



Application for Works Approval

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

Works Approval Number W6556/2021/1

Applicant Elan Energy Matrix Pty Ltd

ACN 611 714 580

File number DER2021/000332

Premises Elan Energy Management
9 Fargo Way
WELSHPOOL WA 6986
Legal description –
Lot 60 on Deposited Plan 13025
Certificate of Title Volume 1549 Folio 111
As defined by the Premises map attached to the Works Approval

Date of report 17/09/2021

Decision Works approval granted

Chris Malley
Manager, Process Industries

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.

Due to an administrative error, previous works approval W6113/2017/1 expired and Elan Energy Matrix Pty Ltd (applicant, Elan) applied for a new works approval to complete construction of remaining infrastructure associated with its tyre resource recovery facility (TRRF) project. The Delegated Officer determined that as the proposed scope of works and previous assessed risk profile in the decision report for W6113/2017/1 (Appendix 3) has not changed, new works approval W6556/2021/1 was granted.

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 26 May 2021, Elan Energy Matrix Pty Ltd (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 construct and commission the TRRF at 9 Fargo Way, Welshpool (the premises). The premises is approximately 12 km southeast of the Perth CBD, located within the locality of Canning within an industrial area.

The TRRF relates to the category 37 – char manufacturing with an assessed production rate of <60 tonnes per day under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations). 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 W6556/2021/1 and W6113/2017/1 (expired).

The proposed TRRF underwent risk-based assessment in 2017/18 (refer to Appendix 3) and works approval W6113/2017/1 was subsequently granted in April 2018. The applicant had applied for an amendment to extend the works approval beyond its 20 April 2021 expiry date, however an administrative error in the assessment of that application resulted in the works approval expiring. The applicant subsequently applied for a new works approval.

The applicant advised that the works and associated emissions and discharges have not changed since the previous works approval was granted and that the works approval and associated decision report (Appendix 3) remain accurate. The applicant sought a materially equivalent works approval to complete and commission the TRRF. The applicant requested a two-year duration for the new works approval.

2.3 Background

The TRRF is linked to Elan's tyre storage and processing (shredding) facility that is located on an existing prescribed premises subject to licence L9041/2017/1 for category 57 (used tyre storage) and 61A (solid waste facility). A fire in December 2020 impacted the tyre storage and processing facility, however the TRRF was not directly impacted other than to delay construction progress.

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.

The application for works approval W6556/2021/1 relates to the same activities that were assessed for the grant of works approval W6113/2017/1. Therefore, the applicant controls, emissions, receptors and the risk profile has not changed from the previous assessment for W6113/2017/1.

See the previous assessment in Appendix 3 for the risk assessment details.

3.1 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and considers potential source-pathway and receptor linkages as identified in Appendix 3 Section 8 and 9. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant has proposed mitigation measures/controls, 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. The previously determined risk assessment outcomes and regulatory controls are detailed in Appendix 3.

Works approval W6556/2021/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued 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. Risks associated with the operational phase were considered in the previous assessment (Appendix 3) and the new works approval contains conditions for time limited operations consistent with the previous works approval. It is expected that conditions for a licence will be consistent with time limited operations conditions on the works approval, subject to review of construction compliance reporting, monitoring data and assessment of the licence application.

4. Consultation

The City of Canning was consulted and responded on the 22 June 2021. Planning approval was issued for the TRRF in April 2018 and a 2-year period was provided to commence development. The City of Canning advised that the period had expired, however the development was substantially commenced before the expiry. Hence the development approval for the plant remains valid. The issue of a new works approval is not considered to conflict with any land use planning approvals for the premises.

The works approval was advertised on the 11 June 2021. No public submissions were received.

5. Decision

Based on the assessment in this decision report, the Delegated Officer has determined to grant works approval W6556/2021/1 subject to conditions. The Delegated Officer referred to the previous risk assessment of the TRRF (Appendix 3) and did not undertake further detailed risk assessment as the scope of works and associated emission risk profiles had not changed. A new works approval will be granted with construction phase conditions materially consistent with the previous works approval.

The Delegated Officer identified that the previous works approval conditions were unclear in respect of the commencement and duration of a time limited operations phase. This has been clarified in the new works approval. Conditions for environmental commissioning have also been included. This is primarily to allow a clear transitional pathway from construction to operating under a licence. Verification monitoring will be undertaken during the environmental commissioning phase, thereby allowing monitoring data in advance of or along with a licence amendment application and minimise any delays in determining licence amendments during the time limited operations phase.

6. Applicant comments

The applicant was provided with a draft of the works approval and decision report on 14 July 2021. The applicant responded with comments on the 11 August 2021. See Appendix 1 for further information.

7. 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 Water and Environmental Regulation (DWER) 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
3. DER 2016, *Guidance Statement: Licence Duration.*, Perth, Western Australia.
4. DWER 2018, *Decision Report Elan Energy Matrix Pty Ltd for W6113/2017/1*, Perth Western Australia
5. DWER 2018, Works Approval W6113/2017/1 *Elan Energy Matrix Pty Ltd*, Perth, Western Australia.
6. Elan Energy Matrix Pty Ltd 2021, Application for a Works Approval, Perth, Western Australia
7. Straten Environmental 2017, *Elan Energy Matrix Pty Ltd – Tyre Resource Recovery Facility Works Approval Application and Supporting Document*, Perth, Western Australia.

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

Condition	Summary of applicant's comment	Department's response
1, Table 1 Row 2	Process gas can be used to fire the TCU (beneficial reuse) or combusted in the thermal oxidiser. Frequent condition be changed such that the TCU can be fired by natural gas and process gas. The heat tube will get hotter than 900°C therefore request the maximum temperature requirement of be removed. The justification for inclusion of the maximum temperature requirement is not provided in the decision report and this specification was not in the original works approval.	<p>The proposed change to the TCU firing gas does not align with the works approval application or the W6113 application and has the potential to alter the assessed risk associated with emissions to air from the premises. DWER has therefore retained the requirement to fire the TCU with natural gas. The proposed change would require risk assessment of the altered emission profile either through a works approval amendment application or the future licence application for the premises. The applicant has the option of applying for a works approval amendment with relevant risk based supporting information.</p> <p>The temperature requirement for the heat tube was taken from the TCU specifications listed in Table 6 of the Strategen 2017 works approval application supporting document. The heat tube must be able to withstand the maximum temperature stated in order to operate effectively. Wording of the condition has been revised such that the heat tube must be able to withstand a temperature of 900°C as this is the maximum temperature the heat tube is expected to reach.</p>
1, Table 1, Row 3	As per the above point, process gas from the oil condenser can be used to fire the TCU. Reword requirements to include TCU burners.	The proposed change has not been incorporated as it was not within the scope of the assessment and has the potential to alter the risk profile associated with emissions to air from the premises. Applicant may apply for a separate works approval amendment.
1, Table 1, Row 4	Delete the minimum height of the bund wall. The containment size is dictated by the 110% containment requirement and will then provide flexibility in the built design.	The proposed changes does not change the assessed risk profile therefore DWER updated the works approval with the requested changes.
1, Table 1, Row 5	Thermal oxidiser can be fuelled by process gas. Reword to include both process and natural gas.	The proposed changes have not been incorporated as they were not within the scope of the assessment and have the potential to alter the assessed risk associated with emissions to air from the premises. Applicant may apply for a separate works approval amendment.
5, Table 2, Row 2	As per line 1 process gas can be used for to fire the TCU burners therefore request include both process and natural gas.	

Condition	Summary of applicant's comment	Department's response
5, Table 2, Row 3	As per line 1 process gas can be used for to fire the TCU burners therefore request the condition allow for use of process gas from the oil condenser train to fire the TCU burners.	
5, Table 2, Row 5	Delete the need for calibration as this a requirement in condition 9 and 18	DWER removed the calibration requirement from Table 2 as it is replicated by conditions 9 and 18.
7, Table 4, Column 3	Delete silica from the metal monitoring suite.	DWER considered the request to delete silica from the air emission monitoring suite. The applicant did not provide justification for the removal of silica. Silica is a common filler in rubber compounds that make up tyre treads and is therefore expected to be present in emissions to air. Silica was identified as an emission to air from the premises in Table 11 of the Stragen 2017 W6113 works approval application supporting document. As no justification for the removal was provided, and silica is expected to be present in emissions from the main stack, the requirement was retained. The requirement can be reviewed based on monitoring results provided in the Environmental Commissioning and Time Limited Operations reports when the applicant submits their licence application.
7, Table 4, Column 4	Amend monitoring frequency for the environmental commissioning period to one sampling event during the 90 day environmental commissioning period rather than during the first month to allow more flexibility in scheduling the monitoring. Delete requirements to undertake monitoring once within the first month of operations noting that one monitoring event is specified during the time limited operations.	DWER has updated the monitoring requirements for the environmental commissioning and time limited operations period to one event during each period. The changes do not alter the assessed risk profile and provide more opportunity for the applicant to target the monitoring to occur once the TRRF achieves steady state conditions and expected production capacity.
8, Table 5, Column 1	Specify the thermal oxidiser unit as the monitoring location to remove uncertainty.	DWER updated the works approval with the requested change.
9, 18	Request that calibration frequency in accordance with manufacturer's specifications as monthly is too onerous.	The calibration requirement is in line with what was originally specified in W6113/2017/1 and the applicant has not provided details of what the manufacturer's specifications are. Therefore, the condition has not been altered. This requirement can be reviewed when the applicant submits a licence application for the premises.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY						
Application type						
Works approval	<input checked="" type="checkbox"/>	Expired works approval W6113/2017/1				
Licence	<input type="checkbox"/>	Relevant works approval number:		None	<input type="checkbox"/>	
		Has the works approval been complied with?			Yes	<input type="checkbox"/>
		Has time limited operations under the works approval demonstrated acceptable operations?			Yes	<input type="checkbox"/>
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?			Yes	<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	26 May 2021					
Applicant and Premises details						
Applicant name/s (full legal name/s)	Elan Energy Matrix Pty Ltd					
Premises name	Elan Energy Management					
Premises location	Lot 60 Deposited Plan 13025 Certificate of Title Volume 1549 Folio 111 9 Fargo Way WELSHPOOL WA 6986					
Local Government Authority	City of Canning					
Application documents						
HPCM file reference number:	DER2021/000332 OLD works approval reference DER2017/001746-1					
Key application documents (additional)	Nil					

to application form):		
Scope of application/assessment		
Summary of proposed activities or changes to existing operations.	<p>Works approval</p> <p>Construction of a tyre resource recovery facility (TRRF). Where shredded tyres will be heated and decomposed into three components, process gas, char and metals.</p> <p>The TRRF is linked to Elan's tyre storage and processing (shredding) facility that is located on the same premises and operated under Licence L9041/2017/1. The tyre storage and processing facility was impacted by fire that destroyed the facility. The TRRF was not impacted by the fire, however the loss of the storage and processing facility and the associated disruption to the premises has caused significant construction and commissioning delays to the TRRF.</p> <p>Previous works approval W6113/2017/1 expired on the 29 April 2021. A works approval amendment was submitted on the 10 March 2021 but was unable to be issued before the works approval expired. The applicant seeks to build the TRRF as per the specifications from the works approval W6113/2017/1.</p>	
Category number/s (activities that cause the premises to become prescribed premises)		
Table 1: Prescribed premises categories		
Prescribed premises category and description	Proposed production capacity	Proposed changes to the production or design capacity (amendments only)
Category 37: Car manufacturing: premises on which wood, carbon material or coal is charred to produce a fuel or material of a carbonaceous nature or of enriched carbon content.	< 60 tonnes per day	?
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"/>	Referral decision No: 2093 Managed under Part V <input checked="" type="checkbox"/> Assessed under Part IV <input checked="" type="checkbox"/> with air quality conditions
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: 1064 EPA Report No: 1061, July 2017
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 checked="" type="checkbox"/> Expiry: 30 November 2024 Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Approval: Yes Expiry date: Planning has expired See City of Canning email DWERDT441526 – All OK for planning.
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"/>	CPS No: N/A 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"/>	Application reference No: N/A Licence/permit No: N/A 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"/>	Application reference No: Licence/permit No: 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"/>	Name: N/A Type: Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Regional office:

Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: P1 / P2 / P3 / N/A Are the proposed activities/landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , <i>State Agreement Act xxxx</i>)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
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"/>	Classification: N/A Date of classification: N/A

SECTION 2: RECEPTORS

The nearest town of Wattle Grove	Is approximately 600 km to the east of the premises.
Human receptors	Distance from activity / prescribed premises
<i>Residential Premises</i>	600m to the south-east and 850m to the west of the tyre recycling and shredding facility.
Commercial/Industrial	Immediately adjacent to the premises are other industrial premises
Environmental receptors	Distance from activity / prescribed premises
Threatened Ecological Community Swan Coastal Plain, Banksia woodland	Located 140m east the premises boundary and 740m southwest of the premises boundary.
Perth Groundwater Area – Perth superficial Stormwater groundwater basin	Groundwater 4m below ground level, stormwater groundwater body located 600m west.
Tomah Road Swamp – Conservation wetland (Sumpland)	Located 500 m east of the premises

Appendix 3: Decision Report for expired works approval W6113/2017/1



Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Works Approval

Division 3, Part V *Environmental Protection Act 1986*

Works Approval Number W6113/2017/1

Applicant Elan Energy Matrix Pty Ltd

ACN 611 714 580

File Number DER2017/000368

Premises Elan Energy Management
9 Fargo Way, WELSHPOOL WA 6986
Lot 60 on Deposited Plan 13025
Certificate of Title Volume 1549 Folio 111

Date of Report 30 April 2018

Status of Report Final

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1. Definitions of terms and acronyms

In this Decision Report, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CS Act	<i>Contaminated Sites Act 2003 (WA)</i>
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DMIRS	means the Department of Mines, Industry Regulation and Safety
DWER	Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Minister	the Minister responsible for the EP Act and associated regulations
MS	Ministerial Statement
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997 (WA)</i>
Occupier	has the same meaning given to that term under the EP Act.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report
Risk Event	As described in <i>Guidance Statement: Risk Assessment</i>

2. Purpose and scope of assessment

The Department of Water and Environment Regulation (DWER) received an application for a works approval on 8 October 2017 from Elan Energy Matrix. It relates to construction of a Tyre Resource Recovery Facility (TRRF) on licensed premises at 9 Fargo Way in Welshpool. The assessment of the application will focus on the addition of the TRRF to the premises within the context of the existing activities conducted on site.

2.1 Application details

Table 2 lists the documents submitted during the assessment process.

Table 2: Documents and information submitted during the assessment process

Document/information description	Date received
Works Approval application	8 October 2017
Additional information	23 November 2017

3. Background

The Applicant currently holds a licence (L9041/2017/1) for the premises on which the TRRF is proposed to be constructed. The licence has been issued for Category 57 – Used tyre storage (general) and Category 61A – Solid waste facility. The proposed TRRF falls under Category 37 – Char manufacturing and as such this category will need to be added to the licence upon completion of the works.

Table 3 lists the prescribed premises categories that have been applied for.

Table 3: Prescribed Premises Category to be added to the Existing Licence

Classification of Premises	Description	Assessed production rate
Category 37	Char manufacturing: premises on which wood, carbon material or coal is charred to produce a fuel or material of a carbonaceous nature or of enriched carbon content.	< 60 tonnes per day

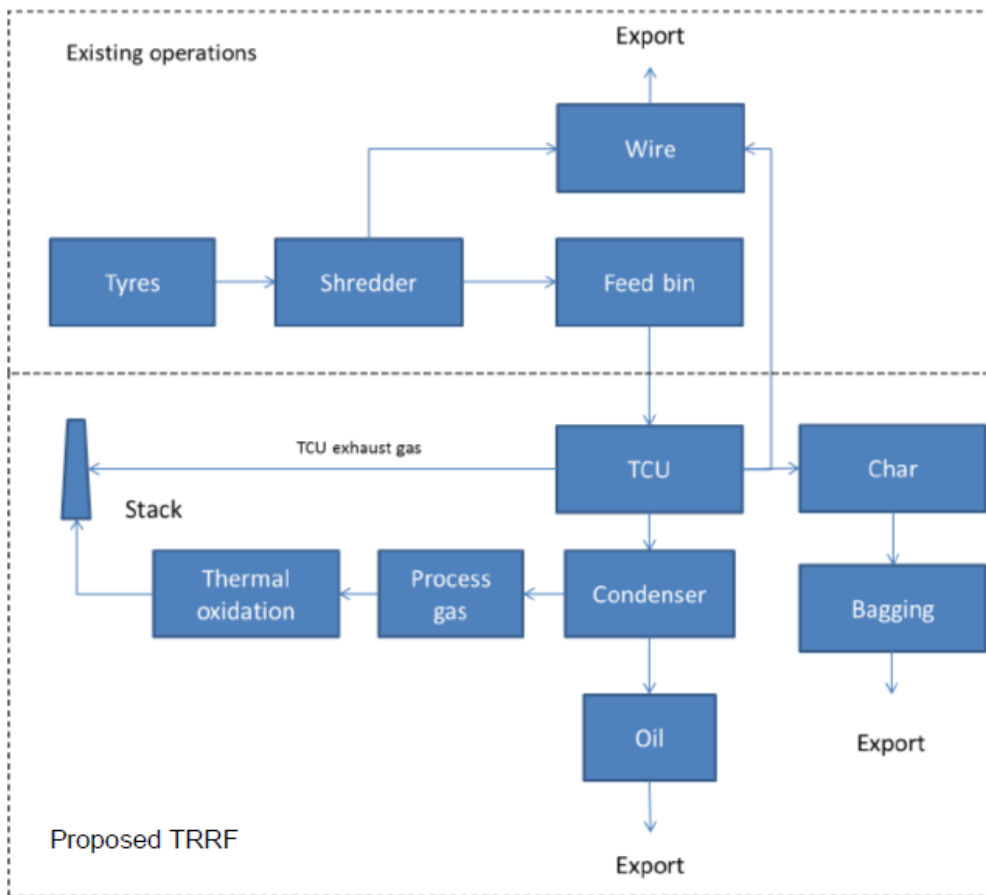
4. Overview of Premises

4.1 Operational aspects

The Applicant proposes to construct a TRRF in the building at the rear of the premises as depicted in Figure 2. The existing tyre shredder is to provide shredded tyres for the plant. Inside the TRRF plant shredded tyres will be heated to between 550 to 650 degrees Celsius. At this temperature, tyres decompose into three components: process gas; char; and metals – see Figure 1. Process gas is condensed, char is bagged; and metal is recovered and consigned for recycling. Uncondensed Process gases are oxidized at high temperature (850 degrees Celsius) and emitted to air via the Main stack, which is at least 15m high above ground level.

Condensed oil is pumped to above ground, fully bunded oil storage tanks.

Figure 1 – process flow chart



4.2 Infrastructure

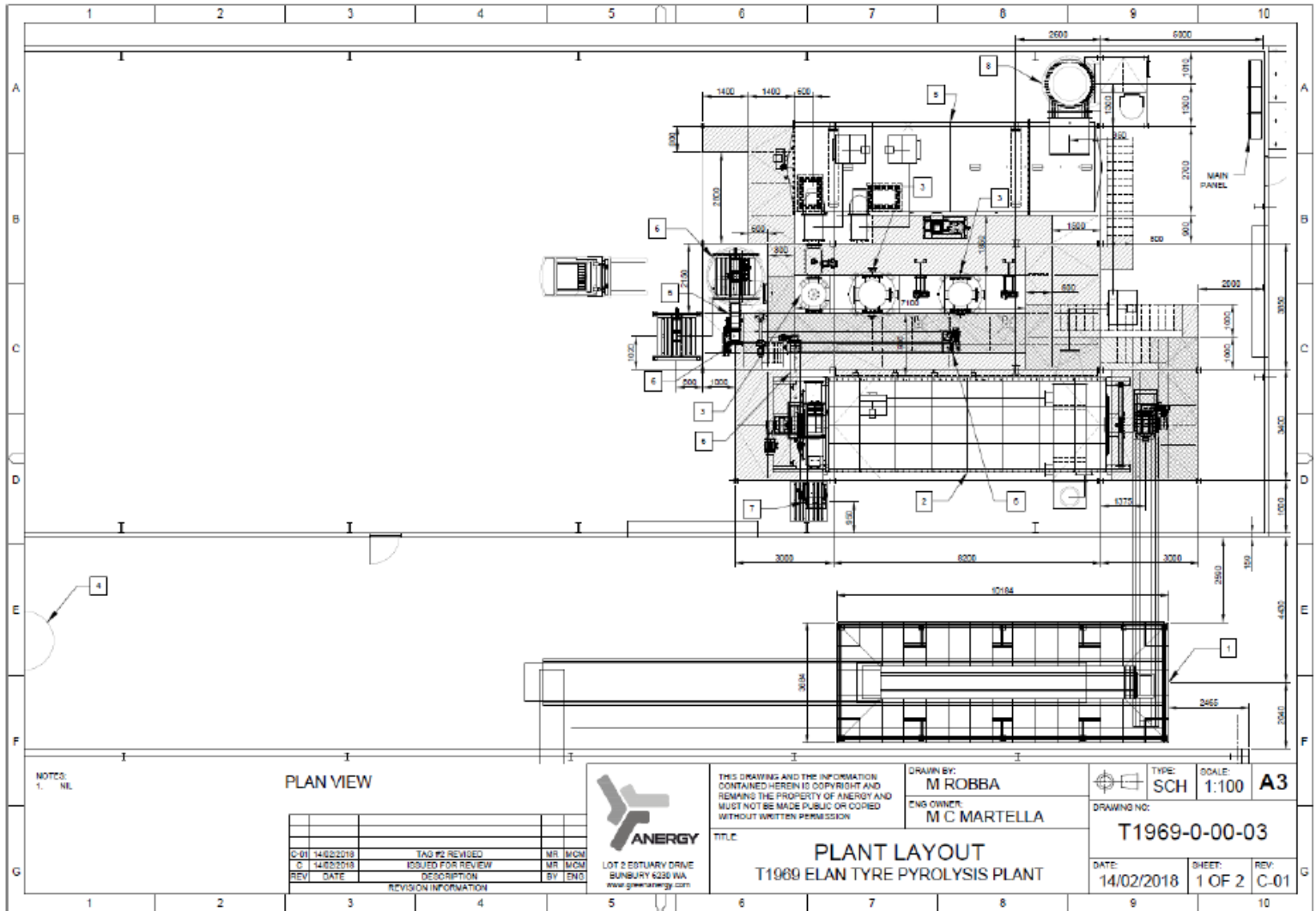
The infrastructure associated with the TRRF is detailed in Table 4 and with reference to the Site Plan in Figure 2.

Table 4 lists infrastructure associated with each prescribed premises category.

Table 4: TRRF Infrastructure

	Infrastructure for the char manufacturing plant	Site Plan Reference
1	Tyre shred Feed bin	1
2	Thermal Conversion Unit (TCU)	2
3	Oil Condenser Train	3
4	Oil Storage	4
5	Thermal Oxidiser Unit (TOU)	5
6	Char handling and bagging	6
7	Metal recovery and processing	7
8	Main Stack	8

Figure 2 – Site Plan



Works Approval: W6113/2017/1

Works Approval: W6556/2021/1

4.3 Exclusions to the Premises

This Decision Document and the Works Approval only relate to the new TRRF proposed for the premises and explicitly excludes the existing tyre shredding activities.

5. Legislative context

5.1 Part IV of the EP Act

5.1.1 Ministerial Statement

The proposed works have been approved by Ministerial Statement No. 1064, with the EPA's Report 1601. The conditions attached to the Ministerial Statement relate the size of the operation and that up to 60 tonnes per day of tyres are allowed to be processed. Air Quality was an environmental factor that was assessed by the EPA which advised:

"The EPA considers, having regard to the relevant EP Act principles and environmental objective for Air Quality, that the impacts to this factor are manageable and would no longer be significant, provided that:

- *Implementation of the proposal is consistent with the elements and authorised extent in Schedule 1 of the Recommended Environmental Conditions, including limiting the quantity of end-of-life tyres processed to 60 tonnes per day, consistent with the parameters for the air dispersion model (Appendix 5).*

The EPA also notes that a works approval and licence is a statutory requirement under Part V of the EP Act. The EPA's view is that any requirement for emissions monitoring are best regulated through this process."

5.2 Other relevant approvals

5.2.1 Planning approvals

The Applicant applied for planning approval with the City of Canning for the proposed works which was granted on 13 April 2018.

5.3 Part V of the EP Act

5.3.1 Applicable regulations, standards and guidelines

The overarching legislative framework of this assessment is the EP Act and EP Regulations. The guidance statements which inform this assessment are listed in Appendix 1.

5.3.2 Works approval and licence history an existing prescribed

The proposed works are to be located within premises that are current prescribed. The current licence relates to the accepting, storing and shredding of tyres.

Table 5 summarises the works approval and licence history for the premises.

Table 5: Works approval and licence history

Approval	Issued	Nature and extent of works approval, licence or amendment
W5982/2016/1	21 April 2016	Works Approval issued for the tyre recycling premises.
L9041/2017/1	11 May 2017	Licence issued for the tyre recycling premises.
W6118/2017/1	24 April 2018	Works approval application for the TRRF plant.

6. Modelling and monitoring

6.1 Modelling of emissions to air

Modelling of air emissions and its assessment was conducted during the EPA's assessment of the project. As such, modelling and assessment information provided with the Application was not further assessed.

The Applicant provided with the application projected emissions data which has been modelled to ground level concentration. Based upon the modelling, NO_x and SO₂ were the highest pollutants at ground level, both between 3% and 4% of the assessment criteria.

6.2 Proposed Monitoring

The Applicant provided with the application a proposed monitoring program for the emissions to air during operation of the TRRF which the Delegated Officer accepted.

However the Delegated Officer believes that some form of continuous monitoring of the Thermal Oxidiser Unit should be implemented to ensure that the emissions are treated efficiently at all times when the TRRF plant is operating, such as process parameters.

7. Consultation

The application for a Works Approval was advertised in the West Australian on 15 January 2018. Also an invitation to comment on the application was sent to the City of Canning on 1 February 2018. No comments were received on the application.

8. Location and siting

8.1 Siting context

The premises are located in an industrial area in Welshpool, approximately 12 kilometers south-east of the Perth CBD. The nearest residential area is Wattle Grove, approximately 600m to the east. Between this residential area and the premises are other existing industrial premises and a major road, Roe Highway. The western side of the premises is adjacent to other industrial and commercial operators.

8.2 Residential and sensitive Premises

The distances to residential and sensitive receptors are detailed in Table 6 and shown in Figure 3.

Table 6: Receptors and distance from activity boundary

Sensitive Land Uses	Distance from Prescribed Activity
Residential Premises	600m to the south-east and 850m to the west of the tyre recycling and shredding facility.
Commercial/Industrial	Immediately adjacent to the premises are other industrial premises

Figure 3: Premises location



9. Risk assessment

9.1 Determination of emission, pathway and receptor

In undertaking its risk assessment, DWER has identified all potential emissions pathways and potential receptors to establish whether there is a Risk Event which requires detailed risk assessment.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Tables 7 and 8 below.

Table 7: Identification of emissions, pathway and receptors during construction

Risk Events					Continue to detailed risk assessment	Reasoning
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
Construction	Generic Construction	Noise	Residential premises 600m to the south-east and 850m west	Air / wind dispersion	No adverse impact expected	No Small scale plant to be built, of which all processing activities to be located within an existing building. <i>The Environmental Protection (Noise) Regulations 1997</i> apply.

Table 8: Identification of emissions, pathway and receptors during operation

Risk Events					Continue to detailed risk assessment	Reasoning
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
TRRF plant	Noise	Residential Premises 600m to the south-east and 850m to the west of the premises.	Air	No adverse impact expected	No	Activities occur inside existing building with noise emissions not expected to cause unacceptable impacts.
	Dust		Air	No adverse impact expected	No	The TRRF including the handling of the char is not expected to generate dust.
	Gaseous emissions	This factor has been assessed by the EPA		No	EPA assessment 1601 assessed this factor and advised that monitoring conditions could be managed by the works approval or licence if needed.	
Bulk storage of chemicals	Condensate (Fuel)	Soil	Direct discharge	Minor soil contamination	No	Fuels and other chemicals to be stored in sound primary and secondary containment. Managed by DMIRS.
Fire risk	Smoke	Residential premises	Air	Amenity	No	No change to existing fire risk and no change to controls in the current licence needed.

10. Regulatory controls

After considering the environmental risk assessment above, the Delegated Officer considered that it would be appropriate to attached conditions to the works approval that relate to the details of the application (infrastructure and equipment) and the monitoring program provided by the applicant. Conditions that are consequential to these (AQ/QC and reporting) will also be attached to the works approval. Table 9 below summarises the conditions to be attached to the works approval.

Table 9: Summary of regulatory controls to be applied

	Controls		
	10.1.1 Infrastructure and equipment	10.1.2 Monitoring	10.1.3 Reports
TRRF	•	•	•

10.1 Works Approval controls

10.1.1 Infrastructure and equipment

The proposed works should be put into place in accordance with the application to ensure that the predicted environmental performance of the TRRF is achieved.

10.1.2 Monitoring

Table 20 of the Works Approval Application Supporting Document outlines a proposed monitoring program which the Delegated Officer accepted and incorporated into the works approval.

The Thermal Oxidiser Unit (TOU) is the key pollution control equipment for the TRRF. It will oxidise residual contaminants in waste gases that are to be emitted to air. Assessment of the TRRF has been based on the TOU being operational at all times while the TRRF is generating uncondensed process gases. At those times, the TOU operates to at least 850 °C with a 2 second residence time in the TOU.

The Applicant informed that the temperature and the residence time of waste gas is being monitored within the TOU and as such this will be required to be monitored continuously. The Delegated Officer may re-assess the monitoring requirements following the results of the initial stack testing.

10.1.3 Reporting

Reporting conditions, commensurate with completion of construction works and provision of monitoring results have been added to the works approval.

11. Determination of Works Approval conditions

The conditions in the Works Approval in Attachment 1 have been determined in accordance with the *Guidance Statement: Setting Conditions*.

Table 10 provides a summary of the conditions to be applied to this Works Approval.

Table 10: Summary of conditions to be applied

Condition Reference	Grounds
Infrastructure and Equipment Conditions 1 to 4	These conditions specify the allowed works as per the application.
Emissions Conditions 5 to 8	These conditions allow for Specified Emissions and General Emissions, which are based upon the expected emissions as per the Application.
Record-keeping Condition 9	These conditions are to ensure that compliance with the works approval conditions can be monitored from the books of the Works Approval Holder.
Monitoring and Reporting Conditions 11 to 14	These conditions are necessary to ensure that stack emissions are monitored and reported to the department.

DWER notes that it may review the appropriateness and adequacy of controls at any time and that, following a review, DWER may initiate amendments to the works approvals under the EP Act.

12. Applicant's comments

The Applicant was provided with the draft Decision Report and draft Works Approval on 21 March 2018. The Applicant provided comments on the draft by letter of 13 April 2018, which have been incorporated in the final versions of this document and the Works Approval.

13. Conclusion

This assessment of the risks of activities on the Premises has been undertaken with due consideration of a number of factors, including the documents and policies specified in this Decision Report (summarised in Appendix 1).

Based on this assessment, the Delegated Office has granted the Works Approval application, subject to conditions.

Paul Byrnes
Manager Licensing (Process Industries)

Officer delegated under section 20
of the *Environmental Protection Act 1986*

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	Works Approval Application	-	DWER records A1536386 and A1568730
2.	Email from Elan Energy regarding emission monitoring	-	DWER record A1625002
3.	Ministerial Statement 1064	MS 1064	accessed at www.epa.wa.gov.au/
4.	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	DER 2015a	accessed at www.dwer.wa.gov.au
5.	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	DER 2015b	
6.	DER, August 2016. <i>Guidance Statement: Licence duration</i> . Department of Environment Regulation, Perth.	DER 2016a	
7.	DER, November 2016. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	DER 2016b	
8.	DER, November 2016. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	DER 2016c	
9.	Applicant's comments on draft Decision Report and Works Approval	-	DWER record A1652885