



Application for Works Approval

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

Works Approval Number W6422/2020/1

Applicant Forbes Industries WA Pty Ltd trading as Custom Engineering

ACN 088 363 142

File Number DER2020/000273

Premises Custom Engineering
60 Irvine Drive
MALAGA WA 6090

Legal description
Lot 119 on Deposited Plan 16231
As defined by the Premises maps in Schedule 1 of the issued works approval

Date of Report 13/11/2020

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. As a result of this assessment, Works Approval W6422/2020/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Decision 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> under 'Industry Regulation'.

2.2 Application summary

On 6 July 2020, Forbes Industries WA 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 undertake construction works relating to a proposed chrome plating facility at the Premises located in the industrial area of Malaga in the City of Swan.

The Premises relates to category 48 (Metal finishing) and the assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in Works Approval W6422/2020/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guidance Statement: Risk Assessments* (DER 2017) are outlined in Works Approval W6422/2020/1.

This assessment does not consider the existing engineering workshop on the Premises.

2.3 Overview of premises

2.3.1 Construction and Operational aspects

The applicant operates an existing engineering workshop at the Premises and is proposing to construct a chrome plating facility, primarily for hydraulic parts, inside the existing workshop building. The process will involve chrome plating hydraulic parts in a tank containing chromic acid and passing a current through the items to be plated. Items will be rinsed in a second tank and allowed to drip dry over the tank. A power rectifier will be used to convert AC to DC current for the plating process.

There will be no discharge of liquid waste as part of normal operations at the premises. Occasionally (less than once per year) the tank will be drained to remove acid waste and sludge from the Premises by a licensed controlled waste contractor.

The plating facility will be used as required and it is not anticipated that it will be in continuous operation.

Proposed new infrastructure relating to category 48 (Metal finishing) activities is listed in Table 1

Table 1: Proposed chrome plating infrastructure

	Infrastructure	Site Plan Reference
1	20 kL steel chrome plating tank	Chrome plating tank in Figure 2 of issued Works Approval.
2	20 kL steel washdown tank	Washdown tank in Figure 2 of issued Works Approval
3	Concrete containment bund	Containment sump in Figure 2 of issued Works Approval

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 *Guidance Statement: Risk Assessments* (DER 2017).

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 2 below.

Table 2 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 2: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Installation of tanks and concrete bund (containment sump)	Air/windborne pathway	Construction will take place inside an existing building with a large separation distance to sensitive receptors therefore no additional applicant controls have been proposed.
Noise			
Operation			
Environmentally hazardous substances – chromic acid and rinse water containing chromic acid	Spills or leaks from plating/washdown tanks	Direct discharge to land and infiltration to groundwater	<p>The tanks will comply with the requirements of <i>Australian Standard AS 1692-2006 Steel tanks for flammable and combustible liquids</i></p> <p>Tanks will be installed inside an impervious containment bund within an existing building which is enclosed with a concrete floor.</p> <p>The bund will be constructed in accordance with AS3780, <i>The storage and handling of corrosive substances</i>, including, the walls and floor of the containment sump coated with an acid resistant surface protection, the floor will be sloped to aid spill recovery and</p>

Emission	Sources	Potential pathways	Proposed controls
			constructed to capture any spills or leaks from the tank. In the unlikely event of a spill into the bunding pit, the fluid is pumped back into the chrome tank.
Air emissions	Chromic acid tank	Air/windborne pathway	Use of a non-perflourooctanesulphonate (PFOS) fume suppressant.
Odour			Tanks will be installed inside an existing building which is completely enclosed.

3.1.2 Receptors

In accordance with the *Guidance Statement: Risk Assessment* (DER 2017), the Delegated Officer has excluded employees, visitors and contractors of the applicants 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 below provides 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 (*Guidance Statement: Environmental Siting* (DER 2016)).

Table 3: Sensitive human and environmental receptors and distance from premises boundary

Human receptors	Distance from premises boundary
Closest residential receptor	800 metres from western boundary of premises
Environmental receptors	Distance from premises boundary
Unnamed Multi-use wetland (sump land)	135 metres north north-east
Threatened Ecological Community Priority 3 Banksia Woodland	140 metres north east
Underlying groundwater	Superficial aquifer used for domestic bores at 5 metre depth
Public drinking water supply area (PDWSA)	Proposed location is within a priority 3 PDWSA proclaimed under the <i>Metropolitan Water Supply, Sewerage and Drainage Act 1909</i> . However, the premises is not located within any wellhead protection zones. The PDWSA protects the quality of drinking water used by the Water Corporation for domestic supply in the Perth metropolitan area.

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) 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 4.

Works Approval W6422/2020/1 that accompanies this Decision Report authorises construction and time-limited operations. The conditions in the issued Works Approval, as outlined in Table 4 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 metal finishing 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 4: Risk assessment of potential emissions and discharges from the Premises during construction, and operation

Risk Event				Consequence rating ¹	Likelihood rating ¹	Risk ¹	Reasoning	Regulatory controls
Source / Activities	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
Construction								
Construction and installation of two dipping tanks and a containment sump	Dust	Air/windborne pathway causing impacts to health and amenity	Refer to Section 3.1.1	Slight: minimal impact at a local scale	Rare: will only occur in exceptional circumstances	Low	Separation distance to receptors and construction. Enclosed within an existing building	NA
	Noise	Residential premises 800 metres west						
Operation (including time limited operations)								
Chrome Plating	Emissions of acid and chrome	Air/windborne pathway causing impacts to health	Refer to Section	Minor: low level impact to amenity at a	Rare: will only occur in exceptional	Low	The Delegated Officer considers the separation distance and applicant controls are sufficient to	Condition 1

Risk Event				Consequence rating ¹	Likelihood rating ¹	Risk ¹	Reasoning	Regulatory controls
Source / Activities	Potential emissions	Potential receptors, pathway and impact	Applicant controls					
	vapours, fumes or aerosols to air	and amenity Residential premises 800 metres west	3.1.1	local scale	circumstances		minimise the risk of vapours, fumes or aerosols.	
	Leaks and spills of chemicals	Direct discharge and infiltration/seepage to groundwater. Contamination of impacted soil and potential contamination of groundwater within a PDWSA.	Refer to Section 3.1.1	Moderate: low level offsite impacts at a local scale	Rare: will only occur in exceptional circumstances	Medium	Overall low storage volumes and small-scale. Tanks to be constructed to Australian Standards including a containment bund/sump. Infrastructure located within an existing enclosed building. However, site is located in a non-wellhead protection zone Priority 3 PDWSA increasing the potential consequence of discharges to groundwater.	Conditions 1, 6 and 7
	Odour	Air/windborne pathway causing impacts to health and amenity	Refer to Section 3.1.1	Minor: low level impact to amenity at a local scale	Rare: will only occur in exceptional circumstances	Low	The Delegated Officer considers the separation distance and applicant controls sufficient to minimise the risk of odour.	Condition1 and 6
	Noise	Residential premises 800 metres west	Refer to Section 3.1.1	Minor: low level impact to amenity at a local scale	Rare: will only occur in exceptional circumstances	Low	The Delegated Officer considers the separation distance and applicant controls sufficient to minimise the risk of noise.	Condition 1

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the Guidance Statement: Risk Assessments (DER 2017)

4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website (24/08/2020)	None received	N/A
Local Government Authority advised of proposal (19/8/2020)	The City of Swan replied 8/9/2022 advising that a development approval to convert the land use from warehouse to general industry was granted on 11 May 2020 (DA-116/2020) and that the inclusion of acid tanks in the proposal does not require further approvals from the City.	The Delegated Officer notes this advice
Applicant was provided with draft documents on 6 November 2020	<p>The applicant replied on 9 November 2020 confirming they had no comment on the draft works approval and requesting the instrument is issued.</p> <p>The applicant also clarified that the wash tank will be constructed to the same Australian Standard as the chrome plating tank and that in the unlikely event of a spill into the bunding pit, the fluid is pumped back into the chrome tank.</p>	The decision report and works approval were updated based on the applicant's clarifications.

5. Decision

The size and scale of proposed chrome plating activities is limited to a 20 kL steel chrome plating tank, 20 kL steel washing tank and associated containment. Infrastructure will be constructed to relevant Australia Standards and located within an enclosed existing building with a hardstand floor.

In general the risk profile of emissions and discharges is assessed be low. However, the premises is located in a non-wellhead protection zone of a Priority 3 PDWSA. The Delegated Officer notes that metal finishing activities are listed in Water Quality Protection Note 25 as an incompatible land use within a Priority 3 PDWSA. The City of Swan has confirmed that the applicant has relevant planning approvals and the addition of acid tanks does not require additional planning approvals.

Noting the siting and location factors, the Delegated Officer assessed the risk to groundwater to be medium and imposed a higher degree of regulatory control.

The works approval infrastructure design requirements will include the following:

- the location of infrastructure (within the existing building)
- storage of chromic acid limited to a single 20 kL tank that complies with AS 1692;
- the chromic acid tank and associated pipework and washdown tank will be located within a concrete containment bund (containment sump)
- the containment sump will be required to:
 - comply with AS 3780;
 - lined or coated with acid resistant surface protection and with a sloped floor. impervious bund suitably designed and constructed for containment of the volume and characteristics of the material being stored;

The works approval also includes conditions for time limited operations where the applicant is able to commencing operating the facility upon submission of an Environmental Compliance Report at the completion of works in accordance with the works approval. During the time limited operations phase (up to 6 months) the application will need to apply for a licence.

The Delegated Officer has specified the following time limited operations requirements on the works approval to address the risk to groundwater:

- maintenance of the containment bund to prevent leaks;
- immediate recovery and disposal of spills;
- use of a non-perfluorooctane sulphonate fume suppressant in plating tanks at all times when chrome plating is being undertaken;
- Acid wastes and sludges are to be removed from the premises;
- no more than 20 kL of chromic acid is stored on the premises at any one time.

The Delegated Officer expects that the time limited operations requirements on the works approval will form the conditions of a future licence, subject to consideration of a licence application and an Environmental Compliance Report.

6. 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) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
2. DER 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
3. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. Department of Water and Environment Regulation (DWER) 2019 *Guideline: Guide to Licensing*, Perth, Western Australia
5. Department of Water (DOW) 2016 *Water quality protection note no. 25, Land use compatibility table for public drinking water source areas Perth*, Western Australia

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 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		6 July 2020			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Forbes Industries (WA) Pty Ltd			
Premises name		Custom Engineering			
Premises location		60 Irvine Drive Malaga being Lot 119 on Plan 16231			
Local Government Authority		City of Swan			
Application documents					
HPCM file reference number:		DER2020/000273			
Key application documents (additional to application form):		Aerial photo Certificate of title Site Map ASIC registration Report and risk assessment mainly directed at DG considerations			
Scope of application/assessment					

Summary of proposed activities or changes to existing operations.	Construction of tanks and bunds inside existing building for hardchrome operation. Operation of hardchrome plating of mechanical parts, principally hydraulic cylinders.	
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	
Category 48: Metal finishing: premises on which metals are chemically cleaned or metals, plastics or metal or plastic products are plated, electroplated, anodized, coloured or otherwise coated or finished.	100 tonnes per annual period.	
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: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input 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"/>	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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Approval: Expiry date: If N/A explain why?
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"/>	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"/>	Name: N/A Type: Proclaimed Groundwater Area Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Regional office: Swan Avon
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Name: Gnangarra PDWSA Priority: P3 Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input 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 checked="" type="checkbox"/> No <input type="checkbox"/>	Applicant has applied for a dangerous goods 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"/>	Date of classification: N/A
Direct interest stakeholders		
City of Swan	Letter to be sent	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>