



Works approval number W6682/2022/1

Works approval holder T C Waste (WA) Pty Ltd

ACN 164 872 806

Registered business address 163 Boomerang Rd Oldbury WA 6121

DWER file number DER2022/000106

Duration 05/09/2022 to 04/09/2025

Date of issue 05/09/2022

Premises details D & M Waste Management
14 Butcher Street
KWINANA BEACH WA 6167
Legal description
Lot 106 on Deposited Plan 43593

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed design capacity
Category 61A: Solid waste facility: premises (other than premises within category 67A) on which solid waste produced on other premises is stored, reprocessed, treated, or discharged onto land.	7,000 tonnes per annual period

This works approval is granted to the works approval holder, subject to the attached conditions, on 5 September 2022, by:

SENIOR INDUSTRY REGULATION OFFICER

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

Works approval history

Date	Reference number	Summary of changes
05/09/22	W6682/2022/1	New Works Approval issued

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; andas set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location
1.	Acoustic wall	<ul style="list-style-type: none">Constructed to a height of 2.2 m and expanding across the southern boundary of the site;Constructed from Colourbond steel fencing (or equivalent) with a thickness of 0.35mmInstall noise absorptive cladding on the acoustic wall with a minimum Rw specification of 24;	Schedule 1, Figure 2
2.	Shed/enclosed building	<ul style="list-style-type: none">Constructed to a size of 1,324 m²Install noise absorptive cladding on the inside of the roof with a minimum Rw specification of 24;Comprise concrete hardstand and concrete bunding.	Schedule 1, Figure 2
3.	Shredder	<ul style="list-style-type: none">Install a Genox J800 Multi-purpose Shredder (or equivalent) fully enclosed system capable of accepting plastic pipes 6 m long with a 760 mm diameter.	Schedule 1, Figure 2
4.	Granulator and Hopper	<ul style="list-style-type: none">Install a GC800T Granulator (or equivalent)Ensure granulator includes sound proofing, blower, cyclone, safety relay, extended hopper, air extraction and bagging station.Capable of producing <12 mm flake material.	Schedule 1, Figure 2

	Infrastructure	Design and construction / installation requirements	Infrastructure location
5.	HDPE washing line	<ul style="list-style-type: none"> Install the following as per Schedule 1, Figure 3: <ol style="list-style-type: none"> Screw washer for initial washing of the flake material; Sink-float tank that separates different types of plastic according to density and removes contaminants; Friction washer for effective removal of any remaining contamination; and Centrifuge dryer for quick drying of the flakes. 	Schedule 1, Figure 2
6.	Pelletising plant	<ul style="list-style-type: none"> As per Schedule 1, Figure 4, install a pelletising plant consisting of: <ol style="list-style-type: none"> Extrusion to apply force to deform the plastic; Degassing to melt, mix and homogenise plastics; Dual-channel filtration that allows for continuous operation if required; and A pelletiser to create the pellets. 	Schedule 1, Figure 2
7.	Storage silos	<ul style="list-style-type: none"> Install 2 storage silos outside the building, both with a height of 11.7m and a diameter of 5m . Install 2 storage silos within the shed, both with a height of 6.51m and a diameter of 3.81m. 	Schedule 1, Figure 2
8.	Water tanks	<ul style="list-style-type: none"> Install a 25,000L wash tank outside the building, designed to store water required for the HDPE washing line. Install a 70,000L holding tank located outside the building, designed to store water required for cooling. 	Schedule 1, Figure 2
9.	Vac Pumps	<ul style="list-style-type: none"> Install 2 conveying vac pumps near the south-eastern corner of the building, connecting the internal and external storage silos to the external holding tank. 	Schedule 1, Figure 2

Compliance reporting

2. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 being constructed and/or installed:
 - undertake an audit of their compliance with the requirements of condition 1; and
 - prepare and submit to the CEO an 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 a registered builder, qualified engineer or equivalent 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) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and
 - (c) 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

4. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 1:
- (a) Where the Environmental Compliance Report as required by condition 2 has been submitted by the works approval holder for that item of infrastructure
5. 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 4 for that item of infrastructure; or
 - (b) until such time as a licence for the infrastructure in condition 1 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 5(a).

Time limited operations – infrastructure and equipment

6. During time limited operations, the works approval holder must ensure that the premises 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 during time limited operations

	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	Acoustic wall	<ul style="list-style-type: none"> Maintained at a height of 2.2 m across the southern boundary of the site Must have noise absorptive cladding with a minimum Rw specification of 24; 	Schedule 1, Figure 2
2.	Shed/ enclosed building	<ul style="list-style-type: none"> Contains noise absorptive cladding on the inside of the roof with a minimum Rw specification of 24; Ensure that building doors remain closed at all times unless vehicles are entering or exiting the building to deliver or remove waste. The integrity of the surface hardstand and bunding (including joining seals) to be maintained free from cracks and defects. Ensure shed doors are only opened as required. 	Schedule 1, Figure 2
3.	Shredder	<ul style="list-style-type: none"> Genox J800 Multi-purpose Shredder (or equivalent) fully enclosed system capable of accepting plastic pipes 6 m long with a 760 mm diameter. 	Schedule 1, Figure 2
4.	Granulator and Hopper	<ul style="list-style-type: none"> GC800T Granulator (or equivalent) Granulator includes sound proofing, blower, cyclone, safety relay, extended hopper, air extraction and bagging station. Capable of producing <12 mm flake material. 	Schedule 1, Figure 2
5.	HDPE washing line	<ul style="list-style-type: none"> Comprises: <ul style="list-style-type: none"> a) Screw washer for initial washing of the flake material; b) Sink-float tank that separates different types of plastic according to density and removes contaminants; c) Friction washer for effective removal of any remaining contamination; and d) Centrifuge dryer for quick drying of the flakes. 	Schedule 1, Figure 2
6.	Pelletising plant	<ul style="list-style-type: none"> Comprises: <ul style="list-style-type: none"> a) Extrusion to apply force to deform the plastic; b) Degassing to melt, mix and homogenise plastics; c) Dual-channel filtration that allows for continuous operation if required; and d) A pelletiser to create the pellets. 	Schedule 1, Figure 2

	Site infrastructure and equipment	Operational requirement	Infrastructure location
7.	Water tanks	<ul style="list-style-type: none"> The water used in the HDPE washing line process must be passed through a filtration system and returned to the tank; The water must be sent from the holding tank to the internal cooling tower then to the extruder via the chilled water drain. 	Schedule 1, Figure 2
8.	Fire and fire washwater management infrastructure	<ul style="list-style-type: none"> Manage and maintain existing bunding in all doorways and concrete service trenches to prevent washwater from existing the shed; Concrete services trenches are to be maintained to ensure the connected filtration system can adequately treat any washwater that may enter the trench. 	Schedule 1, Figure 2

Waste Acceptance

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

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

Waste type	Rate at which waste is received	Acceptance specification
Inert Waste Type 2	3,500 tonnes during time limited operations	Limited to Plastics (HDPE and PET)

8. The works approval holder must ensure that where waste does not meet the waste acceptance criteria set out in 7, it is removed from the premises by the delivery vehicle or, where that is not possible, stored in a quarantined storage area or container and removed to an appropriately authorised facility as soon as practicable.

Waste processing

9. The works approval holder must ensure that the waste types specified in Table 4 are only subjected to the corresponding process, subject to the corresponding process limits and/or specifications.

Table 4: Waste processing

Waste type	Process(es)	Process limits and/or specifications
Inert Waste Type 2	Receipt, handling, storage and processing prior to removal offsite	(a) Must only be stored within the shed; (b) Must be processed through the washing line, shredder, granulator/hopper, and pelletising plant; and (c) Pelletised plastic must only be stored in storage silos.

Waste Acceptance Monitoring

10. The works approval holder must record the total amount of waste accepted onto the premises, for each waste type listed in Table 5, in the corresponding unit, and for each corresponding time period, as set out in Table 5.

Table 5: Waste accepted onto the premises

Waste type	Unit	Time period
Inert Waste Type 2	m ³ and tonnes	During time limited operations

Noise validation

11. Within 30 days of the commencement of time limited operations, the works approval holder must retain the 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 membership of the Australian Acoustical Society or the Australian Association of Acoustical Consultants to:
- (a) investigate the nature and extent of noise emissions from the premises;
 - (b) assess in accordance with the methodology required in the *Environmental Protection (Noise) Regulations 1997*, the compliance of the noise emissions from the primary activities, against the relevant assigned levels specified in those Regulations; and
 - (c) compile and submit to the works approval holder within 30 days of the completion date of time limited operations, a report in accordance with condition 12.
12. A report prepared pursuant to condition 11(c) is to include:
- (a) a description of the methods used for monitoring and/or modelling of noise emissions from the premises;
 - (b) details and the results of the investigation undertaken pursuant to condition 11(a);
 - (c) 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 11(b); and
 - (d) an assessment of noise levels against the most recent previous noise assessment.

13. The works approval holder must submit to the CEO the report prepared pursuant to condition 11(c) within 14 days of receiving it.
14. Where an assessment pursuant to condition 11(b) indicates that noise emissions do not comply with the relevant assigned levels in the *Environmental Protection (Noise) Regulations 1997*, the works approval holder must:
 - (a) within 60 days of receiving an assessment report pursuant to condition 11(c) prepare a plan to ensure the undertaking of the authorised activity will no longer lead to any contravention of the *Environmental Protection (Noise) Regulations 1997*; and
 - (b) provide to the CEO a copy of the plan prepared pursuant to condition 14(a) within 30 days of its preparation.

Compliance reporting

15. The works approval holder must submit to the CEO a report on the time limited operations within 30 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.
16. The works approval holder must ensure the report required by condition 15 includes the following;
 - (a) A summary of the time limited operations, including timeframes and amount of material processed;
 - (b) A summary of any process washwater monitoring results obtained during time limited operations;
 - (c) A review of operational performance and compliance against the conditions of the works approval and the Environmental Compliance Report; and
 - (d) 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)

17. 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.

- 18.** 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 6;
 - (c) complaints received under condition 17.
- 19.** The books specified under condition 18 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 6 have the meanings defined.

Table 6: Definitions

Term	Definition
annual period	a 12 month period commencing from 1 July until 30 June of the immediately following year.
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 WA 6919 info@dwer.wa.gov.au
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.
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	<i>Environmental Protection Act 1986</i> (WA).
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA).
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.
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.

Term	Definition
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).



Figure 2: Map of the boundary of the prescribed premises

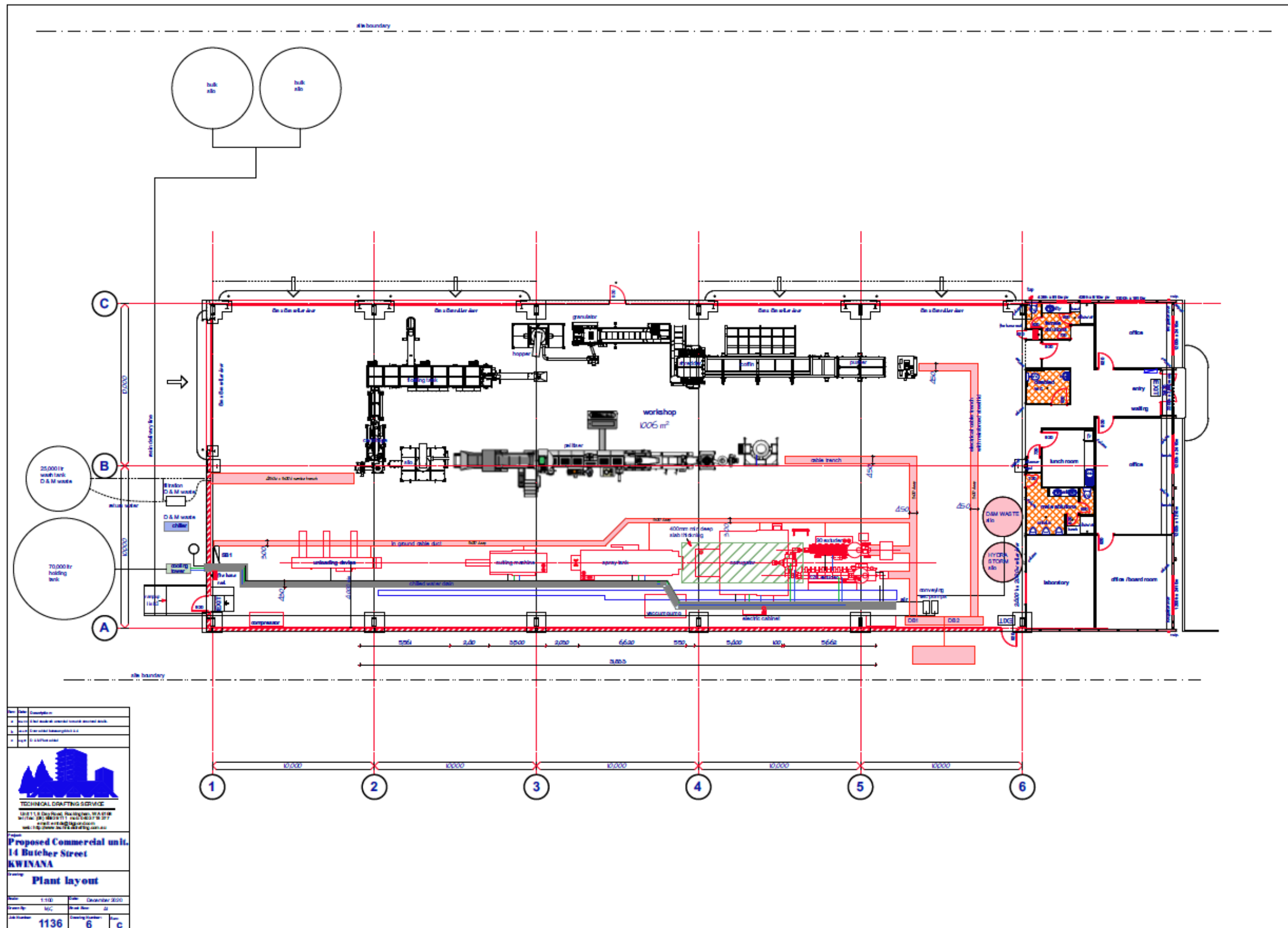


Figure 2: Overview of the prescribed premises

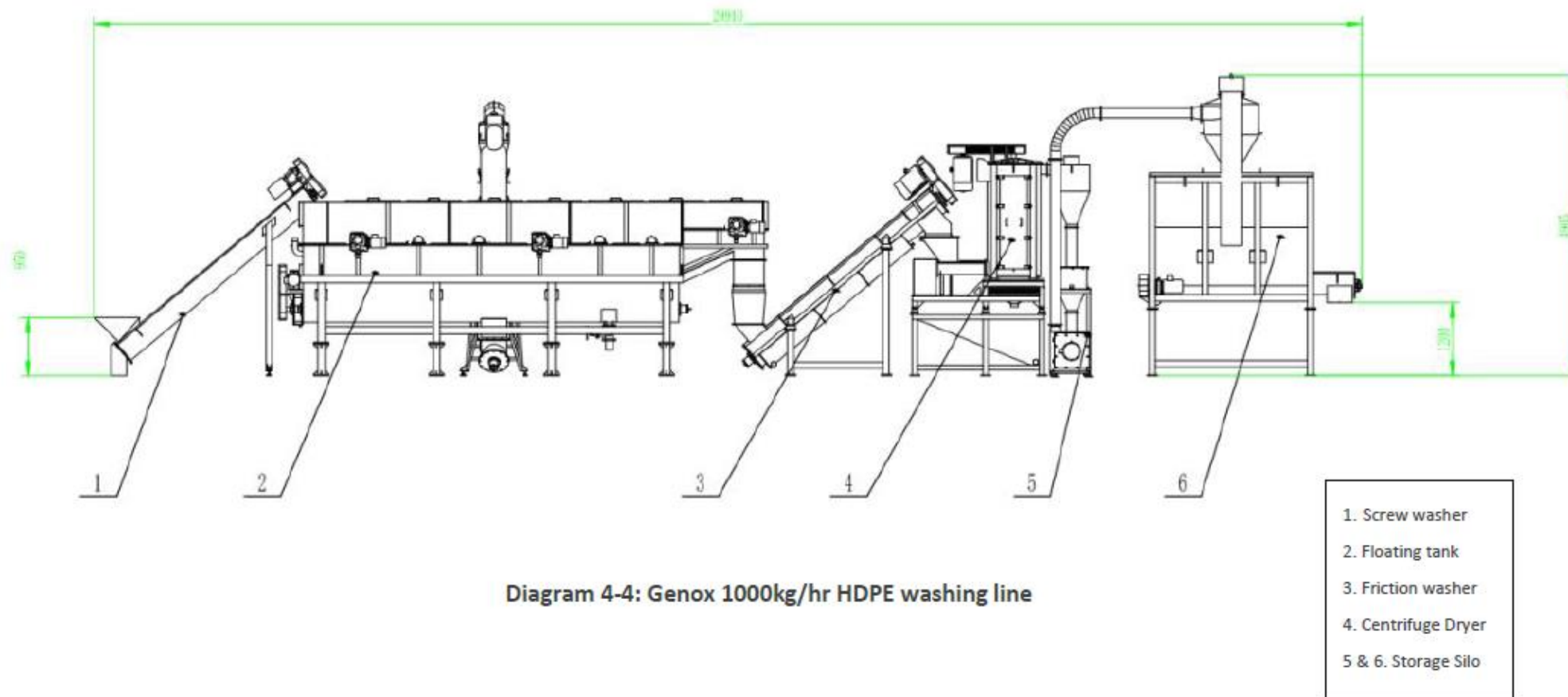


Figure 3: Genox 1000kg/hr HDPE washing line

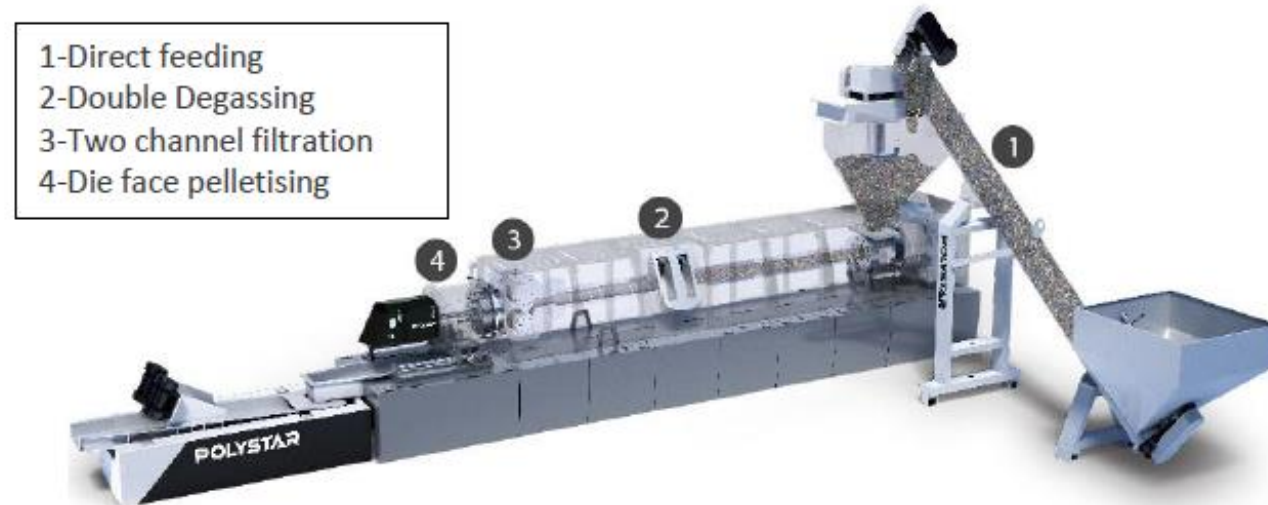


Diagram 4-5: Polystar ReproDirect 150 Plastic Recycling Machine

Image sourced from: https://www.polystarco.com/en/products_i_Hopper_feeding_single_stage.html

Figure 4: Polystar ReproDirect 150 Plastic Recycling Machine