



Application for Works Approval

Part V Division 3 of the *Environmental Protection Act 1986*

Works Approval Number	W6537/2021/1
Applicant	City of Stirling
File number	DER2021/000210
Premises	Recycling Centre Balcatta 238 Balcatta Road, Balcatta BALCATTWA WA 6021 Legal description Lot 45 on Plan 194142 As defined by the premises map attached to the issued works approval
Date of report	17 May 2022
Decision	Works approval granted

**MANAGER WASTE INDUSTRIES
REGULATORY SERVICES**
an officer delegated under section 20 of
the *Environmental Protection Act 1986* (WA)

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1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the premises, being the City of Stirling's Community Recycling Centre and Waste Transfer Station.

As a result of this assessment, works approval W6537/2021/1 has been granted for the construction activities. While operation of the facility has been assessed, only time-limited operations have been approved (for 180 days) under the works approval and the City of Stirling (the applicant) will need to be apply for an amendment to licence L7201/1997/10 for ongoing operations.

The premises relates to the category and assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6537/2021/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in works approval W6537/2021/1.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this decision report, the Department of Water and Environmental Regulation (the department; DWER) has considered and given due regard to its regulatory framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary and overview of premises

On 14 April 2021, the applicant submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

The application is to redevelop the existing Recycling Centre Balcatta, operated under Licence L7201/1997/10 as a Category 62 solid waste depot, to establish a Community Recycling Centre (CRC) and Waste Transfer Station (WTS) Facility.

The WTS will allow for the consolidation of mixed/putrescible materials and other selected waste streams accepted at the premises including the City's waste collection, commercial operators and materials collected at the CRC. The key waste streams that will be accepted at the WTS include Municipal Solid Waste, Food Organics and Garden Organics (FOGO) and Commercial and Industrial waste.

The estimated total volume of materials to be accepted to the WTS is 225,000 tonnes per annum. Of this, 160,000 tonnes will be general putrescible waste from household and commercial and industrial premises, 50,000 tonnes will be FOGO and 15,000 tonnes will be inert waste.

The CRC will be separated into two distinct areas that provide free services and paid and pass services, with an estimated total volume of waste to be accepted of 126,530 tonnes per annum. The following facilities are included within each area:

Free Community Drop Off Area

Container Deposit Scheme (CDS) Facility;

Recycle Shop and Forecourt;

Hazardous Household Waste (HHW) Facility; and

Material Recovery Drop Off.

Paid and Pass Community Drop Off Area: Fridge, Mattress and Tyre Laydown;
 Inert Waste Laydown;
 Green Waste Shed; and
 Mixed Waste Shed.

Figures 1 and 2 provide an overview of the premises.



Figure 1: Existing layout of the Recycling Centre

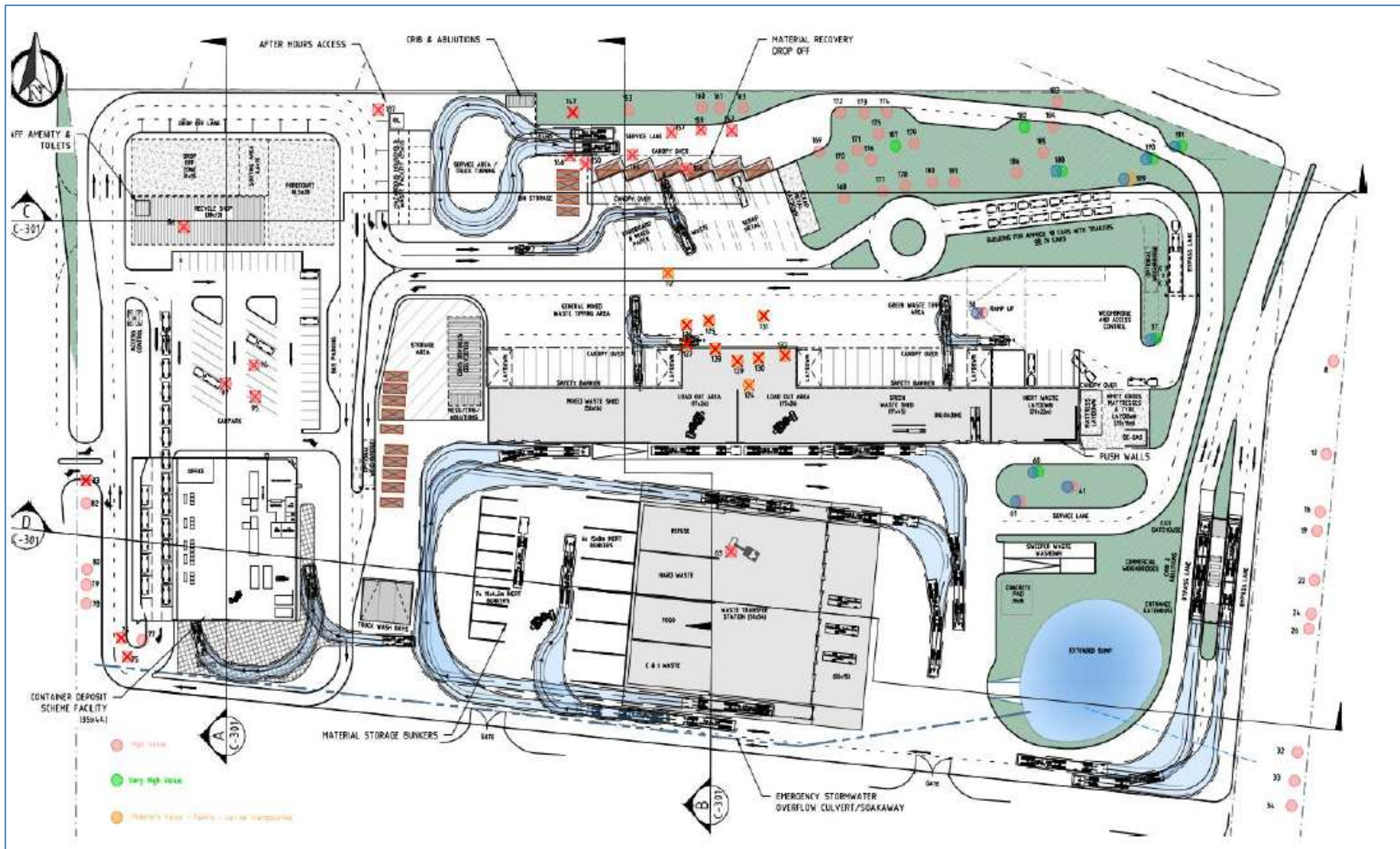


Figure 2: Proposed upgrades and modifications

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2.3 Changes to the original application

Following technical review of the original application by DWER's Air Quality Branch in relation to odour, correspondence was provided to the applicant on 10 August 2021 stating that DWER had some concerns regarding the proposal in its current configuration in that related odour emissions may present an unacceptable risk without further controls or changes to the proposal and requested further information to address these concerns.

This requested information was submitted to DWER on 18 September 2021 and supersedes any contradictory information within the original proposal. Operational controls proposed were clarified including a 'clean floor policy' which will ensure that wastes, other than green waste, will not be held on the tip floor outside of daytime operational hours. Annual air monitoring has also been proposed by the applicant to allow verification of the proposed odour management controls. Where verification indicates that the management controls are not sufficient then additional upgrades to the facility will be considered by the City with any proposed changes subject to further assessment under the EP Act.

2.4 Consideration of Water Quality Protection Note (WQPN) 25

WQPN 25: *Land use compatibility tables for public drinking water source areas* (DWER, August 2021) provides guidance on land uses and activities within public drinking water source areas (PDWSAs) to protect drinking water quality and public health. The department's policy on development in PDWSAs is a presumption against the intensification of land uses. This is because more intense land uses increase the risk that the drinking water will become contaminated.

Although the primary goal is to avoid contamination of PDWSAs, the department also needs to consider land uses, activities and zonings that were present before the PDWSA was declared, or that are required to support population growth, housing, jobs and essential infrastructure or industry. So, there may be times when these risks cannot be avoided. In such cases, the risks need to be minimised or managed. However, wherever possible, DWER has a responsibility to prevent an increase in the base level of risk.

The premises is currently located in the following Priority 3 (P3) PDWSA:

- *Perth Coastal and Gwelup Underground Water Pollution Control Area.*

At the time of accepting the application, the existing land use and proposed upgrades for the premises was considered a compatible land use with a P3 PDWSA (subject to conditions). This was based on the guidance in place at the time and that outlined in the April 2016 version of WQPN 25 (DOW, 2016). This version has since been superseded with a revised version published in August 2021. Based on the updated guidance, waste storage facilities are now considered to be incompatible land use within P3 areas. The department will not generally support the expansion or intensification of an existing, incompatible land use unless the overall water quality contamination risk is reduced.

The department notes that the premises is an existing waste facility which is in an appropriately zoned area from a land use planning perspective and that existing activities can continue to operate. To protect water quality, the expansion of existing *incompatible* land uses or activities should implement appropriate management practices to ensure the overall water quality contamination risk is reduced.

The Delegated Officer has considered the above guidance as part of the risk assessment outlined in Section 3.

2.5 Part IV of the EP Act

The Environmental Protection Authority (EPA) received a referral on 14 April 2021 (CMS number 17986) for the Recycling Centre Balcatta Redevelopment. In its decision on 18 March 2022, the EPA considers that the likely environmental effects of the proposal are not so significant as to warrant formal assessment due to site being already largely cleared, developed and operational, and the relatively small scale of impacts. The EPA is of the view that the potential impacts of the proposal can be adequately managed through the implementation of the proposal in accordance with the referral documentation, and the proponent's management and mitigation measures. The EPA considers that the potential impacts of the proposal can be mitigated by the following statutory decision-making processes:

- Department of Water and Environmental Regulation - Part V of the *Environmental Protection Act 1986* – Division 3 – Prescribed Premises, Works Approval and Licence.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk Assessments* (DWER 2020).

To establish a risk event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction and operation which have been considered in this decision report are detailed in Table 1 below. Table 1 also details the proposed control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Proposed applicant controls

Sources	Emission	Potential pathways	Proposed controls
Construction			
Vehicle movements on unsealed surfaces, construction works, operation of machinery	Dust	Air/windborne pathway	- Mobile water carts to be used as necessary during construction. - No construction works or earthworks will take place during high winds. - Limit vehicle speed to 20km/h on unsealed surfaces.
	Noise		- <i>Environmental Protection (Noise) Regulations 1997</i> apply.
Construction works	Acid sulfate soils	Discharge to land or water, with seepage to groundwater	- If acid sulfate soils are encountered during construction they will be managed in accordance with the DWER's guidelines on Treatment and management of soil and water in acid sulfate landscapes' (June 2015).
Time limited operation			
Acceptance, storage,	Odour	Air/windborne	- A 'clean floor policy' will ensure that wastes are not held on the tip floor outside of daytime operational hours. Green

Sources	Emission	Potential pathways	Proposed controls
handling and removal of wastes, including FOGO		pathway	<p>waste is the only odourous waste that will carry over during the evenings; however, green waste is not shredded/processed/composted.</p> <ul style="list-style-type: none"> - An Odour Impact Assessment (OIA) was undertaken by Environmental & Air Quality Consulting Pty Ltd (EAQ). - A supplementary OFA was undertaken by EAQ (September - October 2021) to assess the baseline odour conditions at the Site. The OFA found that odour intensity and frequency were low with observable odours considered to be 'subtle'. - Current Municipal Solid Waste (MSW) volume is approx. 60,000 tonnes per annum. - The first receivals are at approximately 9:30am and the last receivals to the WTS are at approximately 3:30pm. - Exhaust stacks (> 4 m above ground) will be installed on the roof of the WTS to assist in the control of odour. The forced ventilation will only have an improved effect on odour dispersion. The forced ventilation's primary role is to create negative pressure inside the WTS to contain fugitive odours at ground level. - In the event that effective negative pressure inside the WTS is unable to contain fugitive odours, or stack heights and exit velocities are unable to sufficiently eject the odours into the freestream above the site, the applicant will look at additional controls. - The applicant will also implement annual air monitoring and ongoing assessments to determine if the management measures are sufficient in mitigating odour emissions. - FOGO is <13% of total waste and 22% of WTS Facility waste. - Fully enclosed facility. - Fast acting Hormann insulated high speed doors. - During exceptional events highly odorous FOGO will be removed as soon as possible. - Daily washdown of tipping floor. - Leachate management collection system and removal from site.
Acceptance, storage, handling and removal of wastes	Noise	Air/windborne pathway	<ul style="list-style-type: none"> - Environmental Noise Impact Assessment undertaken by Talis with recommendations to comply with the assigned noise levels. - Speed limits should be limited to 20 km/h. - B-double operations shall be restricted to daytime hours (7am to 7pm). - B-double were included within the noise modelling, but will not commence use until 2030. - B-double trucks certified to ADR 83/00 or European Regulation ECE R51. - Loaders to shut their engines in between loading operations. - The ventilation systems are to be designed with a low noise mechanical system. - Any fans, cowlings and louvres associated with the active

Sources	Emission	Potential pathways	Proposed controls
			<p>and passive ventilation of the WTS Facility are to be orientated in such a way not to affect the nearby receivers.</p> <ul style="list-style-type: none"> - Noise absorptive cladding on the inside wall and ceilings. - An Environmental Noise Management Plan (ENMP) will be developed and implemented. - An acoustic boundary wall will be constructed of 2.2m on the north and east site of the boundary. - An acoustic boundary wall with a height of 3.5m will be constructed at the south boundary. - A short acoustic wall be constructed of 2.2m north of the Storage Area.
Acceptance, storage, handling and removal of wastes	Windblown waste	Air/windborne pathway	<ul style="list-style-type: none"> - Fast acting Hormann insulated high speed doors. - Daily removal of waste (within 24hrs). - All vehicles to be covered entering and existing the WTS Facility. - Litter collections undertaken as required. - Street sweeping around the WTS Facility undertaken on a regular basis.
Acceptance, storage, handling and removal of wastes	Dust	Air/windborne pathway	<ul style="list-style-type: none"> - Limit vehicle speed to 20km/h on unsealed surfaces.
Acceptance, storage, handling and removal of wastes	Smoke emissions from fire	Air/windborne pathway	<ul style="list-style-type: none"> - During fire risk and emergencies, follow procedures in the City's updated Fire Management Plan. - The proposed fire mitigation infrastructure will be constructed in accordance with all relevant Australian Standards and the National Construction Code, Volume 1, Building Code of Australia, Amendment 1 (NCC/BCA). - Every building on site with a floor area greater than 2,000 m² (Waste Transfer Station, Container Deposit Facility, Recycle Shop, Material Drop-Off Facility, and Greens and Mixed Waste Shed) will be considered a large, isolated building in accordance with Clause C2.3 of the NCC/BCA and will be provided with continuous perimeter vehicle access. - Excess water supply can be sourced from the surface water attenuation pond, if necessary. - Installation of fire tank/hoses. - The fire hydrant system will be provided with pumps and tanks (if adequate pressure and flow cannot be facilitated by the town mains) and will incorporate a booster assembly, a ring main, isolation valves that will allow isolation of parts of the system in 25% increments, and external and internal (where appropriate) fire hydrants. - Fire extinguishers on all mobile plant, RCVs and B-Doubles. - WTS to have automatic fire sprinkler system in accordance with Clause E1.10, Specification E1.5 and AS 2118.1-2018. - Fire alarm system which will detect smoke, fire and carbon

Sources	Emission	Potential pathways	Proposed controls
			<p>monoxide level and be linked to building's sprinkler system.</p> <ul style="list-style-type: none"> - WTS to have fire detection and alarm system in accordance with AS 1670.1-2018 consisting of a VESDA air sampling smoke detection system and manual call points (MCP) and interfaced with the site fire detection control and indicating equipment (FDCIE). - System monitoring through Direct Brigade Alarm. - All fire mitigation equipment will be kept in good working order, clearly signed and tested in accordance with the manufacturer's specifications. - Staff adequately inducted and trained to respond to fire and smoke.
Acceptance, storage, handling and removal of wastes	Fire washwaters	Discharge to land or water, with seepage to groundwater	<ul style="list-style-type: none"> - Impermeable concrete-bunded floor slabs within all buildings and under canopies. - Impermeable concrete or asphalt external surfaces such as roads, carparks and hardstand areas bunded by precast concrete kerbs and with falls to collection points. - Impermeable external surfaces having falls away from soft landscaping areas. - Excess fire water is temporarily stored in bunded hardstand areas for safe disposal. - External water from firefighting activities is proposed to be collected and directed to the below ground stormwater storage tanks which form part of the surface water management system. - In the event of a fire, a gate valve between the storage and infiltration tank will be closed to prevent firefighting water from entering the infiltration tank. Firefighting water overflow from the storage tanks will be temporarily stored on sealed roads and car parks.
Acceptance, storage, handling and removal of wastes	Chemical spills, leachate and potentially contaminated stormwater	Discharge to land or surface water, with seepage to groundwater	<ul style="list-style-type: none"> - All vehicle access points will have a small bund that must be driven over to eliminate the ingress of stormwater into the facility. - All stormwater engineering features will be inspected regularly and maintenance works scheduled appropriately. - Undertake routine integrity checks of the tank and conveyance system. - Ensure no clogging of conveyance system. - Waste Transfer Station: Clean stormwater from the external building envelope and external hardstand areas will be directed to the surface water sump to be located adjacent to the building. Leachate generated from within the building will be contained by floor drains and a HDPE pipe network for discharge to a below-ground 1850 DIA x 8710 Long SPEL TANKSTOR or equivalent storage tank with a 600 DIA manhole located outside the building. Leachate will be pumped from the storage tank via 1800 DIA fibreglass submersible pumping station into a vacuum truck (or similar) for off-site disposal. Both the leachate tank and pump station are designed for heavy duty traffic. - Container Deposit Facility: Clean stormwater from the building envelope and surrounding hardstand areas will be directed to below-ground storage and infiltration tanks

Sources	Emission	Potential pathways	Proposed controls
			<p>located to the north and south of the building.</p> <ul style="list-style-type: none"> - Household Hazardous Waste Facility: Clean stormwater from the building envelope and surrounding hardstand areas will be directed to below ground storage and infiltration tanks located to the east of the facility. All household hazardous waste (HHW) material is stored on a proprietary shelving system with trays to catch leaks. The floor to the HHW facility is a bunded and reinforced concrete slab-on-ground with falls to precast concrete containment sumps for the capture, containment and off-site disposal of spills within the building. - Material Drop-off Facility: Clean stormwater from the roof canopy and surrounding hardstand areas will be directed to below-ground storage and infiltration tanks located to the north of the facility. An upstream gross pollutant trap will be installed upstream of the infiltration tank. - Fridge, Mattress, and Tyre Laydown: Clean stormwater from the roof canopy will be directed to below-ground storage and infiltration tanks located to the north of the facility. The floor to the facility is a bunded and reinforced concrete slab-on-ground with falls to precast concrete containment sumps for the capture and off-site disposal of spills under the canopy. - Inert Waste Laydown: The floor to the facility is a bunded and reinforced concrete slab-on-ground with falls to a precast concrete grated gulley with silt trap prior to downstream discharge to the surface water sump. - Green and Mixed Waste Shed: The building is enclosed on 3 sides with a roof canopy extending 5m beyond the open (north) side of the building. Clean stormwater from the building envelope and surrounding hardstand areas will be directed to below ground storage and infiltration tanks located in the roads to the north and south of the facility. The floor to the facility is a bunded and reinforced concrete slab for the containment of spills. The perimeter walls are to connect with the floor to act as a bund to contain spills or wash water.
Acceptance, storage, handling and removal of wastes, including FOGO	Vermin	Direct contact	<ul style="list-style-type: none"> - Perimeter fencing around Site boundary (excluding front). - Frequent removal of material from the facility to minimise the attraction for vermin (within 24hrs). - Fully enclosed facility. - Anti-perch bird deterrent stripping.
Acceptance, storage, handling and removal of wastes	Asbestos	Air/windborne pathway	<ul style="list-style-type: none"> - Inspection of all C&D loads on entry at the weighbridge. - Supervision during offloading at the Inert Waste Laydown. - Management of asbestos in accordance with the City's updated Asbestos Containing Material Management Plan.

3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2020), the Delegated Officer has excluded the applicant's employees, visitors, and contractors from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 and Figure 3 provide a summary of potential human and environmental receptors that

may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental Siting* (DER 2020)). Figure 2 to 3 provides

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Residential subdivision	Directly south of the City's Operations Centre and across Delawney Street, approximately 199m, 214m and 250m from the corners of the proposed WTS.
Environmental receptors	Distance from prescribed activity
Bush Forever Site 134	2.08 km to the north-west
Threatened and/or priority fauna: Nearest recorded threatened priority species is <i>Calyptorhynchus latirostris</i> (Carnaby Cockatoo).	0.195 km to the south
Groundwater	It is estimated that the minimum groundwater contour levels range from 11 mBGL to 14 mBGL.
Threatened and/or priority flora	2.55 km to the north
Aboriginal and other heritage sites	The closest Aboriginal 'Registered Site' is DPLH ID 3442: Lake Gwelup. 2.89 km The closest European Heritage Site is a 'House' recorded through a Local Heritage Survey (0.948 km).
Public drinking water source areas	The site occurs within the Perth Coastal and Gwelup Underground Water Pollution Control Area and is a Priority 3 area.
Rivers, lakes, oceans, and other bodies of surface water: Careniup Swamp Reserve	2 km to the west
Acid sulfate soils: Two areas 'high probability/very low confidence' and 'Low Probability/Very Low Confidence'	530 m to the south

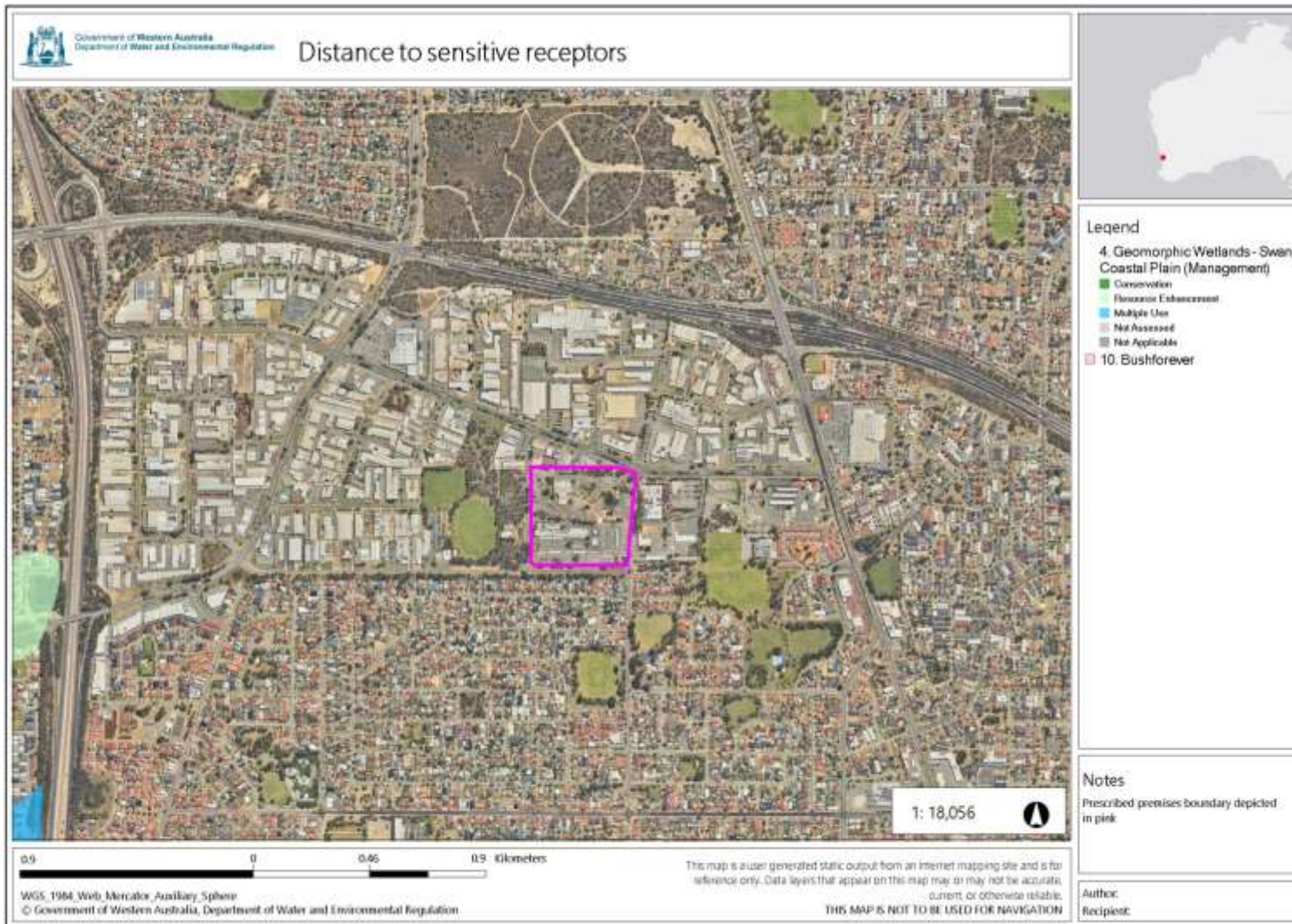


Figure 3: Distance to sensitive receptors

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3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the delegated officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

Works approval W6537/2021/1 that accompanies this decision report authorises construction only. The conditions in the issued works approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required to authorise emissions associated with the operation of FOGO acceptance at the Premises. A risk assessment for the operational phase has been included in this decision report, however licence conditions will not be finalised until the department assesses the licence application.

Table 3: Risk assessment of potential emissions and discharges from the premises during construction, and operation

Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Construction phase								
Vehicle movements on unsealed surfaces, construction works, operation of machinery	Dust	Air/windborne pathway causing impacts to health and amenity	Residences 200 m south	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	Dust is not considered likely to cause any distinguishable impacts to receptors at this distance. The Delegated Officer considers that the provisions of section 49 of the EP Act (<i>Causing pollution and unreasonable emissions</i>) is sufficient to regulate dust emissions from construction activities, where required.
	Noise			Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	Noise is not considered likely to cause any distinguishable impacts to receptors at this distance. The Delegated Officer considers that the provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> are sufficient to regulate noise emissions from construction activities.
Construction works	Acid sulphate soils	Discharge to land or surface water, with potential seepage to groundwater	Groundwater contour levels range from 11 mBGL to 14 mBGL.	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	The Delegated Officer considers that the controls proposed by the applicant are sufficient to mitigate potential acid sulphate soils emissions during construction activities.
Operational phase (including time-limited operations).								
Acceptance, storage, handling and removal of wastes, including FOGO	Odour	Air/windborne pathway causing impacts to health and amenity	Residences 200 m south	Refer to Section 3.1	C = Major L = Possible High Risk	N	Conditions 1, 7 and 8 <u>Conditions 2, 3, 12, 13, 14, 15 and 16</u>	See Section 3.3
Acceptance, storage, handling and removal of wastes	Noise	Air/windborne pathway causing impacts to health and amenity	Residences 200 m south	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Conditions 1 and 7 <u>Conditions 2 and 3</u>	No complaints pertaining to noise emissions from the premises have been received by the department in the last five years.

Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
								<p>Conditions 2 and 3 require the submission of an Environmental Compliance Report to verify the acoustic barrier works have been constructed in accordance with the relevant requirements.</p> <p>The Delegated Officer considers that the proposed controls, including the installation of acoustic barriers, and the provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> are sufficient to regulate noise emissions during time-limited operations.</p> <p>As part of the licence amendment following time-limited operations, noise validation monitoring will be considered to verify the effectiveness of controls to mitigate noise during operation.</p>
Acceptance, storage, handling and removal of wastes	Dust	Air/windborne pathway causing impacts to health and amenity	Residences 200 m south	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 1 <u>Conditions 2, 3 and 7</u>	<p>Dust is not considered likely to cause any distinguishable impacts to receptors at this distance.</p> <p>The Delegated Officer considers that the provisions of section 49 of the EP Act (<i>Causing pollution and unreasonable emissions</i>) is sufficient to regulate dust emissions from operational activities.</p>
Acceptance, storage, handling and removal of wastes	Chemical spills, leachate and potentially contaminated stormwater	Discharge to land or water, with potential seepage to groundwater	Within P3 drinking area and 2km to Careniup Swamp Reserve	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1 <u>Conditions 2, 3 and 7</u>	<p>The Delegated Officer considers the applicant's controls to be sufficient to mitigate leachate emissions during time-limited operations.</p> <p>Conditions 2 and 3 require the submission of an Environmental Compliance Report to verify the works have been constructed in accordance with the relevant requirements.</p>

Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
								Based on the proposed controls and management measures the Delegated Officer considers that the base level of risk posed by the existing operations will not be increased and the proposed upgrades to infrastructure and equipment and management measures are sufficient to reduce the overall water quality contamination risk posed by the premises, noting that it lies in a P3 PDWSA (refer to Table 1 and 2).
Acceptance, storage, handling and removal of wastes	Windblown waste	Air/windborne pathway causing impacts to health and amenity	Residences 200 m south	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 1 <u>Conditions 2, 3 and 7</u>	The Delegated Officer considers the applicant's controls to be sufficient to mitigate windblown waste emissions during time-limited operations.
Acceptance, storage, handling and removal of wastes	Vermin	Direct contact causing health and amenity impacts to Human receptors	Residences 200 m south	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 1 <u>Conditions 2, 3 and 7</u>	The Delegated Officer has determined that the transmission of pathogens by vectors causing low level adverse health effects may only occur in exceptional circumstances.
Acceptance, storage, handling and removal of wastes	Asbestos	Air/windborne pathway causing impacts to health and amenity	Residences 200 m south	Refer to Section 3.1	C = Major L = Rare Medium Risk	Y	Condition 7 <u>Conditions 9 and 10</u>	The acceptance of asbestos containing material is not authorised for acceptance during time-limited operations. The Delegated Officer considers the applicant's controls, in addition to conditions requiring the inspection of all waste upon arrival, to be sufficient to mitigate the risk asbestos fibre emissions during time-limited operations.
Fire at the premises (upset conditions)	Smoke emissions from fire	Air/windborne pathway causing impacts to health and amenity	Residences 200 m south	Refer to Section 3.1	C = Major L = Rare Medium Risk	Y	Condition 1 <u>Conditions 2, 3 and 7</u>	Conditions 2 and 3 require the submission of an Environmental Compliance Report to verify the works have been constructed in accordance with the relevant requirements.

Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
	Firefighting wash waters	Discharge to land or water, with potential seepage to groundwater	Within P3 drinking area and 2km to Careniup Swamp Reserve	Refer to Section 3.1	C = Major L = Rare Medium Risk	Y	Condition 1 <u>Conditions 2, 3 and 7</u>	The Delegated Officer considers the applicant's controls relating to the proposal, in addition to existing firefighting capability at the premises, to be sufficient to mitigate the risk of fire events.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk Assessments* (DWER 2020).

Note 2: Proposed applicant controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

3.3 Detailed risk assessment for odour

Given the potential for odour emissions, the updated application was referred to the department's Air Quality Sciences Branch (AQB), Science and Planning Directorate, for technical advice. This advice is summarised below:

Key findings:

1. The additional information is not sufficient to conclude with a high degree of confidence that the proposed facility expansion will not impact on the nearest residences approximately 200 m to the south of the odour generating activities.
2. A lack of clarity exists regarding the proposed roof-top stack heights, the FOGO bin collection time interval and first and last odorous waste handling times of both current and proposed operations. Clarification of these details may aid the setting of licence conditions.
3. Securing proponent commitment to undertake additional odour control measures as needed in the event that odour impacts are experienced at receptors is recommended to mitigate the uncertainties and the small margins for error that are present in this proposal.

In further detail, the technical advice noted that high levels of uncertainty are typical for predictive odour impact assessments and will not necessarily be reduced by the provision of further details regarding existing and proposed operations. Rather, focus on additional control options and commitment by the proponents to adopt them is recommended to reduce the long-term risk of impacts occurring at receptors if this proposal is accepted.

Further information on the following topics will be beneficial in informing the potential licence amendment following time-limited operations:

- Proposed stack heights: Stacks for the proposal are described as emitting vented air to the "freestream" however the stack parameters such as building heights, stack heights above roof line and exit velocity are not specified.
- Time between FOGO bin collections: The time between bin collections is an important consideration in determining the odour emitting potential of the waste stream.
- Time of the first and last odorous waste handling each day: The time of the first odorous waste receipt has been described as being at approximately 9:30am. However, daily waste acceptance data provided shows putrescible waste trucks arriving with some apparent regularity at times significantly earlier than this time (e.g. as early as 8:26am). Further information regarding the timing of earliest general putrescible and FOGO waste arrivals and their frequencies is suggested.

Although the supplementary field study results are consistent with a conclusion of a low odour footprint for the existing operations, these conclusions cannot be extrapolated to the situation where the odorous waste stream has increased by an assumed factor of approximately three and forced roof-top ventilation is in place.

Due to these factors, inherent uncertainties in predictive odour impact assessments, a lack of experience in WA regarding FOGO waste stream odour emissions potential, and the very small margin for error (receptors at 200 m) it is not possible to predict with certainty if the proposed controls will be sufficient to mitigate the risk of impacts to acceptable levels at the nearest receptors. However, these uncertainties can be validated through regulatory controls within the Works Approval, through the monitoring and reporting of complaints data, requirements for the operator to carry-out odour field assessments post upgrade works (under the time-limited operations phase) and via DWER site investigations and or compliance inspections. As such, additional odour mitigation measures may be implemented in the

subsequent licence following assessment of information obtained through time-limited operations in the Works Approval.

3.3.1 Determination

In addition to the applicant's proposed controls, further regulatory controls have been specified within the works approval to align with the technical advice, notably in relation to the applicant needing to undertake odour field assessments during the time limited operations phase. The need for additional odour field surveys during ongoing operations, under the licence, will be informed from the results of the initial field surveys carried-out in accordance with the works approval.

Based on the above information the Delegated Officer has determined the Consequence of odour emissions from the proposal to be **'Major'** (potential high-level impact to amenity at the local scale) while the Likelihood of the risk event occurring is **'Possible'**. The resulting risk rating is therefore deemed as **'High'**.

Given the uncertainties outlined above, this risk rating will be reviewed following assessment of the initial odour field surveys and considered as part of the licence amendment application which will authorise the ongoing operational aspect of the proposal. Receipt of any feedback from the local community (complaints etc.) will also be considered.

4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website	No comments received	N/A
Applicant was provided with draft documents on 25 March 2022	Refer to Appendix 1	Refer to Appendix 1

5. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. DWER, August 2021, *Water Quality Protection Note 25: Land use compatibility tables for public drinking water source areas*, Perth Western Australia.
5. Department of Water (DOW), April 2016, *Water Quality Protection Note 25: Land use compatibility tables for public drinking water source areas*, Perth Western Australia. (Superseded)

Appendix 1: Summary of applicant’s comments on risk assessment and draft conditions

Condition	Summary of applicant’s comment	Department’s response
Duration of works approval	It is requested that the duration of works approval be extended from three years to five years from date of issue to ensure that any potential delays with the delivery of the project will not present administration burden for all parties to revise the Works Approval at a later stage. This is particularly relevant considering that the project is proposed to be delivered inphases while remaining operational through the construction work.	The Delegated Officer considers the request appropriate and has extended the duration of the works approval.
Condition 1, Table 1	Removal of all references to ‘Hormann’ brand as the doors will be based on quality rather than brand.	The Delegated Officer considers the request appropriate and has removed reference to the ‘Hormann’ brand.
Departure requirement	<p>In addition, we also request that a departure mechanism is included within the Works Approval. We are requesting wording used in other, similar works approvals, such as:</p> <p>“The works approval must not depart from the requirements specified within Table X except:</p> <ul style="list-style-type: none"> • Where such departure is minor in nature and does not materially change or affect the infrastructure; • Where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment; and • All other Conditions in this Works Approval are still satisfied.” <p>As outlined within the EAMP, the Project is only at the Conceptual Design stage and there may be minor changes to the design as the works progresses. Therefore, a mechanism is needed to ensure that that these minor design change can be dealt with through the Works Approvals to ensure that this will not cause an unnecessary burden for the City and the DWER to resolve. This is particularly relevant as there may be late tweaks to the design that evolve during the design and construction stage of the project.</p>	<p>The Delegated Officer considers the request appropriate in part. It is considered that the departure exceptions are not appropriate without assessment by the department.</p> <p>In general, where material departures are known in advance of the construction phase then these changes should be facilitated via amending the works approval. This provides an opportunity for the City to justify the proposed changes with respect to the assessed risk profile and allows the department time to assess such changes.</p> <p>The department does however recognise that changes may need to be implemented within the construction phase and as such a condition will be included in the works approval that will require any departures from the specifications of Table 1 to be declared and described within the Environmental Compliance Report. This will allow the department to assess the departures and determine their appropriateness and relevance to the risk profile previously assessed.</p>

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY				
Application type				
Works approval	<input checked="" type="checkbox"/>			
Licence	<input type="checkbox"/>	Relevant works approval number:		None <input type="checkbox"/>
		Has the works approval been complied with?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Date Report received:		
Renewal	<input type="checkbox"/>	Current licence number:		
Amendment to works approval	<input type="checkbox"/>	Current works approval number:		
Amendment to licence	<input type="checkbox"/>	Current licence number:		
		Relevant works approval number:	N/A	<input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:	None	<input type="checkbox"/>
Date application received	14 April 2021			
Applicant and Premises details				
Applicant name/s (full legal name/s)	City of Stirling			
Premises name	Recycling Centre Balcatta			
Premises location	Lot 45 on Plan 194142 The project occurs on the northern portion of the Lot occupying approximately 6 hectares within the 10.8ha. 238 Balcatta Road, Balcatta			
Local Government Authority	City of Stirling			
Application documents				
HPCM file reference number:	DER2021/000210			
Key application documents (additional to application form):	Environmental Assessment and Management Plan – Talis Consultants			
Scope of application/assessment				

<p>Summary of proposed activities or changes to existing operations.</p>	<p>Works approval:</p> <p>The City of Stirling propose to redevelop the existing Recycling Centre Balcatta (L7201/1997/10) (RCB) to establish a best practice Community Recycling Centre (CRC) and Waste Transfer Station (WTS) Facility. The project will improve the overall layout, operational efficiency, safety and usability of the site along with providing increased capacity and services to manage waste for the City and Perth Metropolitan Area in the long term.</p> <p>The community will be able to drop off a range of waste materials with ease and safety. The estimated total volume of waste to be accepted at the CRC is 126,530 tonnes per annum (tpa). The CRC will be separated into free and paid</p> <p>(and pass) waste management services. The following facilities are included within each area:</p> <p>Free Community Drop Off Area:</p> <ul style="list-style-type: none"> • Container Deposit Scheme (CDS) Facility; • Recycle Shop and Forecourt; • Hazardous Household Waste (HHW) Facility; and • Material Recovery Drop Off. <p>Paid and Pass Community Drop Off Area:</p> <ul style="list-style-type: none"> • Fridge, Mattress and Tyre Laydown; • Inert Waste Laydown; • Green Waste Shed; and • Mixed Waste Shed. <p>Waste materials will then be loaded into a semi-trailer or B-double truck and transported to a suitable facility for recycling, treatment, or disposal. The estimated total volume of materials to be accepted is 225,000 tonnes per annum.</p> <p>No time limited operations were proposed.</p>
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Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 62: Solid waste depot	225,000tpa (Existing Licence) (WTS Facility) ~126,530tpa (CRC) Total: approx. 350,000 tpa	

Legislative context and other approvals

<p>Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Referral decision No:</p> <p>Managed under Part V <input type="checkbox"/></p> <p>Assessed under Part IV <input type="checkbox"/></p> <p>Although not deemed significant, the City is referring the project to avoid any potential time delays.</p>
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Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	The redevelopment will require Development Approval from the City of Stirling. The concept design for the redevelopment has only recently been completed and agreed with all internal City of Stirling stakeholders. The final concept design is needed in order to apply for Development Approval. This shall be submitted along with relevant documents to the City of Stirling by the end-April 2021. However, the Development Services team have been one of the key stakeholders during the concept design consultation process and support the redevelopment in line with the local planning guidelines.
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CPS No: Removal of approximately 18 trees within the historically and predominantly cleared site is required for the purpose of constructing buildings for the project. The removal of these individual trees is less than five hectares and is therefore subject to clearing exemption <i>Regulation 5, Item 1 Clearing to construct a building.</i>
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: Licence/permit No: Licence / permit not required.

<p>Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A Type: Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Regional office:</p>
<p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Name: The site occurs within the Perth Coastal and Gwelup Underground Water Pollution Control Area and is a Priority Priority: P3 Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Part of the proposed activities are compatible and part of considered non-compatible. The premises is an existing waste transfer station and community drop-off area. As per WQPN 25, the department will not support expansion or intensification of an existing, incompatible land use unless the overall water quality contamination risk is reduced.</p>
<p>Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises within an Environmental Protection Policy (EPP) Area?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises subject to any EPP requirements?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	

<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Classification: N/A Date of classification: N/A</p>
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