which animals are slaughtered	Not more than 50,000 tonnes per annual period (live weight)

This works approval is granted to the works approval holder, subject to the attached conditions, on 15 November 2024, by:

Caron Goodbourn
Digitally signed by Caron Goodbourn
Date: 2024.11.15 13:41:00 +08'00'

Manager, Process Industries
INDUSTRY REGULATION
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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/or install the infrastructure and/or 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	Design and construction / installation requirements	Infrastructure location
1.	Odour control system	4 x Biofilters with 750m3/h capacity each 1 x KOH activated carbon filter 1 x odour extraction fan 1 x heater 1 x 14m treated air stack 3 x air monitoring ports at inlet, outlet and activated carbon outlet 2 x hydrogen sulfide sensors Ducting to integrate biofilter fan and carbon filter Point source air extraction at	Figure 2 & Figure 3
2.	Wastewater treatment system	<u>Primary Treatment</u> 1 x internally fed drum screen with 60L/s solids loading capacity 1 x standby static bow screen with 60L/s solids loading capacity 1 x solids inlet screen cleaning system 1 x packed sewage pump station with capacity of 60L/s flow rate, including: 1 x set aspirating jet aerators with a mixing flow rate of 150m3/h and an air flow rate of 95L/s <u>Secondary Treatment</u> 1 x free standing skid mounted Dissolved Air Floatation (DAF) Unit with 54m3/h solids loading capacity, including: • Chemical dosing system • Air compressor • 2 x pumps taking filtrate to sewer	Figure 2 & Figure 3

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		• 1 x sludge pump 1 x sludge handling unit, including: • 1 x dewatering screw press with automatic polymer preparation system with a capacity of 140kg/h • 1 x dewater sludge press feed pump • 1 x screw conveyor From membrane bioreactor unit with treatment capacity of 680m3/day • 2 x MBR Blowers • 1 x UV Steriliser	
3.	Brackish water reverse osmosis system	<u>Tertiary Treatment</u> 1 x brackish water reverse osmosis plant with a capacity of 476m^3/day including: • 2 x 5-micron Cartridge Filters • 2 x 1 micron Cartridge Filters • 2 stage Membrane Vessels • Duty chemical dosing systems for membrane scaling mitigation, biocide, chlorination and pH correction, including bunded chemical storage tanks	Figure 2 & Figure 3
4.	Recycled water reuse system	1 x treated water booster pump set including • 3 x 50m3/h water distribution pumps • 1 x water reticulation pumps Reticulation to Cleaning station, scalders, crate wash, cooling towers/condensers and live bird holding shed	Figure 2 & Figure 3
5.	Commercial shed	1 x shed with dimensions of 30m (length) x 15m (width) x 5m (height) Shed roof to be insulated 4 x wall vents (0.6 x 1.5m) must have the ability to be sealed completely to the external outdoor environment 1 x 4.2m (height) x 5.1m (wide) personal access door must have the ability to be sealed completely to the external outdoor environment 4 x personnel access doors must have the ability to be sealed completely to the external outdoor environment	Figure 2 & Figure 3
6.	Dangerous goods store	Located within the Commercial Shed Self bunding containers for the following chemicals: • Caustic • Ferric Chloride, • Anionic polymer, • Cationic polymer, • Coagulant	Figure 2 & Figure 3

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		• Anti-scalant • Biocide • Sodium Hypochlorite, • Acid	

2. The works approval holder must:

(a) construct the critical containment infrastructure;

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

(c) at the corresponding infrastructure location;

as set out in Table 2.

Table 2: Critical containment infrastructure design and construction requirements

	Infrastructure	Design and construction requirements	Infrastructure location
1.		Wastewater treatment system • From packed sewage pump station 1 x 15kL tank • 1 x 3.3kL double skinned dosing tank • 1 x self-bunded corrosion resistant steel and glass balance tank with capacity of 3, 090 kL and diameter of 18.8m and height of 11.3m, including: • 1 x corrosion resistant steel and glass tank bund with capacity to contain 110% of the balance tank and dimensions of 22.2 diameter and height of 9.2m Secondary Treatment • 1 x 15kL sludge storage tank with agitator and • 2 x 15m3 spirotainer sludge storage unit From the membrane bioreactor unit with treatment capacity of 680m3/day • 1 x 30kL Pre-Anoxic Tank with Agitator, dosing pump and 1 x 3300L Double Skinned Chemical Tank • 4 x 50kL Aerobic Tanks with 2 x Submersible Aerators in each tank, connected in series • 2 x 50kL Post Anoxic Tanks, with agitators, connected in series and Duty Chemical Dosing Pump with a 3300L Double Skinned Chemical Dosing Tank • 1 2 x 50kL Treated Effluent Tanks, connected in series	Figure 2 & Figure 3

	Infrastructure	Design and construction requirements	Infrastructure location
2.	Brackish water reverse osmosis system	1 x 75kL MBR Tank with 8 x Membrane Modules 1 x 2400L MBR CIP Tank	Figure 2 & Figure 3
3.	Recycled water reuse system	2 x 500kL treated water tanks	Figure 2 & Figure 3

Compliance reporting

3. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by conditions 1 and 2 being constructed and/or installed:

(a) undertake an audit of their compliance with the requirements of conditions 1 and 2; 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 wastewater civil engineer that the items of infrastructure or component(s) thereof, as specified in condition 1 and 2, have been constructed in accordance with the relevant requirements specified in condition 1 and 2;

(b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1 and 2; and

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

5. The works approval holder must within 30 calendar days of the Critical Containment Infrastructure identified by condition 2 being constructed:

(a) undertake an audit of their compliance with the requirements of condition 2; and

(b) prepare and submit to the CEO a Critical Containment Infrastructure Report on that compliance.

6. The Critical Containment Infrastructure Report required by condition 5(b) must include as a minimum the following:

(a) certification by a suitably qualified wastewater engineer or accredited testing authority that each item of critical containment infrastructure or component thereof, as specified in condition 2, has been built and installed in accordance with the requirements specified in condition 2;

(b) as constructed plans and a detailed site plan showing the location and dimensions for each item of critical containment infrastructure or component thereof, as specified in condition 2;

(c) photographic evidence of the installation of the infrastructure; and

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

Time limited operations phase

Commencement and duration

7. The works approval holder may only commence time limited operations for an item of critical containment infrastructure identified in condition 2:

(a) where the CEO has notified the works approval holder that the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 6 meets the requirements of that condition; or

(b) where at least 30 business days have passed after the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 6 has been submitted to the CEO.

8. The works approval holder may conduct time limited operations for infrastructure specified in conditions 1 and 2 (as applicable):

(a) for a period not extending beyond 15 January 2026; 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 date as specified in condition 8(a).

Noise Validation

9. Following the submission of an Environmental Compliance Report required by condition 3 and an Critical Containment Infrastructure Report required by condition 5, the works approval holder must retain services of a person qualified and experienced in the area of environmental noise assessment and who by their qualifications and experience is eligible to hold a grade of Member of the Australian Acoustical Society to:

(a) investigate the nature and extent of noise emissions from the premises;

(b) assess in accordance with methodology required in the *Environmental Protection (Noise) Regulations 1997*, the compliance of the noise emissions from the premises against the relevant assigned levels for nearby receivers, as specified in those regulations, based on a Representative Assessment Period of 4 hours;

(c) equipment used for the assessment of the noise emissions shall comply with Schedule 4 of the *Environmental Protection (Noise) Regulations 1997*; and

(d) compile and submit to the works approval holder within 60 calendar days of commencing the time limited operations a report.

10. A report prepared pursuant to condition 9(d) is to include:

(a) a description of the methods used for monitoring and/or modelling of noise emissions from the premises;

(b) details and results of the assessment of the noise emissions from the premises against the relevant assigned levels in the *Environmental Protection (Noise) Regulations 1997* undertaken pursuant to condition 9(b); and

(c) details and timeframes for any corrective actions to further control noise emissions in the event that the assessment indicates that compliance with the relevant assigned levels in the *Environmental Protection (Noise) Regulations 1997* has not yet been achieved.

11. The works approval holder must submit to the CEO the prepared report pursuant to condition 9(d) within 14 days of receiving it.

Odour Validation

Monitoring during time limited operations

12. The works approval holder must undertake processing monitoring during time limited operations in accordance with Table 2.

Table 2: Process monitoring during time limited operations

Monitoring point reference	Process description	Parameter	Units[1]	Frequency[2]	Method
Biofilter inlet valves	Collectors feeding to biofilters for treatment of process air	Volumetric Flow rate	m^3/sec	Continuously	CEMS
		Relative Humidity	%		
		Pressure	kPa		
Activated Caron filter	Inflow valve	Pressure	kPa		
	Scrubber outlet value	H_2S	ppm		
		Odour concentration	ou	Once during time limited Operations Quarterly[3,4,5]	AS/NZS 4323.3

Notes to Table 2

Note 1: Volumetric flow rate and odour units are referenced to STP wet.

2: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions inputs or production.

3: Whilst undertaking the monitoring ensure that the activated carbon inlet fan is operating at a capacity of 95% or greater of design capacity.

Compliance reporting

13. The works approval holder must submit to the CEO a report on the time limited operations within 90 calendar days of the completion date of time limited operations.

14. The works approval holder must ensure the report required by condition 13 includes the following:

(a) a summary of the time limited operations, including timeframes and amount of wastewater treated;

(b) a summary of noise monitoring results obtained during time limited operations under conditions 9, 10, 11 and 12.

(c) a summary of the environmental performance of all infrastructure as constructed or installed (as applicable),

(d) a review of performance and compliance against the conditions of the works approval; and

(e) where the manufacturer's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

Records and reporting (general)

15. 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.

16. 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 conditions 1 and 2;

(b) any maintenance of infrastructure that is performed in the course of complying with condition 14;

(c) monitoring programmes undertaken in accordance with conditions 9, 10, 11 and 12; and

(d) complaints received under condition 15.

17. The books specified under condition 16 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 3 have the meanings defined.

Table 3: Definitions

Term	Definition
annual period	a 12 month period commencing from 1 January until 31 December in the same calendar year.
Assigned noise level	as defined in the *Environmental Protection (Noise) Regulations 1997*
AS/NZS 4323.3	means Australian Standard 4323.3 *Stationary source emissions - Determination of odour concentration by dynamic olfactometry*
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
critical containment infrastructure	means the items of infrastructure listed in condition 2.
Critical Containment Infrastructure Report	means a report to satisfy the CEO that works of critical containment infrastructure have been constructed in accordance with the works approval.
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 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).
premises	the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1)

Term	Definition
	in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
Representative Assessment Period	as defined in the *Environmental Protection (Noise) Regulations 1997*
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.
suitably qualified wastewater engineer	means a person who: (a) holds a relevant tertiary academic qualification as an engineer; and; (b) has a minimum of 3 years' experience working in the field waste water process engineering.
Wastewater treatment and recycling plant	This includes all of the infrastructure proposed to be constructed under this works approval:
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 delineated red in the map below (Figure 1). The proposed location of the Wastewater Treatment and Recycling Plant is shown in yellow.

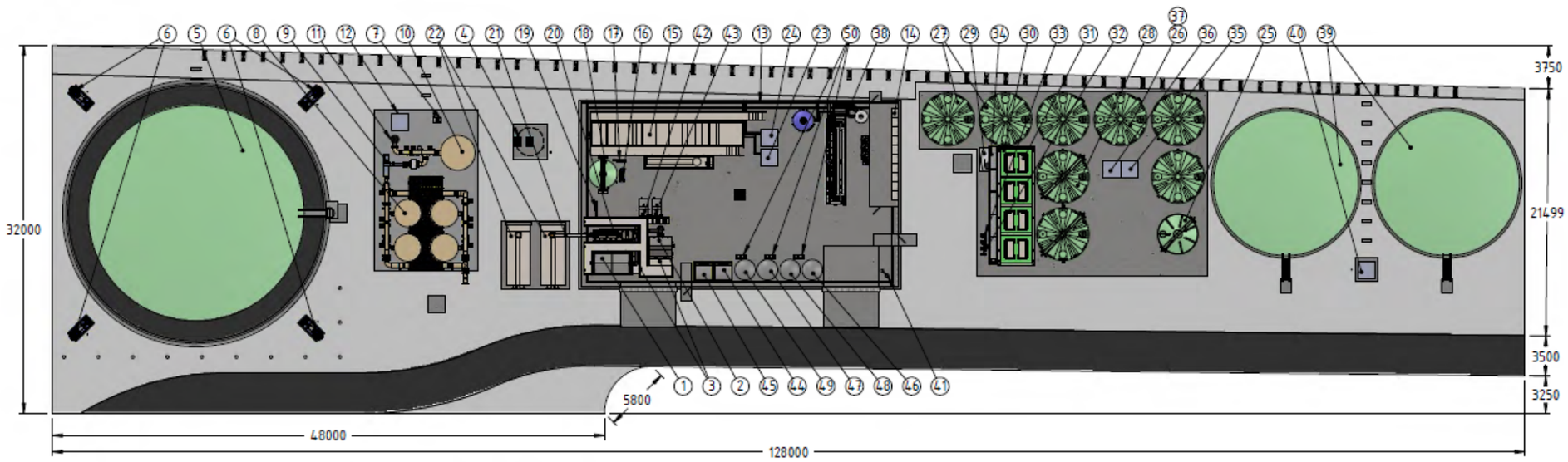
Figures 2 and 3 show the layout of infrastructure within the Wastewater Treatment and Recycling Plant footprint in 2- dimensions and 3- dimensions respectively.

Figure 1: Map of the boundary of the prescribed premises

Item No.	Description	Qty.
1	Internally Fed Drum Screen	1
2	Static Bow Screen (Standby)	1
3	Solids Waste Bin (By Others)	2
4	15kL Underground Pump Station	1
5	3,091kL Bunded Balance Tank	1
6	Balance Tank Mixing Pumps w/ Venturi Aeration	4
7	Balance Tank Blower	1
8	Odour Filtration Biofilter	4
9	Odourous Air Extraction Fan	2
10	Odour Activated Carbon Filter	1
11	14m Stack	1
12	DAF Feed Pump Skid	1
13	Shed	1
14	MCC/Control Panel	1
15	DAF-75 w/ Access Platform & Saturator System	1
16	Air Compressor	1
17	DAF Sludge Pump	1

Item No.	Description	Qty.
18	15kL Sludge Tank & Agitator	1
19	DSP Feed Pump	1
20	Dewatering Screw Press Unit	1
21	Sludge Screw Conveyor	1
22	15m³ Spirotainer Sludge Storage Tank	2
23	DAF Filtrate to Sewer Pump Skid	1
24	MBR Feed Pump Skid	1
25	30kL Pre-Anoxic Tank	1
26	50kL Aerobic Tank	4
27	50kL Post-Anoxic Tank	2
28	50kL Treated Effluent Tank	2
29	2.4kL MBR CIP Tank	1
30	75kL MBR Tank	1
31	MBR Cassette	8
32	MBR Permeate Pump	1
33	MBR Blower	3
34	MBR Access Platform	1

Item No.	Description	Qty.
35	MLR Pump Skid	1
36	RAS/WAS Pump Skid	1
37	Submersible Aerator	6
38	RO System (Refer MAK5915-VA-003)	1
39	450kL Treated Water Tank	2
40	Treated Water Distribution Pump Skid	1
41	Safety Shower & Eyewash Station	1
42	Anionic Polymer Batching System	1
43	Cationic Polymer Batching System	1
44	1000L Anionic Polymer Bunded IBC	1
45	1000L Cationic Polymer Bunded IBC	1
46	3300L Caustic Double-Skinned Dosing Tank	1
47	3300L Ferric Chloride Double-Skinned Dosing Tank	1
48	3300L Sucrose Double-Skinned Dosing Tank	1
49	3300L Coagulant Double-Skinned Dosing Tank	1
50	Double Chemical Dosing Pump Cabinet	3



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Rev	Date	Description	Notes	DRN	CHK	APP
B	10/06/2022	Issued for Client Review	-	RG	NJ	PF
A	08/06/2022	Issued for Internal Review	-	RG	NJ	PF

MAK5915-VJ-101/102/103/104 — Process Flow Diagram (PFD)

All dimensions in mm. Scale: 1:350. Sheet 1 of 2. Commercial in Confidence. Paper Size: A3

Project No.: 5915
Inghams Enterprises
Osborne Park AWWRP
GA Drawing
Plan View

Client Document No.: -
MAK Document No.: MAK5915-VA-001
Rev: B

Figure 2: Overview of Wastewater Treatment and Recycling Plant infrastructure

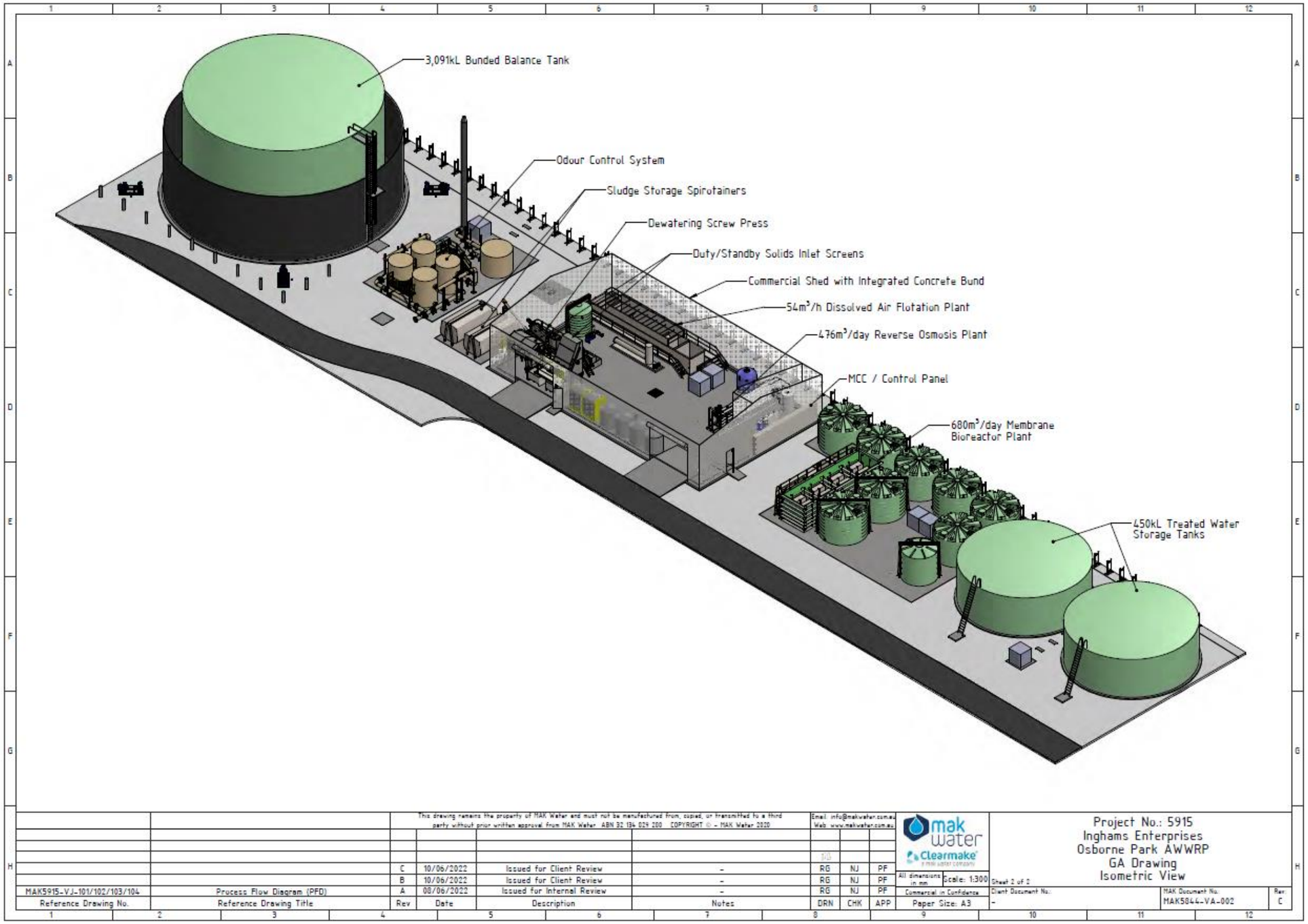

Figure 3: 3-Dimensional overview of Wastewater Treatment and Recycling Plant infrastructure