Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Works Approval

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

Works Approval Number	W6968/2024/1
Applicant	ICD Superalloys Australia Pty Ltd
ACN	675 181 987
File number	DER2024/000508
Premises	Canning Vale Facility Warehouse B, 204 – 208 Bannister Road CANNING VALE WA 6155 Legal description Part of Lot 165 on Plan 13436 Certificate of Title Volume 1589 Folio 88 As defined by the coordinates in Schedule 2 of the issued works approval
Date of report	20 December 2024
Decision	Works approval granted

Grace Heydon

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GRACE HEYDON
MANAGER, WASTE 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 W6968/2024/1 has been 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.

2.1 Application summary and overview of the premises

On 10 September 2024, ICD Superalloys 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 applicant is proposing to develop a newly built warehouse to process various metals. The premises is in the General Industry zone as designated under the City of Canning's Local Planning Scheme No. 42 (City of Canning, 2020).

The works approval application is to undertake installation and construction works associated with the following:

- Plasma cutting station;
- Shot blasting booth;
- Metals turning shredder; and
- Rotajet metals turnings wash plant

The premises relates to the category and assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6968/2024/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with Guideline: Risk Assessments (DWER 2020) are outlined in works approval W6968/2024/1.

2.2 Description of operations

Processing and storage zones for each waste stream are specified in Figure 1 below, with a full list of site infrastructure and equipment used in the recycling process for all Premises activities included in the works approval.

The following information in relation to the Oleology filtration process has been summarised from the application.

2.2.1 Waste acceptance

The premises will be used to process low-volume, high-value revert metals (i.e., scrap metal from other manufacturing processes that can be remelted and sent back into production).
The premises will accept various minor metals, including:

- Pure metals (e.g., cobalt, molybdenum, nickel and titanium);
- Alloys and revert (e.g., nickel, tungsten, cobalt);

- Ferro alloys (e.g., ferro molybdenum, ferro tungsten and ferro titanium); and
- Rare earth metals (cerium, yttrium and lanthanum)

The metal will be received in various containers such as drums, IBCs and bulk bags in the goods-in areas (as shown on Site Layout Plan in Attachment 8B) where it will be inspected and designated for processing. Depending on the type and nature of material, the various metals will be subject to the following activities

- Bulking-up of material only (i.e., no further processing needed);
- Cutting into smaller pieces at a plasma-cutting station installed with local exhaust ventilation (LEV) with filter and external exhaust to the environment;
- Consolidation of larger items using cutting shears (240 t and 260 t) and baler;
- Cleaning and preparation of items by shotblasting in a chamber installed and operated in accordance with the Environmental Protection (Abrasive Blasting) Regulations 1998 and incorporating a ventilation and dust extraction system prior to external discharge to the environment; and
- Swarf material will be prepared in a shredder to reduce material volume and the metal turnings wash plant used to wash off any contaminants (e.g., oil and grease).

The Rotajet metal turnings wash plant is comprised of 3 main sections; wash; rinse; and dry with an in-feed hopper on the front end and a bagging off station for the out feed. The process is described as follows.

2.2.2 Washing Screw

The in-feed material (swarf) is loaded into the twin screw feed hopper. This is connected to a screw conveyor that controls both the speed and amount of material loaded into the wash line. The feed hopper ensures a consistent throughput and uniform production feed.

From the feed hopper, the swarf is transported into the washing screw which thoroughly and effectively targets all internal and external surfaces of the swarf. The swarf is submerged into to a heated bath of environmentally friendly wash chemicals, that ensures every internal and external surface of the swarf cut turnings comes into contact with the wash solution and contamination and oils can be targeted, even from fine ridges.

The wash solution is heated and recirculated into the cycle from the wash tank. The wash solution is also pumped to the overhead spray bars where it is impinged through the high flow knife jets directly onto the materials surface. The solution flows down the screw and drains out to the vibro sieve where the liquid is filtered through a 300-micron screen to remove any fines and solid picked up through the swarf. This is fed back into the wash tank. Used wash water will be drained to IBCs and temporarily stored on-site before removal to an appropriately licensed facility for treatment.

From the wash screw the swarf is transferred onto the linear vibrating deck. Here any fines are separated through the screen. The step also de waters the material to prevent any cross contamination from the wash liquor stand and the rinse stage.

2.2.3 Rinse

The rinse stage uses the same configuration as the wash. This stage howewer, uses water only to rinse the turning of any remaining residue, affluent or wash. Using the Rotajet again, the rinse screw will submerge, impinge and back flow the water for a thorough rinse process.

The screw then leads onto the second vibrating sieve where the swarf is transferred across the screen to be dewatered, and fines filtered again. This stage is crucial to reduce the moisture on the surface of the cut in preparation for the subsequent drying stage. This step ensures less

energy is needed to dry and that the drying stage will be more effective.

2.2.4 Dry

Rotajet uses a hot air blower to create an airflow down the screw that dries the surface of the swarf. As the swarf is constantly transferred up the screw, all surfaces of the swarf are in contact with the hot air and by the time it exits the screw, the material is completely dry.

The final stage of the line is the bagging station where bulk bags or drums are used collect the clean and dry swarf. All consolidated and processed material will be stored in containers (bulk bags, drums and IBCs) in the goods out area before removal off-site by truck for further processing (e.g., remelting).

Figure 1: Basic structure of the rotajet swarf washing line

3 Risk assessment

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

To establish a risk event there must be an emission, a receptor which may be exposed to that

emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

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

Table 1: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Placement of processing equipment. Vehicle and equipment movements.	Air / windborne pathway	**No controls provided** However, The Delegated Officer is aware that the provisions of section 49 of the EP Act is sufficient to regulate dust emissions during construction. The Delegated Officer is also aware that the premises site roads and delivery areas are sealed with concrete and/or bitumen, preventing dust dispersion into the atmosphere.
Noise			**No controls provided** However, The Delegated Officer is aware that the activities at the Premises will need to comply with the *Environmental Protection (Noise) Regulations 1997.* Any works on a Sunday or public holiday will need to comply with the prescribed standard for noise emissions as outlined in Regulation 7 unless prior consent is given in accordance with Regulation 13(3).
Operation			
Dust and fume	Vehicle movements, operation of shot blasting equipment and plasma cutting station	Air / windborne pathway	The premises site roads and delivery areas are sealed with concrete and/or bitumen, preventing dust dispersion into the atmosphere. All processing activities will be undertaken within enclosed warehouse. Plasma-cutting bay installed with local exhaust ventilation (LEV), including filter. The Shotblast booth will be constructed and operated in accordance with *Environmental Protection (Abrasive Blasting) Regulations 1998*, including a mechanical ventilation and

Emission	Sources	Potential pathways	Proposed controls
			dust extraction system which is operating so that: Concrete and bitumen areas will be maintained in good condition. All processing of metals (sorting, separating, grinding and shearing) will be undertaken within a dedicated processing building. Good housekeeping services maintained within the warehouse.
Noise and vibration	Delivery and storage of material, Operation of processing equipment (plasma cutting, shotblasting, shears, baler, wash plant and shredder), operation of mobile equipment and vehicles	Air/windborne pathway causing impacts to health and amenity	Operational hours limited to day period only (Monday to Saturday 0700-1900). All processing activities will be carried out inside the warehouse. Non-tonal reversing beepers will be used on mobile handling plant (e.g., forklifts). Will ensure that all equipment is in good working order and is maintained regularly.
Smoke (particulates and noxious gases)	Uncontrolled waste metal fire	Air/windborne pathway causing impacts to health and amenity	**No controls provided**
Fire debris and washwater	Firefighting activities in the event of an uncontrolled waste metal fire	Overland flow to stormwater infrastructure and infiltration to groundwater	**No controls provided**
Spil or leak of wash water	Metal turnings wash plant	Contamination of stormwater, direct discharge to land	Only environmentally safe cleaning solution will be used. All processing activities will be carried out in building with sealed concrete floors and concrete panel walls (below steel cladding). The wash water recirculation system will minimise volume of water stored in wash tank and need for change out of wash water. Regular inspection of wash plant for leaks and over-spray will be carried out. Used wash water will be stored in IBCs on temporary/mobile secondary containment (e.g., spill pallets).

3.1.2. Receptors

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

Table 2 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 *(Guideline: Environmental Siting* (DWER 2020)).

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

Human receptors	**Distance from prescribed activity**
Residential Premises	1000 m south of the premises boundary 640 m north-west of the premises boundary
Industrial premises	Immediately adjacent to the premises are other industrial premises
Environmental receptors	**Distance from prescribed activity**
Geomorphic wetlands – multiple use category wetland	Premises located approximately 1km south on the edge of the general industry zone.
Underlying groundwater	Depth to groundwater is approximately between 4.05 and 4.7 mBGL (Perth Groundwater Map) with groundwater flow to the west.
Proclaimed area (*RIWI Act 1911)* – Perth Groundwater Area Environmentally sensitive areas (ESA)	Premised not located within Proclaimed Perth Groundwater Area or ESA

3.2 Risk ratings

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

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

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 33.

Works approval W6968/2024/1 that accompanies this decision report authorises construction only. The conditions in the issued works approval, as outlined in Table 33 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

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

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

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Construction								
Placement of infrastructure and associated equipment Vehicle movements	Dust	Air / windborne pathway causing impacts to health and amenity	Residences within 640 m of premises Immediately adjacent industrial premises Priority ecological community approximately 800 m east of the premises boundary	Refer to Section 3.1	C = Minor L = Rare **Low Risk**	Y	N/A	The Delegated Officer is aware that dust Emission can be regulated under the general provisions of the EP Act. Excessive noise emissions can be regulated under the Environmental Protection (Noise) Regulations 1997 (EP Noise Regulations)
	Noise			Refer to Section 3.1	C = Minor L = Rare **Low Risk**	Y	N/A	
Operation ***(including time-limited-operations operations)***								
Operation of shredder, Cutting shears, shot blasting and other equipment Traffic movements and deliveries Sorting and load preparation	Dust	Air / windborne pathway causing impacts to health and amenity	Residences within 640 m of premises Immediately adjacent industrial premises	Refer to Section 3.1	C = Moderate L = possible **Medium Risk**	Y	Condition 1,2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16 and 25	The Delegated Officer considers that the Applicant's proposed controls and infrastructure are likely to be sufficient at mitigating dust emissions. The Delegated Officer considers dust emissions associated with operational activities can be adequately regulated by the general provisions of the EP Act. The Delegated Officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, therefore will be incorporated into the works approval and licence as regulatory controls.

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Operation of shredder, Cutting shears, shot blasting and other equipment Traffic movements and deliveries Sorting and load preparation	Noise	Air / windborne pathway causing impacts to health and amenity	Residences within 640 m of premises Immediately adjacent industrial premises	Refer to Section 3.1	C = Moderate L = possible **Medium Risk**	N	Conditions 1,2, 3, 4, 5, 6, 7, 8, 9, 12, 23, 24, 25, 26 and 27 **Conditions 19, 20 21 and 22,**	The Delegated Officer considers that noise verification monitoring is required to demonstrate the noise levels from operations comply with *Environmental Protection (Noise) Regulations 1997* at the Premises boundary and as such, has incorporated conditions requiring noise assessment to be undertaken.
Plasma cutting operation Stockpiling of metal	Fire/smoke	Air / windborne pathway causing impacts to health and amenity	Residences within 640 m of premises Immediately adjacent industrial premises	Refer to Section 3.1	C = Severe L = Unlikely **High Risk**	Y	Conditions 1,2, 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 16, 25, 26 and 27 **Conditions 17 and 18**	The Delegated Officer considers, a fire prevention and management plan can help reduce the risks of impacts of fire and can be regulated through conditions in the works approval and the licence. As such, the works approval holder will be required to implement a Fire and Emergency Management plan that is consistent with AS3745 through works approval conditions. The Delegated Officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, therefore will be incorporated into the works approval and licence as regulatory controls.
Fire - Abnormal operations	Potentially contaminated stormwater/fire	Overland flow and subsurface seepage causing impacts on	Immediately adjacent industrial premises.	Refer to Section 3.1	C = Moderate L = Unlikely	Y	Conditions 1,2, 3, 4, 5, 6, 7, 8, 9, 13, 14,	The Delegated Officer considers that the Applicant's proposed

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
	fighting water	human health, soil and groundwater quality	Wetlands approximately 1000 m south of the premises boundary, on the edge of general industry zone. Underlying groundwater 4 – 4.7 mbgl		**Medium Risk**		15, 16, 25, 26 and 27 **Conditions 17 and 18**	infrastructure and management controls are likely to be sufficient at mitigating emissions from contaminated stormwater. However, demonstration that fire wastewater will be removed from the premises is required to be submitted as a part of the Fire and Emergency Management.
Spil or leak of wash water	Contaminated washwater	Overland flow and subsurface seepage causing impacts on human health, soil and groundwater quality	Immediately adjacent industrial premises. Wetlands approximately 1000 m south of the premises boundary, on the edge of general industry zone. Underlying groundwater 4 – 4.7 mbgl.	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	Condition 13, 14 and 16	The Delegated Officer considers that the Applicant's proposed controls and the standard conditions within the works approval are likely to be sufficient at mitigating contaminated stormwater emissions during time limited operations. The Delegated Officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, therefore will be incorporated into the works approval and licence as regulatory controls.

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

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

4 Consultation

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

Table 4: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 18/10/2024	None received	N/A
Local Government Authority advised of proposal on 24/10/2024	None received	N/A
Applicant was provided with draft documents on 13/12/2024	The Applicant provided the following comments on 16/12/2024: Condition 1, Table 1: Cross referencing error noted Condition 7, Table 3, Item d: Typographical changes requested.	 Corrected Request adopted.

5 Conclusion

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

ICD Superalloys Australia Pty Ltd will require a licence to authorise emissions associated with the ongoing operation of the premises.

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.