



Application for Works Approval Amendment

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

Works Approval Number	W6304/2019/1
Works Approval Holder	FTR Operations Pty Ltd
ACN	634 958 179
File Number	DER2019/000504
Premises	Nexus Recycling 8 Winchester Road BIBRA LAKE WA 6163 Legal description – Lot 82 on Deposited Plan 418427
Date of Report	18 October 2021
Proposed Decision	Revised works approval granted

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MANAGER

WASTE INDUSTRIES

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

Table of Contents

1. Decision summary	1
2. Scope of assessment	1
2.1 Regulatory framework	1
2.2 Amendment summary	1
3. Risk assessment	2
3.1 Source-pathways and receptors	3
3.1.1 Emissions and controls	3
3.1.2 Receptors	7
3.2 Risk ratings	9
4. Consultation	19
5. Conclusion	19
5.1 Summary of amendments	20
References	20
Appendix 1: Summary of Works Approval Holder's comments on risk assessment and draft conditions	21
Appendix 2: Application validation summary	22

Tables

Table 1: Assessed production capacity	1
Table 2: Works Approval Holder controls	3
Table 3: Sensitive human receptors and distance from prescribed activity	7
Table 4: Sensitive environmental receptors and distance from prescribed activity	7
Table 5. Risk assessment of potential emissions and discharges from the Premises during time limited operations	10
Table 6: Consultation	19
Table 7: Summary of works approval amendments	20

Figures

Figure 1: Distance to sensitive receptors	8
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1. Decision summary

FTR Operations Pty Ltd (Works Approval Holder) holds Works Approval W6304/2019/1 for Nexus Recycling (the Premises), located at 8 Winchester Road, Bibra Lake for Category 47 scrap metal recovery activities for the purposes of constructing a new used lead acid battery (ULAB) reprocessing facility.

This Amendment Report documents the assessment of potential risks to the environment and public health from the emissions and discharges during the proposed time limited operations of the Premises. As a result of this assessment, Revised Works Approval W6304/2019/1 has been granted.

The Revised Works Approval issued as a result of this amendment consolidates and supersedes the existing Works Approval previously granted in relation to the Premises. The Revised Works Approval has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department 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 Amendment summary

On 17 June 2021 the Works Approval Holder submitted an application to the department to amend Works Approval W6304/2019/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Addition of time limited operations for a period of 180 days; and
- Alteration of premises address due to amalgamation of lots.

This amendment is limited only to the addition of time limited operations. There are no proposed changes to Category 47 activities from the Existing Works Approval. Table 1 below outlines the previously assessed production capacity approved by the existing Works Approval.

It is noted that risk associated with commissioning and operation of the facility was assessed as part of the determination of W6304/2019/1 and this assessment only seeks to determine regulatory controls required to mitigate risks.

Table 1: Assessed production capacity

Category	Assessed production capacity
Category 47 Scrap metal recovery: premises (other than premises within category 45) on which metal scrap is fragmented or melted, including premises on which lead acid batteries are reprocessed.	30 240 tonnes per annum

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 time limited operations which have been considered in this Amendment Report are detailed in Table 2 below. Table 2 also details the proposed control measures the Works Approval Holder has proposed to assist in controlling these emissions, where necessary.

Table 2: Works Approval Holder controls

Sources	Emission	Potential pathways	Proposed controls
Operation of infrastructure	Lead	Air / wind dispersion	<p>The applicant has implemented various construction requirements, operating procedures and controls to prevent emissions and accidental spillage of lead and prevent the transfer of any potential lead dust outside of the warehouse. These include:</p> <ul style="list-style-type: none"> Batteries will only be sourced from established 3rd party suppliers, with contractual agreements that all ULABs are to be supplied undamaged, intact, have not been previously drained of sulfuric acid and are adequately shrink-wrapped and strapped for transport. This will ensure no leakage of lead paste during transport and on arrival at the Premises and when stored within the warehouse. ULABs will be stored in the designated storage area within the shrink-wrapped packaging, undercover and within the warehouse. This will ensure protection from the environment such as rain and heat, and ensure no leakage of lead paste during storage within the warehouse. The reprocessing plant is all mechanised, automated and will occur within entirely sealed equipment, with the exception of the mouth of the crusher (hammer mill). This will ensure reprocessing activities are contained to certain parts of the warehouse, and that no lead mist is emitted inside the warehouse. The mouth of the crusher (hammer mill) is fitted with plastic curtains, spray bars and operated under negative pressure via the mist eliminator. This will ensure no lead solids or particles are emitted outside of the machinery. The mesh filter within the mist eliminator will be cleaned on a routine basis via either automatic cleaning or manual activation of the cleaning on a monthly basis. This will ensure no lead solids are emitted outside of the machinery. The shredder is operated at low rotational speed of 10 rotations per minute, which will minimise the contact with sulfuric acid and prevent splash back of sulfuric acid and the generation of mists.

Sources	Emission	Potential pathways	Proposed controls
			<ul style="list-style-type: none"> • Should a battery be damaged or a leak occur from machinery, staff will be sufficiently trained in the use of the on-site spill kits to ensure any spills are contained and collected quickly, and the collected spill disposed of back into the processing system. • Water from the mist eliminator, waste wash water from the laundry and collected spills will be disposed of back into the reprocessing system. This will ensure no lead is emitted to the Water Corporation sewerage system. • The entire warehouse comprises a concrete slab banded by a curb. This will prevent any spills and daily wash water being discharged from the warehouse. • A floor drain will be installed in the centre of the warehouse which will collect any spills. This drain will discharge to the paste slurry tanks so as to reclaim any solids as well as enable treatment of liquors via the wastewater treatment system. This will ensure no lead is emitted to the Water Corporation sewerage system. • The designated storage area for ULABs and the floor under all machinery involved in the reprocessing, will be non-permeable concrete coated with an epoxy resin impervious to sulfuric acid. This will ensure sulfuric acid does not erode the warehouse floor and will prevent subsurface seepage of lead. • The internal area of the warehouse will be washed daily including all floors and the external of the processing equipment. This wastewater is disposed of into the reprocessing system. This will ensure that, should any spill of lead paste go unnoticed, the warehouse is adequately cleaned to collect any lead paste and return it to the reprocessing system. • The external areas of the warehouse, being the carpark area, will be vacuumed daily with a road sweeper fitted with a HEPA filter, which will then be disposed of into the reprocessing system. This will ensure that, should any spill of lead paste go unnoticed, the warehouse is adequately cleaned to collect any lead dust and return it to the reprocessing system. • An air lock room operates under negative pressure between the warehouse and the administration facilities as part of OSH requirements for onsite worker safety. This will prevent the movement of lead dust between the warehouse and the administration facilities, and therefore will control the potential for fugitive emissions outside of the building. • Workers will utilise the Dirty Change Rooms to disrobe from personal protective equipment, which remains within the Dirty Change Room or is laundered in the provided laundry next door, and then enter the Clean Change Rooms to don street clothes. This will prevent the transfer of dust contaminants on clothing and shoes, out of the

Sources	Emission	Potential pathways	Proposed controls
			<p>warehouse and into the environment.</p> <ul style="list-style-type: none"> Workers will wear personal air quality monitoring devices and the Applicant will install static air quality monitors that both measure airborne dust and will detect the presence of any lead particles within the warehouse in accordance with OSH requirements. Washing machines are fitted with a drain pump filter to capture any potential lead solids in the waste water. This filter will be cleaned regularly and wastes disposed of back into the reprocessing system. Any potential acid washed from clothing will be neutralised by standard washing powders which are slightly alkaline. Waste washing water, after it has been filtered, is plumbed directly into the wastewater treatment system, where it is directed through the wastewater system for disposal.
Operation of infrastructure	Noise	Air / wind dispersion	<ul style="list-style-type: none"> Warehouse roller doors to be closed when the crusher (hammer mill) is in operation. The mill is easily stopped should the warehouse doors need to be opened, Delivery times scheduled to accommodate the mill shut down and door opening times.
Operation of infrastructure	Odour	Air / wind dispersion	<ul style="list-style-type: none"> The storage and handling of all chemicals at the Premises is regulated by the <i>Dangerous Goods and Safety Act 2004</i>. The reprocessing system does not require heating, melting or smelting, thereby does not generate fumes so will not generate odours. The reprocessing system ensures all activities are mechanical, automated and will occur within entirely sealed equipment which will contain odours, with the exception of the mouth of the crusher (hammer mill). Plastic curtains and spray bars will be installed on the crusher (hammer mill) and the mill will be operated under negative pressure via the mist eliminator, which will contain all materials and will ensure no fugitive emissions such as odour.
Operation of infrastructure	Vibrations	Ground	<ul style="list-style-type: none"> Air bags will be installed under the base of the crusher (hammer mill) to absorb ground vibrations.
Operation of infrastructure	Spills of hazardous chemicals	Direct discharge to land	<ul style="list-style-type: none"> The storage and handling of all chemicals at the Premises is regulated by the <i>Dangerous Goods and Safety Act 2004</i>. The reprocessing system ensures all activities are mechanical, automated and will occur within entirely sealed equipment, which will prevent spills of hazardous chemicals, with the exception of the mouth of the crusher (hammer mill). Plastic curtains and spray bars will be installed on the crusher (hammer mill) and the mill will be operated under negative pressure via the mist eliminator, which will contain all

Sources	Emission	Potential pathways	Proposed controls
			<p>materials and will ensure no spills of hazardous chemicals.</p> <ul style="list-style-type: none"> • The Applicant has a designated storage area for ULABs • The floor under all machinery involved in the reprocessing, will be non-permeable concrete coated with an epoxy resin impervious to acid, to prevent deterioration to the floor from spills of sulfuric acid. • The entire warehouse comprises a concrete slab bunded by a curb to prevent any escape of spilled liquids from the facility. • A floor drain will be installed in the centre of the warehouse which will collect any spills should this occur. This drain will discharge to the paste slurry tanks so as to reclaim any solids as well as enable treatment of liquors via the wastewater treatment system. • Should a spill occur, staff will be sufficiently trained in the use of the on-site spill kits to contain and collect the spill, plus the daily internal and external cleaning regime will provide further spill collection, with disposal back into the reprocessing system.
Operation of infrastructure	Spills of hydrocarbons from vehicles and equipment	Direct discharge to land	<ul style="list-style-type: none"> • Diesel storage will be within an above ground, self-bunded 2,000 L storage tank. Diesel storage at this quantity is regulated by the <i>Dangerous Goods and Safety Act 2004</i>. • Should a spill occur, staff will be sufficiently trained in the use of the on-site spill kits to contain and collect the spill, and correct disposal.
Operation of infrastructure	Contamination of stormwater	Overland flow Leachate to groundwater Discharge to stormwater system	<ul style="list-style-type: none"> • All external areas of the warehouse will be concrete lined. • A stormwater drainage system will direct uncontaminated stormwater away from the warehouse, off the Premises and into the City of Cockburn stormwater system. • The City of Cockburn has required all stormwater received within the Premises to be contained within the premises and if necessary transported off-site for disposal. In the event of a fire this system will also capture of firefighting washwater, preventing discharges to the City of Cockburn stormwater system. • The reprocessing system ensures all activities are mechanical, automated and will occur within entirely sealed equipment, and operated within a warehouse.

3.1.2 Receptors

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

Table 3 and Figure 1 below provides a summary of potential human receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

Table 3: Sensitive human receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Industrially zoned offices and workplaces adjacent to the Premises	<ul style="list-style-type: none"> Immediately adjacent to the side boundaries of the prescribed Premises, along Winchester Road to the north and south and across Winchester Road to the west. Immediately adjacent to the rear boundary of the prescribed Premises, to the east on Wellard Street.
Residential Premises	<ul style="list-style-type: none"> 470m west of the boundary of the prescribed Premises.

Table 4 below provides a summary of potential environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

Table 4: Sensitive environmental receptors and distance from prescribed activity

Environmental receptors	Distance from prescribed activity
Threatened Fauna	<ul style="list-style-type: none"> Priority 4 classified <i>Isoodon fusciventer</i> (southern brown bandicoot) located 770m south, 770m east, 810m east and 1180m north of the boundary of the prescribed Premises; Endangered <i>Calyptrorhynchus latirostris</i> (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo) located 1010m south west of the boundary of the prescribed Premises; and Priority 4 classified <i>Oxyura australis</i> (blue-billed duck) located 1600m west of the boundary of the prescribed Premises.
Bush Forever	<ul style="list-style-type: none"> Market Garden Swamps classified as a Special Area, located 1730m west of the boundary of the prescribed Premises.
Threatened Ecological Communities (TEC)	<ul style="list-style-type: none"> Priority 3 classified Banksia Dominated Woodlands of the Swan Coastal Plain located 300m north, 990m north east, 715m east and 1375m north east of the boundary of the prescribed Premises. <p>These Threatened Ecological Communities are recognised as potential refuge habitat for fauna.</p>
Green Growth Vegetation Complex (GGVC)	<ul style="list-style-type: none"> Cottesloe Complex-Central and South, located 335m north, 520m south west, 1700m west and 1035m south of the boundary of the prescribed Premises; and Karrakatta Complex-Central and South, 335m north, 700m south west and 1400m north west of the boundary of the prescribed Premises. <p>These Green Growth Vegetation Complex communities are recognised as potential refuge habitat for fauna.</p>



Figure 1: Distance to sensitive receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change 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 Works Approval Holder 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 Works Approval Holder'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 Works Approval Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 5.

The Revised Works Approval W6302/2019/1 that accompanies this Amendment Report authorises construction and time-limited operations. The conditions in the Revised Works Approval have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the Premises. A risk assessment for the operational phase has been included in this Amendment Report, however licence conditions will not be finalised until the department assesses the licence application.

Table 5. Risk assessment of potential emissions and discharges from the Premises during time limited operations

Risk Event				Risk rating ¹ C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
Operation of Infrastructure (including time-limited-operations operations)							
Lead	Air / wind dispersion Amenity impacts	Industrial offices and workplaces adjacent to the Premises Residential premises located 470m west of the Premises	See Section 3.1	C = Slight L = Unlikely Low Risk	Yes	Conditions 12 and 13, 21 to 27, 28 to 29, 31. Conditions 16 and 17	<p>The Delegated Officer notes the overall risk of lead emissions during operation of the reprocessing plant is directly related to the effectiveness of the Applicant controls put into place during construction.</p> <p>Therefore, the Delegated Officer has included regulatory controls to ensure time limited operations cannot commence until construction has been completed as per the original works approval condition 1, and that commissioning monitoring parameters required by existing works approval condition 9 have met the requirements of the <i>Workplace Exposure Standards for Airborne Contaminants (Safe Work Australia, 2019)</i>. In addition, time limited operations are limited to a maximum of 180 days.</p> <p>During time limited operations of the plant the Applicant must maintain negative pressure within the mist eliminator, and will monitor pressure continuously. A tiered warning system will alert to increases in pressure in order to foresee failures with the system, prior to a leak occurring.</p> <p>During time limited operations of the plant the Applicant will conduct air quality monitoring on a quarterly basis for sulfuric acid in accordance with the <i>Workplace Exposure Standards for Airborne Contaminants (Safe Work Australia, 2019)</i>, where detection of sulfuric acid shall be an indicator of failure to adequately maintain</p>

Risk Event				Risk rating ¹ C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
							<p>the system.</p> <p>The Delegated Officer has set a trigger for sulfuric acid emissions to identify a point prior to the system failing and leaking. An exceedance of the trigger shall require the Applicant to isolate and cease operations of that section of plant, investigation and rectification of the issue, prior to recommencing operations.</p> <p>The Delegated Officer will require the reporting of all time limited operations data, and during assessment of the Licence application shall consult with the Department of Health on the results of the air quality monitoring to determine the risk to human health of sulfuric acid emissions, and potentially lead emissions.</p>
Noise	Air / wind dispersion Amenity impacts		See Section 3.1	C = Possible L = Unlikely Low Risk	No	Conditions 18 and 19	<p>Projected noise modelling shows potential exceedance of night time assigned levels for a limited number of residential premises to the west, where operations occur prior to 7am. The Delegated Officer considers it appropriate to manage this matter via regulatory controls on the Licence to limit the operating times of the crusher (hammer mill) from 7am to 7pm, Monday to Saturday consistent with the <i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p>Applicant controls to mitigate noise emissions during daytime operations include ensuring the roller doors are closed when the crusher (hammer mill) is in operation, ease of stopping the mill should the doors need to be opened, and scheduling delivery times to accommodate the mill shut down and door opening times.</p>

Risk Event				Risk rating ¹ C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
							<p>These Applicant controls ensure neither the LA10 nor the LA1 noise emissions will exceed the assigned levels at neighbouring industrial premises.</p> <p>After implementation of these Applicant controls the Delegated Officer considers noise emissions although a possibility, are unlikely to have a pathway to result in impact. Therefore, the risk of impacts to surrounding industrial premises and nearby residential premises is low.</p>
Odour	Air / wind dispersion Amenity impacts	Industrial offices and workplaces adjacent to the Premises Residential premises located 470m west of the Premises	See Section 3.1	C = Rare L = Slight Low Risk	Yes	Condition 16	<p>The storage and handling of all chemicals at the Premises is regulated by the <i>Dangerous Goods and Safety Act 2004</i>, whereby the packaging of such items is required to be adequately sealed which will contain odours.</p> <p>The Applicant has selected a reprocessing system that does not require heating, melting or smelting, thereby does not generate fumes so will not generate odours. All system activities are mechanical, automated and will occur within entirely sealed equipment which will contain odours, with the exception of the mouth of the crusher (hammer mill).</p> <p>The Applicant will install plastic curtains and spray bars on the crusher (hammer mill) and will operate the mill under negative pressure via the mist eliminator, which will contain all materials and will ensure no fugitive emissions such as odour.</p> <p>The Delegated Officer notes odours can potentially occur during decanting of chemicals from packaging into process</p>

Risk Event				Risk rating ¹ C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
							<p>equipment, however this will occur within the warehouse.</p> <p>As this risk is mitigated by adequate implementation of these Applicant controls, the Delegated Officer shall enforce these controls via operational and maintenance conditions on the Works Approval, and via operational conditions on the Licence.</p>
Vibrations	Ground Amenity impacts	Industrial offices and workplaces adjacent to the Premises Residential premises located 470m west of the Premises	See Section 3.1	C = Slight L = Unlikely Low Risk	Yes	Condition 16	<p>The Delegated Officer notes the only source of potential vibrations are from the crusher (hammer mill). Operation of the hammer mill will create vibrations that could be transferred through the subsurface structure; however, vibrations are absorbed by air bags located in between the base of the mill and the ground.</p> <p>After implementation of this Applicant control the Delegated Officer considers the potential for vibrations to occur is unlikely, and with a slight consequence to amenity. Therefore, the risk of impacts to surrounding industrial premises and nearby residential premises is low.</p> <p>As this risk is mitigated by adequate implementation of these Applicant controls, the Delegated Officer shall enforce these controls via operational and maintenance conditions on the Works Approval, and via operational conditions on the Licence.</p> <p>Ground vibrations may be subject to the provisions of the <i>Environmental Protection (Noise) Regulations 1997</i>.</p>

Risk Event				Risk rating ¹ C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
Spills of hazardous chemicals	Direct discharge to land Impacts to: Human health Soil contamination Degradation of surface water and groundwater quality	Industrial offices and workplaces adjacent to the Premises Residential premises located 470m west of the Premises TEC and GGVC communities located as close as 300m to the Premises	See Section 3.1	C = L = Low Risk	Yes	Conditions 14 and 15 Conditions 16 and 20	<p>The storage and handling of all chemicals at the Premises is regulated by the <i>Dangerous Goods and Safety Act 2004</i>. This regulates the packaging, the method of storage and which chemicals can and cannot be stored together, to prevent spills, cross contamination and adverse chemical reactions.</p> <p>The Applicant has selected a reprocessing system where all activities are mechanical, automated and will occur within entirely sealed equipment, which will prevent spills of hazardous chemicals, with the exception of the mouth of the crusher (hammer mill).</p> <p>The Applicant will install plastic curtains and spray bars on the crusher (hammer mill) and will operate the mill under negative pressure via the mist eliminator, which will contain all materials and will ensure no spills of hazardous chemicals.</p> <p>The Applicant will ensure the floor at the designated storage area for incoming ULABs and under all machinery involved in the reprocessing will be non-permeable concrete coated with an epoxy resin impervious to acid, to prevent deterioration to the floor from spills of sulfuric acid. The entire warehouse comprises a concrete slab bounded by a curb to prevent any escape of spilled liquids from the facility. A floor drain will be installed in the centre of the warehouse which will collect any spills should this occur. This drain will discharge to the paste slurry tanks so as to reclaim any solids as well as enable treatment of liquors via the wastewater treatment</p>

Risk Event				Risk rating ¹ C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
							<p>system.</p> <p>Should a spill occur, staff will be sufficiently trained in the use of the on-site spill kits to contain and collect the spill, plus the daily internal and external cleaning regime will provide further spill collection, with disposal back into the reprocessing system.</p> <p>After regulation by the above legislation and implementation of Applicant controls for adequate construction, spill response and daily cleaning, the Delegated Officer considers that there is no pathway for spills to discharge to land. Therefore, the risk of impacts to surrounding industrial premises and nearby residential premises is low.</p> <p>As this risk is mitigated by adequate implementation of these Applicant controls, the Delegated Officer shall enforce these controls via operational and maintenance conditions on the Works Approval, and via operational conditions on the Licence.</p> <p>In addition, conditions have been added to the Works Approval to require the implementation of a Fire and Emergency Management Plan to adequately manage emergency events, documentation for which is to be lodged with the Licence application for assessment of effectiveness of the controls.</p> <p>Discharges of chemicals may also be subject to the provisions of the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p>

Risk Event				Risk rating ¹ C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
Spills of hydrocarbons from vehicles and equipment	Direct discharge to land Impacts to: Soil contamination Degradation of surface water and groundwater quality	TEC and GGVC communities located as close as 300m to the Premises	See Section 3.1	C = Slight L = Unlikely Low Risk	Yes	<u>Conditions 14 and 15</u>	<p>Diesel is required for the forklifts, front end loader and generator. Diesel storage will be within an above ground, self-bunded 2,000 L storage tank. Diesel storage at this quantity is regulated by the <i>Dangerous Goods and Safety Act 2004</i>.</p> <p>Should a spill occur, staff will be sufficiently trained in the use of the on-site spill kits to contain and collect the spill, and correct disposal.</p> <p>After regulation by the above legislation and implementation of Applicant controls the Delegated Officer considers that there is no pathway for spills to discharge to land. Therefore, the risk of impacts to surrounding TEC and GGVC communities is low.</p> <p>As this risk is mitigated by adequate implementation of these Applicant controls, the Delegated Officer shall enforce these controls via operational and maintenance conditions on the Works Approval, and via operational conditions on the Licence.</p> <p>In addition, conditions have been added to the Works Approval to require the implementation of a Fire and Emergency Management Plan to adequately manage emergency events, documentation for which is to be lodged with the Licence application for assessment of effectiveness of the controls.</p> <p>Discharges of hydrocarbons may also be subject to the provisions of the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p>

Risk Event				Risk rating ¹ C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
Contamination of stormwater	Overland flow Leachate to groundwater Discharge to stormwater system Impacts to: Soil contamination Degradation of surface water and groundwater quality	TEC and GGVC communities located as close as 300m to the Premises	See Section 3.1	C = Slight L = Unlikely Low Risk	Yes	Conditions 14 and 15 Condition 16	<p>The external areas of the warehouse are all concrete lined, which will prevent leachate to groundwater.</p> <p>The onsite stormwater drainage system will direct stormwater received on non-operational areas away from the warehouse, off the Premises and into the City of Cockburn stormwater system, which will exclude stormwater from entering the warehouse and therefore from becoming contaminated. Any washwater that is created within the premises, including firefighting water, will be contained and collected onsite, for offsite disposal in accordance with the City of Cockburn requirements. There is no connectivity with the external City of Cockburn stormwater system, therefore there will be no discharges of contaminated washwaters or firefighting waters under foreseeable operational circumstances.</p> <p>In addition, the Applicant has selected a reprocessing system where all activities occur within entirely sealed equipment and operated within a warehouse, which will minimise the likelihood of spills of hazardous chemicals and thereby the likelihood of contamination of stormwater.</p> <p>After implementation of these Applicant controls the Delegated Officer considers stormwater will not become contaminated during operation, thereby contaminated stormwater cannot be emitted from the Premises. Therefore, there is no risk of impact to the TEC and GGVC communities.</p>

Risk Event				Risk rating ¹ C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
							<p>As this risk is mitigated by adequate implementation of these Applicant controls, the Delegated Officer shall enforce these controls via operational and maintenance conditions on the Works Approval, and via operational conditions on the Licence.</p> <p>In addition, conditions have been added to the Works Approval to require the implementation of a Fire and Emergency Management Plan to prevent discharges of contaminated firewater into stormwater systems, documentation for which is to be lodged with the Licence application for assessment of effectiveness of the controls.</p> <p>Discharges of hydrocarbons and other chemicals within contaminated stormwater may also be subject to the provisions of the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p>

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

Note 2: Proposed Works Approval Holder's controls are depicted by standard text. **bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

Table 6 provides a summary of the consultation undertaken by the department.

Table 6: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website (15/07/2021) and in the West Australian (19/07/2021)	None	N/A
City of Cockburn advised of proposal (16/07/2021)	The City confirmed it has no objection and appears consistent with current approvals for the Premises (27/07/2021).	N/A
Department of Health advised of proposal (16/07/2021)	<p>The Department does not have any concerns, provided the approved 'commissioning testing' program is carried out rigorously and results reported expeditiously, allowing any rectification works and/or shut down to be implemented before any public health impacts arise.</p> <p>From a broader public health perspective, the applicant has incorporated design elements and control measures, and does not anticipate any emissions during 'normal operations' of the facility. The Department recommends that further information is submitted in relation to possible emissions during periods of unexpected shut down or malfunction, or during fire incidents at the site. This includes contingency measures to prevent contaminated firefighting water from entering the storm drainage systems, manage the quantity of waste and recycled product stored on site, and procedures to manage external (public) communications and emergency actions, should a hazardous emission arise.</p>	The Delegated Officer has taken into consideration the comments and conducted a risk assessment for the occurrence of smoke, odour and contaminated firewater emissions resulting from fires and emergency scenarios (see section 3.2).
Direct interest stakeholders advised of proposal (16 – 22/07/2021)	None	N/A
Works Approval Holder was provided with draft amendment on (11/10/21)	See Appendix 1	See Appendix 1

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Works Approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 7 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Works Approval as part of the amendment process.

Table 7: Summary of works approval amendments

Condition no.	Proposed amendments
N/A	Premises address updated to reflect new street and plan description.
Condition 9 Table 3	Row 4, monitoring locations 1, 2, 3 and 4, addition of 'as depicted in Figure 1'
Condition 12 and 13	Commencement and duration of time limited operations
Condition 14	Fire and emergency management plan
Condition 15 Table 4	Fire and emergency management requirements
Condition 16 Table 5	Infrastructure and equipment
Condition 17 Table 6	Waste acceptance
Condition 18	Restriction of operating hours
Condition 19	Warehouse roller doors to be closed during operation of the crusher (hammer mill).
Condition 20	Recover, remove and dispose of spills
Condition 21 Table 7	Monitoring of inputs and outputs during time limited operations
Condition 22 Table 8	Monitoring during time limited operations
Conditions 23 and 24	Exceedance of any limit specified in condition 21
Conditions 25, 26 and 27	Monitoring requirements for number of days apart, calibration of equipment, laboratory NATA accreditation
Conditions 28 and 29	Compliance reporting
Condition 30, 31 and 32	Records and reporting

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.

Appendix 1: Summary of Works Approval Holder's comments on risk assessment and draft conditions

Condition	Summary of Works Approval Holder's comment	Department's response																												
Condition 22 Table 8	<p>The Applicant requests that Table 8 be amended as shown in red below.</p> <p>Table 8: Monitoring during time limited operations</p> <table border="1"> <thead> <tr> <th>Row</th> <th>Monitoring Location</th> <th>Parameter</th> <th>Unit</th> <th>Limit</th> <th>Frequency</th> <th>Averaging Period</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Mist eliminator inlet pipe</td> <td>Negative pressure¹</td> <td>kPa (gauge)</td> <td>N/A</td> <td>Continuous</td> <td>N/A</td> </tr> <tr> <td>2</td> <td>Mist eliminator outlet pipe (5)</td> <td>H₂SO₄²</td> <td>mg/m³</td> <td>1</td> <td>Quarterly</td> <td>4 – 8 hours</td> </tr> <tr> <td>3</td> <td>Air sampler locations 1, 2, 3 and 4 (as depicted in Figure 1)</td> <td>H₂SO₄²</td> <td>mg/m³</td> <td>1</td> <td>Quarterly</td> <td>4 – 8 hours</td> </tr> </tbody> </table>	Row	Monitoring Location	Parameter	Unit	Limit	Frequency	Averaging Period	1	Mist eliminator inlet pipe	Negative pressure ¹	kPa (gauge)	N/A	Continuous	N/A	2	Mist eliminator outlet pipe (5)	H ₂ SO ₄ ²	mg/m ³	1	Quarterly	4 – 8 hours	3	Air sampler locations 1, 2, 3 and 4 (as depicted in Figure 1)	H ₂ SO ₄ ²	mg/m ³	1	Quarterly	4 – 8 hours	<p>The Delegated Officer agrees to the alteration of the units for negative pressure, as this unit will be more appropriate for in-field measurements.</p> <p>The Delegated Officer agrees to the alteration of the limit to be one (1) as it ensures consistency with the <i>Workplace Exposure Standards for Airborne Contaminants (Safe Work Australia, 2019)</i>.</p> <p>The Delegated Officer agrees to the alteration of the averaging period, as in-field measurements are more appropriately taken for a period of between four to eight hours.</p> <p>The Delegated Officer agrees to the addition of the wording 'Air sampler locations' to row 3, for clarification purposes.</p>
Row	Monitoring Location	Parameter	Unit	Limit	Frequency	Averaging Period																								
1	Mist eliminator inlet pipe	Negative pressure ¹	kPa (gauge)	N/A	Continuous	N/A																								
2	Mist eliminator outlet pipe (5)	H ₂ SO ₄ ²	mg/m ³	1	Quarterly	4 – 8 hours																								
3	Air sampler locations 1, 2, 3 and 4 (as depicted in Figure 1)	H ₂ SO ₄ ²	mg/m ³	1	Quarterly	4 – 8 hours																								

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY			
Application type			
Amendment to works approval	<input checked="" type="checkbox"/>	Current works approval number:	W6304/2019/1
Date application received		17 June 2021	
Applicant and Premises details			
Applicant name/s (full legal name/s)		FTR Operations Pty Ltd	
Premises name		Nexus Recycling	
Premises location		8 Winchester Road, Bibra Lake	
Local Government Authority		City of Cockburn	
Application documents			
HPCM file reference number:		DWERDT466174	
Key application documents (additional to application form):		Certificate of Title	
Scope of application/assessment			
Summary of proposed activities or changes to existing operations.		Works approval amendment: Addition of Time Limited Operations	
Category number/s (activities that cause the premises to become prescribed premises)			
Table 1: Prescribed premises categories			
Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity (amendments only)	
Category 47 scrap metal recovery: premises (other than premises within category 45) on which metal scrap is fragmented or melted, including premises on which lead acid batteries are reprocessed.	30 240 tonnes per annum	None	
Legislative context and other approvals			
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?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	General lease <input checked="" type="checkbox"/> Expiry: 10 years
Has the applicant obtained all relevant planning approvals?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Approval: 31 March 2020 Expiry date: two years from approval
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No clearing is proposed.
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"/>	No clearing is proposed.
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"/>	Licence / permit not required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
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>)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<i>Environmental Protection (Controlled Waste) Regulations 2004</i> <i>Dangerous Goods Safety Act 2004</i> Water Corporation Trade Waste Licence
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	