



Application for Works Approval

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

| | |
|------------------------------|--|
| Works Approval Number | W6804/2023/1 |
| Applicant | International Graphite Limited |
| ACN | 624 579 326 |
| File Number | DER2018/001042-9~25 |
| Premises | International Graphite R & D Centre Lot 28 Morrison Way, Collie, WA 6225 Legal description Volume 2747, folio 128 on plan 625048 As defined by the coordinates in Schedule 2 of the Works Approval |
| Date of Report | 16/08/2023 |
| Decision | Works approval granted |

A/MANAGER, RESOURCE INDUSTRIES
REGULATORY SERVICES

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

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1. Decision summary

This Decision Report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the Premises. As a result of this assessment, Works Approval W6804/2023/1 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>.

2.2 Application summary and overview of Premises

On 5 May 2023, International Graphite Limited (the applicant) submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act). This application is to undertake construction works relating to a graphite micronisation mill at Lot 28 Morrison Way, Collie (the Premises). The Premises is approximately 1 km north-west of the centre of the Collie townsite.

The Premises relates to the category 80: non-metallic mineral processing and assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in Works Approval W6804/2023/1. 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 2017) are outlined in Works Approval W6804/2023/1.

The applicant has already established a pilot plant at the premises. The plant equipment currently consists of pilot-scale micronising and spheroidising mills (with an estimated production capacity of 10 tonnes/year) and a high-temperature graphite purification furnace to produce material for the anodes in lithium-ion batteries. The applicant is proposing to replace the current mill with one that can process up to 150 tonnes/year. The applicant expects to process 32 tonnes/year of product.

Power at the premises is currently supplied by an on-site diesel generator. The generator is an 80kW engine and does not trigger the capacity to be considered a prescribed activity under the *Environmental Protection Regulations 1987*.

The plant processes imported raw materials for the project at this time. The applicant plans to establish commercial-scale downstream processing, with raw material to be supplied from a nearby mine that is yet to be established. The establishment of the pilot plant is partly funded through the Collie Futures Industry Development Fund and is part of the Western Australian State Government's program to attract new industries and create future-focused jobs in Collie before coal mining and coal-fired power generation is retired in 2030.

Infrastructure proposed to be installed under this works approval includes the following:

- air-swept milling system (45 kW);
- feed hopper assembly;
- screw auger;
- classifier mill;
- CL classifier;
- Screw auger (return);
- Cyclone classifier;
- Filter receiver;

- Filter bags
- Draft fan (15 kW);
- 3 x surge bins;
- Transfer bin; and
- Weigh scale.

The applicant is also requesting to operate the infrastructure under at time limited operating period to allow time for a licence application to be submitted and approved for ongoing operation of the premises.

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 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 1 below. Table 1 also details the proposed control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Proposed applicant controls

| Emission | Sources | Potential pathways | Proposed controls |
|---------------------|--|-----------------------|---|
| Construction | | | |
| Noise | Installation of key machinery | Air/windborne pathway | All machinery will be installed within the existing building. |
| Operation | | | |
| Dust | Raw material stockpile Micronising plant Dust extraction | Air/windborne pathway | Dust extraction on major infrastructure, directed to a baghouse designed to collect 99.9% of generated dust above 1micron. All materials will be handled within the building and raw material stored in 1-tonne polypropylene bags. A dust management plan will be created and implemented within the ISO 14001 framework. The yard, carpark and building storage areas are sealed (paved or asphalt) and will be washed on a regular basis to remove potential dust-generating materials. |

| Emission | Sources | Potential pathways | Proposed controls |
|------------------|---------------------|---------------------------------|---|
| Noise | Machinery operation | Air/windborne pathway | <p>Most key machinery housed within the existing building.</p> <p>Noise attenuation enclosure to be constructed around external draft fan housing.</p> <p>Draft fan installed with a silencer.</p> <p>Operations will be conducted during “day-time” hours (7am to 7pm, Mon – Sat).</p> <p>Diesel generator fitted with standard exhaust muffler.</p> |
| Product spillage | Material handling | Air/windborne pathway | <p>All transfer and process of material will be within the enclosed shed.</p> <p>The yard, carpark and building storage areas are sealed (paved or asphalt) and will be washed on a regular basis to remove product build-up.</p> |
| Hydrocarbon | Diesel fuel storage | Seepage to soil and groundwater | The generator has a 550 L fuel tank that is self-bunded to comply with Australian Standard 1940:2004 - <i>The storage and handling of flammable and combustible liquids.</i> |

Dust and Noise

All handling and processing of raw and final materials will be undertaken within the existing shed and any dust emissions will be drawn into the dust extraction system. Raw materials will be transported to site enclosed in 1 tonne polypropylene bags.

Noise emissions from the construction and operation of the mill are not expected to be significant. The main noise emissions will be from the compressor, generator, extraction fan and micronisation mill. Noise emissions estimated on the manufacturer’s specifications are shown below in diagram 1.

| Unit | LA max dB @ 1m | LA max dB @ 7m | LA max dB @ 600m | Combined LA max dB @ 600m |
|------------|----------------|----------------|------------------|---------------------------|
| Compressor | 67 | 50 | 11 | 31 |
| Generator | 78 | 61 | 22 | |
| Fan | 80 | 63 | 24 | |
| Mill | 85 | 68 | 29 | |

Diagram 1: Noise emission estimation

Operations at the micronisation mill will be limited to daytime hours only (between 7am and 7pm, Monday to Saturday). The estimated combined noise emissions from the proposed operations will be 31dB LAmax at 600 metres. The assigned noise levels within the *Environmental Protection (Noise) Regulations 1997* are 65dB LAmax. Noise emissions from the proposed operations are not expected to have a significant impact at noise sensitive receivers, the closest being 650 metres from the site.

3.1.2 Receptors

In accordance with the *Guideline: Risk assessment* (DWER 2017), the Delegated Officer has excluded employees, visitors and contractors of the applicant'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 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 2016)).

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

| Human receptors | Distance from prescribed activity |
|--------------------------------|--|
| Closest residential receptor | 650m north-west of the premises |
| Environmental receptors | Distance from prescribed activity |
| Reserve 48390 | ~ 450m north-east of the premises |
| Collie River | 2.4 km north of the premises |

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk assessments* (DWER 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 3.

Works Approval W6804/2023/1 that accompanies this Decision Report authorises construction and time-limited operations. The conditions in the issued Works Approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required 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 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 Event | | | | | Risk rating ¹ C = consequence L = likelihood | Applicant controls sufficient? | Conditions ² of works approval | Justification for additional regulatory controls |
|---|--------------------|---|----------------------------------|----------------------|---|--------------------------------|---|--|
| Source/Activities | Potential emission | Potential pathways and impact | Receptors | Applicant controls | | | | |
| Construction | | | | | | | | |
| Placement of mill and associated equipment including vehicle movements (reversing beepers). | Dust | Air/windborne pathway causing impacts to health and amenity | Nearest resident 650m north east | Refer to Section 3.1 | C = Minor L = Rare Low Risk | Y | N/A | N/A |
| Construction of noise attenuation enclosure surrounding the external draft fan | Noise | | | Refer to Section 3.1 | C = Slight L = Rare Low Risk | Y | N/A | N/A |
| Operation (including time-limited-operations operations) | | | | | | | | |
| Operation of the mill and associated equipment including unloading, loading and storage of material | Dust | Air/windborne pathway causing impacts to health and amenity | Nearest resident 650m north east | Refer to Section 3.1 | C = Minor L = Rare Low Risk | Y | Condition 1 – dust extraction Condition 6 – operating requirements | N/A |
| | Noise | | | Refer to Section 3.1 | C = Minor L = Rare Low Risk | Y | Condition 6 – operating requirements Condition 7 – operating times | This emission is adequately managed by the general provisions of the EP Act and the <i>Environmental Protection (Noise) Regulations 1997 (noise regulations)</i> . |

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2017).

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 (19/06/2023) | None received | N/A |
| Local Government Authority (Shire of Collie) advised of proposal (14/06/2023) | The Shire of Collie replied on 27/06/2023 stating they had no comments on the application. | N/A |
| Applicant was provided with draft documents on 7/08/2023 | Refer to Appendix 1 | Refer to Appendix 1 |

5. Conclusion

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

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2016, *Guideline: Environmental siting*, Joondalup, Western Australia.
3. DWER 2017, *Guideline: Risk assessments*, Joondalup, Western Australia.

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

| Condition | Summary of applicant's comment | Department's response |
|--------------------------------------|---|-----------------------|
| Section 3.1.2 of the Decision Report | Formatting error in the section needed to be corrected. | Correction made. |

Appendix 2: Application validation summary

| SECTION 1: APPLICATION SUMMARY | |
|---|---|
| Application type | |
| Works approval | <input checked="" type="checkbox"/> |
| Date application received | 5/05/2023 |
| Applicant and Premises details | |
| Applicant name/s (full legal name/s) | International Graphite Limited |
| Premises name | International Graphite R&D Centre |
| Premises location | Lot 28 Morrison Rd Collie |
| Local Government Authority | Shire of Collie |
| Application documents | |
| HPCM file reference number: | DER2023/000311 |
| Key application documents (additional to application form): | Supporting document "Works Approval Application (category 80)" |
| Scope of application/assessment | |
| Summary of proposed activities or changes to existing operations. | <p>Works approval</p> <p>Construction of a Battery Anode Material Research and Development Facility.</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 or design capacity |
| Category 80: Non-metallic mineral processing | 150 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"/> | General lease <input checked="" type="checkbox"/> Expiry: 9/5/2025 |
| Has the applicant obtained all relevant planning approvals? | Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> | Shire of Collie has assessed the works and deemed no approval or development approvals were required as the activities of IG are contained within an existing building requiring no alterations or modifications. |
| 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 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 <u>WQPN 25</u>)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> |

| | | |
|--|--|--|
| <p>Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)</p> | <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> | <p>If Yes include details here.</p> |
| <p>Is the Premises within an Environmental Protection Policy (EPP) Area?</p> | <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> | <p>If Yes include details of which EPP(s) here.</p> |
| <p>Is the Premises subject to any EPP requirements?</p> | <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> | <p>If Yes, include details here, e.g. Site is subject to SO₂ requirements of Kwinana EPP.</p> |
| <p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p> | <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> | <p>If Yes include details here. Classification: Date of classification: N/A</p> |