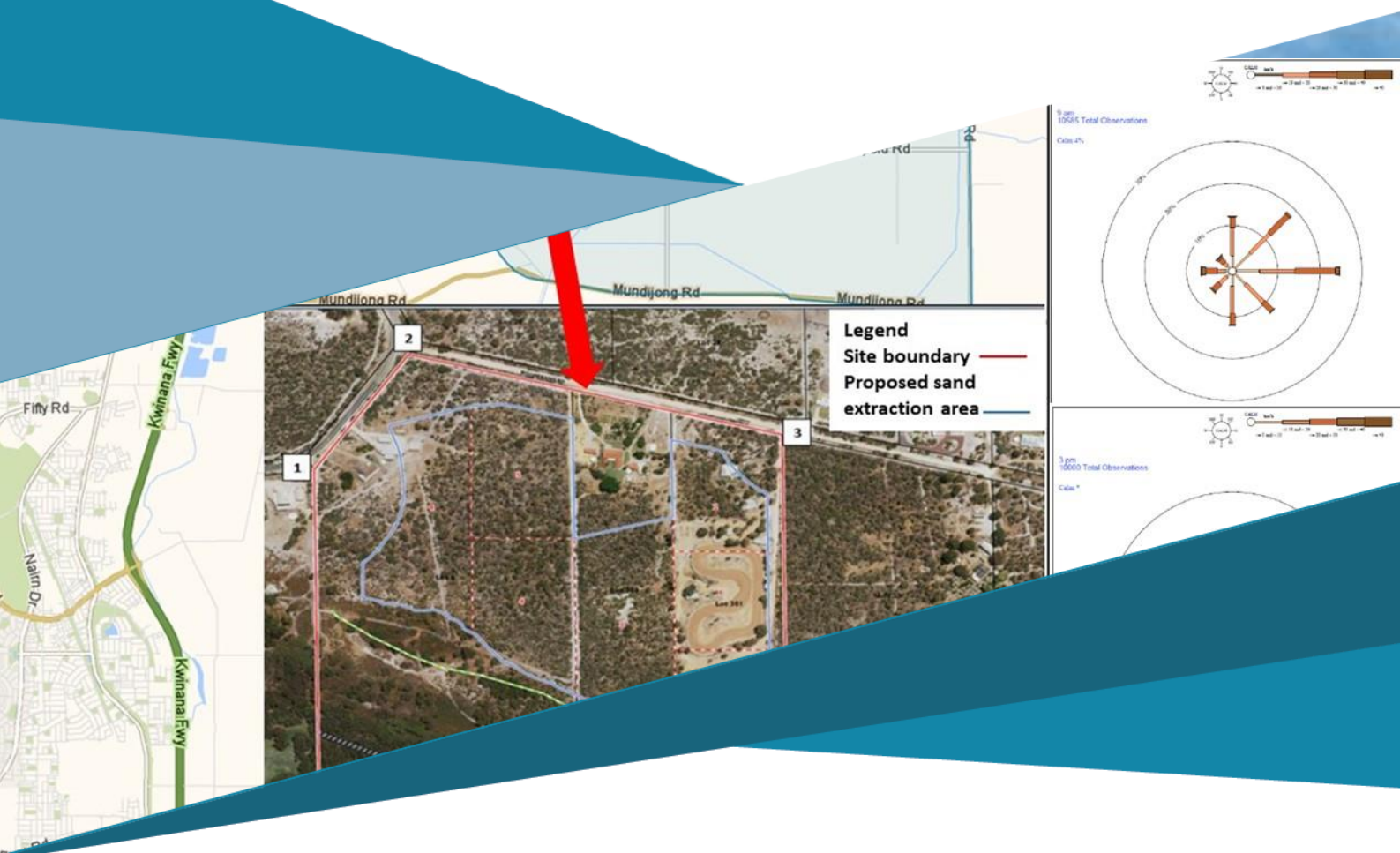




Government of **Western Australia**
Office of the **Appeals Convenor**
Environmental Protection Act 1986

Appeals Convenor's Report to the Minister for Environment

Appeal against Conditions of Works Approval W6163/2018/1
Hanson Oldbury Sand Quarry, Shire of Serpentine Jarrahdale



Appellant	City of Kwinana
Works approval holder	Hanson Construction Materials Pty Ltd
Authority	Department of Water and Environmental Regulation (DWER)
Appeal No.	044 of 2021
Date	April 2022

Office of the Appeals Convenor

08 6364 7990 or TTY 13 36 77 (National Relay Service)

admin@appealsconvenor.wa.gov.au

www.appealsconvenor.wa.gov.au

221 St Georges Terrace
Perth WA 6000

Appeals Convenor

Emma Gaunt

Investigating Officer

Annarie Boer

This report

© 2022 Office of the Appeals Convenor, Western Australia.

All rights reserved. This material may be reproduced in whole or in part provided the source is acknowledged.

Cover image: Whereis.com 2022 and DWER Works approval W6163/2018/1

Please contact us if you need the report in a different format.

Acknowledgement of Country

The Office of the Appeals Convenor acknowledges the traditional custodians throughout Western Australia and their continuing connection to the land, waters and community.

We pay our respects to all members of the Aboriginal communities and their cultures, and to Elders past, present and emerging.

Contents

1	Executive summary	1
1.1	Decision under appeal	1
1.2	Grounds of appeal and appellant concerns	1
1.3	Key issues and conclusions	2
1.4	Recommendation to the Minister	3
2	Reasons for recommendation	4
2.1	The conditions are appropriate to manage dust emissions, but could be improved	4
2.2	The conditions are appropriate to manage impacts to groundwater	8
3	Other matters	11
4	Supporting information	13
4.1	Premises description and legislative context	13
4.2	Location of sensitive receptors	15
4.3	Dust management and monitoring conditions in the works approval	16
Appendix 1	Appeal process	18

1 Executive summary

1.1 Decision under appeal

The Department of Water and Environmental Regulation (DWER) issued a works approval to Hanson Construction Materials Pty Ltd (the works approval holder) to construct and operate a mobile screening plant on 6 October 2021. The premises is located at Lot 6 Banksia Road, Lots 300 and 301 Boomerang Road, Oldbury in the Shire of Serpentine Jarrahdale (Figure 1, Section 4). The mobile screening plant is authorised for a capacity of 250,000 tonnes per annum.

The works approval, which includes conditions specifying infrastructure design and construction requirements also authorises a period of time-limited operations for 180 days and monitoring and compliance reporting. The premises will require a licence for ongoing operation. A licensing process will include an assessment, supporting data and opportunities for public review and comment.

The appeal is against the conditions of works approval W6163/2018/1.

This section summarises the key appeal issues and our conclusions. Further detail and reasons for our conclusions are contained in Section 2 and Section 3 sets out a brief summary of the matters considered beyond the scope of the appeal. Supporting information is in contained Section 4.

1.2 Grounds of appeal and appellant concerns

The City of Kwinana (the appellant) submitted that the conditions of the works approval do not adequately protect groundwater or air quality (dust). The appellant's concerns are summarised in Table 1 below.

Table 1 Grounds of appeal

Ground	Main concerns the appellant submitted
1 Dust emissions – inadequate conditions	<p>Conditions are inadequate to manage dust in the absence of requirements for:</p> <ul style="list-style-type: none">• monitoring of PM_{2.5}¹ as the main indicator for health impacts• the National Environment Protection Measures (NEPM) for PM_{2.5}, PM₁₀ and Total Suspended Particulates (TSP) as air quality targets at the site boundary• cleaning of dust along Mortimer and Casuarina Roads <p>The City requests access to air quality monitoring data and the right to make further submissions on dust management measures</p>
2 Groundwater quality and monitoring	<p>The works approval includes limited conditions for groundwater level and quality monitoring that do not reflect the degree of risk management necessary to protect the Critically Endangered Tumulus Mound Springs Threatened Ecological Community (TEC). Conditions should be included to ensure:</p>

¹ The appeal submission includes references to PM₅, which is assumed to intend references to PM_{2.5} (particulate matter with an equivalent aerodynamic diameter of 2.5 micrometres or less)

Ground	Main concerns the appellant submitted
	<ul style="list-style-type: none"> management of a stable hydrological cycle, based on more accurate modelling of changes to local groundwater ongoing off-site monitoring of groundwater levels at the wetland during operations and post revegetation.

1.3 Key issues and conclusions

The concerns from the City of Kwinana relate to the management of emissions from the Oldbury Sand quarry, located on the boundary of its administrative area. The City sought for all its issues raised on appeal to be addressed before the works approval is authorised.

The appeal investigation focused on 2 questions – are the conditions adequate to manage dust and are the conditions adequate to manage impacts to groundwater.

The conditions are appropriate to manage dust emissions, but could be improved

We conclude that DWER applied conditions proportionate to the level of risk and are appropriate to manage dust during construction and time-limited operations at the premises. However, we agree with DWER's recommendations that the works approval be amended to include an ambient target for dust of PM₁₀ particle size in line with NEPM and include a condition that requires management actions, should this target be reached.

DWER noted that sand mining tends to be associated with larger particles (PM₁₀ and greater) rather than PM_{2.5}, unless mechanical processes are on site, such as crushing or grinding which produce finer particle sizes. We note from New South Wales Health information that most of the dust from mining activities consists of coarse particles and particles larger than PM₁₀, with fine particles accounting for about 5 per cent.

DWER advised that it considered that monitoring of ambient PM₁₀ was sufficient to understand the potential impacts from dust on human receptors during time-limited operations and that conditions 6, 7 and 8 are expected to adequately manage emissions of particulates of all fraction sizes including PM_{2.5}, PM₁₀ and TSP.

DWER advised that the PM₁₀ monitoring data collected during the time-limited operations phase will be considered when undertaking a risk assessment for a licence for the ongoing operation of the premises. This assessment will also consider any requirements for PM_{2.5} and TSP monitoring in future dust monitoring conditions. The licence assessment process would offer opportunity to provide comments on dust monitoring programs, including any data submitted as supporting information.

We consider that with the additional requirements, the conditions applied in relation to dust management are consistent with guidance and will allow for validation against NEPM of the effectiveness of the dust controls on the works approval, including ongoing management of the risk.

Conditions are adequate to manage impacts to groundwater

We accept that DWER applied conditions appropriate to manage the emissions to ground and surface water from screening activities for time-limited operations, noting that related activities and potential impacts to groundwater are regulated by other decision-making authorities under relevant legislation.

The Decision Report identified 'Wetland L120' and 'Communities of Tumulus Springs (organic Mound Springs) of the Swan Coastal Plain' as 'specified ecosystems' described as areas of '*high conservation value and special significance*' located within the southern boundary of the premises.

The Decision Report considered hydrocarbon spills from screening machinery and vehicles as relevant emissions for impacts to groundwater and surface water quality. DWER advised in response to the appeal that it found for both receptors (groundwater and Tumulus Mound Springs TEC) that while minor impacts may occur in the event of a hydrocarbon spill, the risk event would be unlikely due to the works approval holder's proposed controls.

We note that the works approval holder proposed controls are reflected in condition 6 on the works approval, including a number of requirements for the management of hydrocarbon spills and contaminated stormwater runoff.

DWER advised that the Category 12 screening activity will not impact the hydrology (water level impacts) of the Tumulus Springs TEC wetland. Related activities from the proposed project, including vegetation clearing and sand extraction activities, are regulated by either the Commonwealth, in accordance with the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), or the relevant local government (sand extraction).

The works approval holder confirmed, during the appeal investigation, that water required for dust management will be delivered to the site, rather than being extracted through an on-site bore.

1.4 Recommendation to the Minister

We conclude that DWER applied conditions that are proportionate to the level of risk from dust for construction and time-limited operations at the premises.

However, we agree with DWER that the requirements for management of dust can be improved through amendments that specify:

- a target of 50 µg/m³ over a 24-hour averaging period for ambient PM₁₀ (consistent with NEPM) at the monitoring locations stated in condition 11;
- management actions in the event that ambient monitoring data indicates an exceedance of the ambient PM₁₀ target to support ongoing management and assessment of the risk from dust including:
 - a requirement for the works approval holder to investigate and report to the CEO on any exceedance within a specified timeframe
 - the information that the works approval holder reports to the CEO may include the details of the exceedance; ambient monitoring data, meteorological monitoring data and any actions that the works approval holder has taken towards preventing and controlling dust emissions from the premises.

We otherwise recommend the appeal be dismissed.

2 Reasons for recommendation

2.1 The conditions are appropriate to manage dust emissions, but could be improved

The appellant submitted that on the basis of potential health concerns, that measurement of PM_{2.5} is required. The appellant recommended that the National Environment Protection Measures (NEPM) should be included as standards for dust (PM_{2.5}, PM₁₀ and TSP) on the boundary of the premises and that local roads should be cleaned to manage dust.. The appellant acknowledged that DWER addressed a number of concerns submitted during public consultation in the proposed works approval conditions.

We find that DWER applied conditions to regulate dust, proportionate to the 'Medium' level of risk determined for dust from construction and time-limited operations at the premises. However, we agree with DWER's recommendation that the works approval should be amended to include a target for PM₁₀ dust emissions in line with NEPM and include a condition that requires management actions should this target be reached.

We explain our reasoning below.

DWER assessed the risk from dust

The Decision Report identified sensitive land uses including dwellings located towards the west and northeast of the premises within the annual morning and afternoon prevailing wind directions (see section 4.2). The closest dwellings are located at distances of 110 metres (northeast) and 120 metres (west) from the working face of different project phases.

The consideration of potential impacts from dust within the context of the appeal, includes the following types of dust:

- Particles as PM_{2.5} - particulate matter with an equivalent aerodynamic diameter of 2.5 micrometres or less²
- Particles as PM₁₀ - particulate matter with an equivalent aerodynamic diameter of 10 micrometres or less³. PM₁₀ therefore includes dust of fraction size PM_{2.5}
- Total suspended particulates (TSP) - particles each having an equivalent aerodynamic diameter of less than 50 micrometres⁴. TSP therefore includes dust of fraction sizes PM₁₀ and PM_{2.5}

In response to the appeal, the works approval holder advised that screening activities do not generate significant dust emissions of PM_{2.5} size fraction due to the absence of combustion and chemical processes.

DWER advised that sand mining tends to be associated with larger particles (PM₁₀ and greater) rather than PM_{2.5} unless mechanical processes on site, such as crushing or grinding, produce finer particle sizes.

² National Environment Protection (Ambient Air Quality) Measure, <https://www.legislation.gov.au/Details/C2004H03935>

³ Ibid

⁴ Environmental Protection (Kwinana) (Atmospheric Wastes) Regulations 1992

We note from a New South Wales Health Factsheet⁵ that:

The vast majority of dust from mining activities consists of coarse particles (around 40 per cent) and particles larger than PM₁₀, generated from natural activities such as mechanical disturbance of rock and soil materials by dragline or shovel, bulldozing, blasting, and vehicles on dirt roads. Particles are also generated when wind blows over bare ground and different types of stockpiles. These larger particles can have amenity impacts as well as health impacts.

Fine particles from vehicle exhausts and mobile equipment are also produced at mine sites, though they only account for about 5 per cent of the particles emitted during the mining process. Fine particles produced at mine sites are mainly from vehicle and mobile equipment exhausts.

DWER advised that published guidance⁶ and expert technical advice were followed in assessing the risk of dust emissions from the Premises and the Decision Report⁸ described the risk of impacts to amenity and human health from dust emissions as 'Medium' having regard to:

- an emission-exposure-receptor pathway between fugitive dust sources and sensitive receptors in close proximity to the premises
- sensitive receptors are located downwind of the premises at specific time periods taking into consideration available meteorological data
- the public health (exceedance of NEPM)⁹ consequence rating of a risk event from screening activities as 'Moderate'
- the likelihood rating of a risk event from the screening activities as 'Possible' (the risk event could occur at some time)

We note that DWER's assessment of risk from dust includes dust emissions of all particle sizes under the term 'dust'.

Having established that there is a medium risk to human health from dust emissions, DWER applied controls to the activity which are discussed below.

DWER imposed conditions to monitor and manage dust

DWER applied a number of conditions to the works approval, consistent with the *Guideline: Risk assessments* (February 2017) to regulate 'Medium' risk related to dust emissions including a number of conditions relating to dust management, air monitoring and reporting (see section 4.3).

The Decision Report states that monitoring of PM₁₀ would be sufficient to understand the risk from dust to human receptors during time-limited operations. Condition 11 applied to the works approval requires the following:

11. Within 7 days of the commencement of time limited operations the works approval holder shall undertake the monitoring of ambient air quality in Table 3 in accordance with the specifications in that table

⁵ New South Wales Government, New South Wales Health accessed March 2021; Fact Sheet – Mine dust and you; www.health.nsw.gov.au/environment/factsheets/Pages/mine-dust.aspx

⁶ DWER 2017; Guideline: Risk assessments, Part V, Division 3, *Environmental Protection Act 1986*

⁸ DWER 2021; Works Approval W6163/2018/1 Decision Report

⁹ DWER 2017; Guideline: Risk assessments, Part V, Division 3, *Environmental Protection Act 1986* (Statement 20, page 9 and Appendix 1)

Table 3

Parameter	Monitoring location	Units	Frequency	Averaging period	Method
PM ₁₀	AQ1 at Lot 301 as shown in Schedule 1 figure 2	µg/m ³	Continuous during time limited operations	24-hour average	AS3580.9.8
PM ₁₀	AQ2 at Lot 6 as shown in Schedule 1 figure 2	µg/m ³	Continuous during time limited operations	24-hour average	AS3580.9.8
Wind direction	Jandakot BOM station (009172)	Degrees (°)	Continuous during time limited operations	1-hour average	AS3580.14
Wind direction	Jandakot BOM station (009172)	Degrees (°)	Continuous during time limited operations	1-hour average	AS3580.14

In response to the appellant's assertion that PM_{2.5} and TSP should also be monitored, DWER acknowledged that while TSP monitoring may be used to identify impacts for human health and amenity, PM₁₀ is considered the more appropriate parameter for impacts to human health based on internal expert technical advice. DWER also advised that a requirement to monitor for TSP would require daily filter changes which increases the risk of human error.

The works approval holder submitted that the monitoring of both PM₁₀ and PM_{2.5} would require two separate instruments at each monitoring location. DWER advised that the installation of an additional two monitors was not justifiable from the medium risk rating for time-limited operations.

In relation to the management of dust generally, DWER advised in response to the appeal that conditions 6, 7 and 8 in particular, are expected to adequately manage emissions of dust of all fraction sizes including PM_{2.5}, PM₁₀ and TSP. These conditions include the following:

- condition 6 – specifies infrastructure, equipment and operational requirements for the control and minimisation of dust including a water cart, dust screens on fences and dust monitors
- condition 7 – requires the works approval holder to ensure that no visible dust from the primary activities crosses the boundary of the premises
- condition 8 – specifies a buffer between the location of material stockpiles and the premises boundary; requires the works approval holder to manage dust by wetting down unsealed roads, stockpiles and operational areas

DWER advised, in response to the appeal, that it would be appropriate to amend the Works Approval to include a target for PM₁₀ that aligns with the NEPM value (50 µg/m³ over a 24-hour averaging period) for the time-limited operations. DWER advised that the works

approval holder would be required to undertake additional management actions in relation to dust in the event this target is reached, which DWER proposed as an additional regulatory control.

The works approval holder was provided an opportunity to comment on DWER's recommendation and submitted that its experience with monitoring of dust at other sand mining sites indicates that an exceedance of the NEPM value for PM₁₀ is unlikely.

DWER advised that the PM₁₀ monitoring data collected during the six-month time-limited operations phase will be considered when undertaking a risk assessment for a licence for the ongoing operation of the premises. This assessment will also consider any requirements for PM_{2.5} and TSP monitoring in future dust monitoring conditions.

We note that the *Guideline: Risk assessments*¹⁰ states that DWER will determine regulatory controls which may include:

- monitoring to validate performance within limits or the effectiveness of other controls (e.g. infrastructure requirements), or to obtain baseline data to support our ongoing assessment of the risk.

The works approval holder agreed to a requirement for reporting within a specified timeframe of any exceedance of the NEPM value of 50 µg/m³ over a 24-hour averaging period together with corresponding meteorological data. This reporting would provide the basis for DWER to consider emission risk associated with the screening activity and any short term management measures.

Taking the above into account, we agree with DWER's recommendation that the works approval be amended to include a target for PM₁₀ dust emissions in line with the NEPM and in the event this target is reached, that additional management actions be required. In reviewing a regulatory instrument for management actions required in response to the exceedance of an air quality target¹¹, we recommend that requirements be included on exceedance of the NEPM value for PM₁₀ to ensure:

- the investigation and reporting of any exceedance within a specified timeframe
- specifications for information to be reported to support the collection of relevant information and the ongoing assessment of risk.

We consider that these requirements are consistent with guidance and will improve the validation against NEPM of the effectiveness of other dust controls on the works approval, including ongoing management of the risk.

The appellant recommended that the conditions of the works approval require local roads to be cleaned. In response DWER advised that any accumulation of dust on roads such as Mortimer and Casuarina Roads, are outside the premises boundary prescribed within the works approval, and therefore cannot be regulated under a works approval. DWER advised that conditions can only apply to land that is within the control of the holder of the works approval. We accept this advice.

In discussions with the works approval holder during the appeal investigation, the works approval holder requested changes to the type of dust monitors specified in response to

¹⁰ DWER 2017; Guideline: Risk assessments, Part V, Division 3, *Environmental Protection Act 1986*, statement 27

¹¹ DWER July 2021; Amended Licence L4706/1972/17

DWER's recommendations. Given that the works approval holder did not appeal the instrument and that the type of dust monitoring equipment was not raised by the appellants, this request is considered beyond the scope of appeal, however it is open to the works approval holder to discuss the request with DWER and apply for an amendment to the instrument should changes be necessary.

Further review of dust management measures can be considered during the licensing process

The City requested an opportunity to review the air quality monitoring data (required by condition 10) at the end of the time-limited monitoring period and a further right to make comment on future dust monitoring programs based on its review.

DWER advised that there is no statutory or regulatory requirement for the works approval holder to make the air quality monitoring data collected under the works approval publicly available. However, the data may be submitted as supporting information for the licence application for ongoing operation of the premises, in which case it would be available as part of the public consultation process. The licence assessment process would provide opportunity to provide comments on dust monitoring programs.

Monitoring data collected under the works approval may also be requested directly from the works approval holder or through submission of a Freedom of Information (FOI) access application to the Department under the *Freedom of Information Act 1992*.

2.2 The conditions are appropriate to manage impacts to groundwater

The appellant submitted that the works approval contains limited conditions for the management and monitoring of groundwater quantity and quality, does not address all the concerns previously raised in relation to the Hydrology Management Plan and does not reflect the degree of risk management that would be appropriate for the location of the premises adjacent to the wetland supporting the Critically Endangered Tumulus Mound Springs Threatened Ecological Community (TEC). The Appellant sought for revision of the Hydrology Management Plan to include long-term, site-specific data for modelling and additional conditions for groundwater level monitoring at Wetland L120 to protect the TEC.

We accept that DWER applied conditions adequate to the level of risk from screening activities, noting that related activities and their potential impacts to groundwater quality and hydrology are regulated by other decision-making authorities under relevant provisions.

We explain our reasoning below.

DWER assessed the risk from contaminated stormwater

The Decision Report identifies 'Wetland L120' and 'Communities of Tumulus Springs (organic Mound Springs) of Swan Coastal Plain' as 'specified ecosystems' and describes these as areas of '*high conservation value and special significance that may be impacted because of activities at, or emissions and discharges from, the premises*'. These specified ecosystems are located within the southern boundary of the premises¹³.

DWER considered the impacts of hydrocarbon spills from screening machinery and vehicles to groundwater and surface water quality during time-limited operation of the premises. The likelihood of contamination from stormwater run-off during time-limited operations was determined as 'Unlikely' and the consequence as 'Minor'. The Decision Report states that

¹³ DWER October 2021, Decision Report W6163/2018/1, page 15, Figure 5

these ratings were determined as overland run-off is unlikely and high permeability would let stormwater infiltrate through surface sediments to a shallow aquifer. The Decision Report refers to the works approval holder's controls as applicable for the management of contaminated stormwater run-off.

We note that DWER applied some of the works approval's stated controls and conditions (condition 6) which includes in Table 2 the following requirements to manage:

Hydrocarbon spills:

- Keep suitably stocked spill response equipment close to where spills may occur.
- Ensure all staff are trained to use the spill response equipment.
- Contain and clean-up spills as soon as they occur.

Contaminated stormwater run-off:

- Clean surface water run-off is to be diverted around screening plant infrastructure.
- Potentially contaminated surface waters are to be contained and recovered onsite via storage bunds or retention ponds.

Hydrocarbon or chemical storage areas:

- Store environmentally harmful materials in secured, covered, impervious and bunded areas.
- Bunded areas to have a minimum capacity of 110% of the largest container stored within it, or 25% of the volume of all containers, whichever is the larger.

The Decision Report states in relation to groundwater that:

the Commonwealth Department of Environment and Energy approval contains conditions that regulate the hydrology and monitoring of groundwater quantity and quality (especially TPH¹⁴) therefore no additional regulatory requirements will be included on the works approval regarding impacts to groundwater, as a means of avoiding regulating duplication.

DWER advised in response to the appeal that groundwater quality monitoring requirements were not considered necessary based on the nature of the operations being undertaken (Category 20 Screening activity). DWER further advised that it was determined for both receptors (groundwater and Tumulus Mound Springs TEC) that minor impacts may occur in the event of a hydrocarbon spill and that the risk event would be unlikely due to the works approval holder's proposed controls.

While infrastructure requirements for hydrocarbon and chemical storage are included on the works approval (condition 6), the Decision Report states that:

The storage of 5000 litres of diesel at the premises is not a prescribed activity as it does not meet the requirements of Category 73 and therefore is not regulated under the EP Act. Emissions from the storage of hydrocarbon will not be assessed under this works approval but the *Environmental Protection (Unauthorised Discharge Regulations) 2004* will apply in this instance and will regulate this activity.

DWER considered but did not condition impacts to hydrology

Section 6.2 of the Decision Report summarises the hydrology modelling and groundwater monitoring undertaken by the works approval holder, stating:

¹⁴ TPH refers to Total Petroleum hydrocarbons

As the hydrology aspects of this proposal are already regulated by other decision-making authorities, there is no requirement for further regulation by this Department.

DWER advised in response to the appeal that impacts to hydrology (water level impacts) will not occur because of the Category 12 screening activity and acknowledged that the Decision Report section 'Hydrology modelling and groundwater monitoring' (section 6.2) should not have been included.

DWER further advised that the Hydrology Management Plan outlines controls in managing impacts to the hydrology of the Tumulus Mound Springs TEC wetland from the vegetation clearing and sand extraction activities at the premises. These activities are regulated by either the Commonwealth, in accordance with the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), or the relevant local government (sand extraction) (see section 4.1 of this report).

The works approval holder confirmed, during the appeal investigation, that water required for dust management will be delivered to the site, rather than being extracted through an on-site bore.

3 Other matters

Exemption - construction noise

The City of Kwinana submitted support for the proposed works approval conditions subject to strict enforcement to protect adjoining residents from noise impacts.

The City raised concern that the construction stage of the project is subject to the *Environmental Protection (Noise) Regulations 1997*, which includes Regulation 13 for an exemption by the relevant local government. The City requested to make submissions regarding the proposed construction noise management plan prior to the Shire of Serpentine Jarrahdale issuing a Regulation 13 exemption under the Noise Regulations.

DWER advised that any approvals granted by the Shire of Serpentine Jarrahdale, including a Regulation 13 exemption under the Noise Regulations, is outside of the scope of the works approval.

By further way of information, DWER advised that the works approval includes the following in relation to construction noise:

- condition 9 requires the preparation of a Construction Noise Management Plan that describes the proposed management controls to mitigate noise during construction activities
- condition 23 requires the submission of the Construction Noise Management Plan at least 45 days prior to the commencement of construction works
- condition 24 requires the submission of an Addendum to the Environmental Management Plan (EMP) 30 days prior to screening operations commencing.

The works approval holder submitted in response to DWER's advice that:

Condition 9, however, should have more clearly required Hanson to provide the Construction Noise Management Plan to DWER, prior to the installation of the mobile screening plant, to confirm the design of the noise bund pit wall(s) (constructed for the separate sand mining operations) aligns with DWER's assessment for the Works Approval. Hanson assumes this to be the substantive intent (*sic*) of condition 9.

We note that conditions 23 and 24 set out specific points in time for the submission of the Construction Noise Management Plan and an Addendum to the EMP. We note that the requirements of the conditions related to noise management was not raised on appeal, rather that the appellant submitted support for the conditions. We consider it open to the works approval holder to clarify its assumptions in relation to the intent of the conditions in the works approval with DWER.

DWER advised that, similar to air quality monitoring data (section 2.1), the Construction Noise Management Plan may be requested directly from the works approval holder or through the submission of a Freedom of Information (FOI) access application under the *Freedom of Information Act 1992*.

Lack of viable Fauna Management Plan

- The appellant submitted that, as indicated in the decision report for Clearing Permit CPS 4935/1 (and /2; the Clearing Permit), the premises is likely to provide habitat for a significant range of fauna listed as rare (now threatened) or likely to become extinct under the *Wildlife Conservation Act 1950* (now under the *Biodiversity Conservation Act 2016*).

- The appellant noted that section 9.1.3 in the Hydrology Management Strategy Plan states that the staged clearing of the site, and the subsequent staged mining process, will facilitate the movement of fauna away from proposed mining operations and clearing. The appellant submitted that this is insufficient to mitigate, minimise and manage potential injury to existing native fauna within each clearing stage, and sought for the works approval holder to be required to contract a qualified ecologist to prepare a Fauna Management Plan prior to clearing and, at the very least, deploy qualified fauna rescue personnel on-site during clearing operations.

Ambiguities regarding on-site conservation covenant and off-site vegetation offset

- The appellant submitted that the lack of information regarding when the 11.6 hectare (ha) conservation covenant required under the clearing permit presents a risk of significant reputational damage to the works approval holder from a professional and public standpoint.
- The appellant submitted that the failure by the works approval holder to provide a location for the 35.46 ha offset for which a monetary contribution is required under the clearing permit, is potentially a 'lost opportunity' for the works approval holder to constructively engage with the local government and associated communities affected by the works approval.

Response:

Impacts to fauna resulting from the proposed clearing of native vegetation within the premises boundary have been assessed by DWER under a separate regulatory process for the clearing permit and are considered to be outside the scope of the works approval.

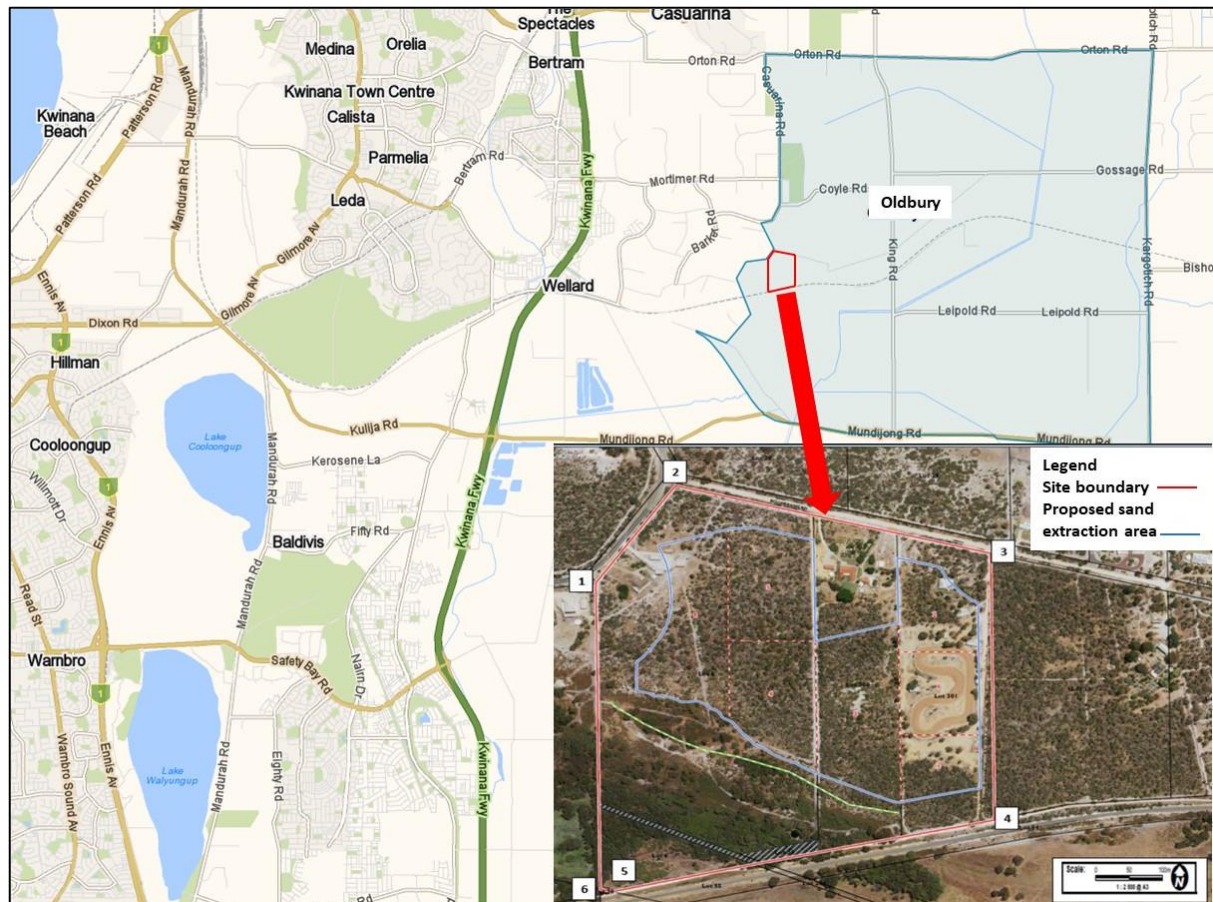
The 11.6 ha conservation covenant and 35.46 ha offset are requirements of the clearing permit that are outside the scope of the works approval. DWER invited the City of Kwinana to engage directly with the Department in relation to the offset to further discuss these opportunities.

4 Supporting information

4.1 Premises description and legislative context

Premises location

Figure 1 Premises location - Oldbury, Shire of Serpentine Jarrahdale



Sources: Whereis.com 2022; DWER Works approval W6163/2018/1

Proposal description¹⁵

The total extractive footprint of the premises at 15.2 hectares (ha), includes areas of disturbance for mining and site infrastructure. Figure 1 outlines the location of the property. The approved Extractive Industry Licence, granted by the Shire of Serpentine Jarrahdale, proposes to mine the extractive footprint in six (6) stages. The extraction of the sand (Extractive activity) is not a prescribed activity listed under Schedule 1 of the *Environmental Protection Regulations 1987* and is therefore not a prescribed activity regulated under the EP Act. Extraction is regulated by the respective local government authority and Hanson Construction Materials Pty Ltd has a valid approval under the *Planning and Development Act 2005* (refer to Table 2 below).

The screening plant does not require permanent fixing to the ground. The plant equipment will be positioned on a stable compacted pad at least 2 meters above the water table and on the floor of the extraction pit. There will be no construction apart from plant placement. The

¹⁵ DWER October 2021, Decision Report W6163/2018/1

mobile screening plant will be moved between areas as required during operations and positioned in the precise locations indicated in the Decision Report.

Water will not be used in the screening process but may be used to reduce dust lift-off during operations such as trafficable areas and material stockpiles for example. A materials conveyor will accompany the screening plant to stockpile the sand. No crushing of material is proposed. Final sand product will be removed from site as required by haul trucks and transport off site to market. Operational hours are from 7:00am to 5:00pm Monday to Saturday inclusive except on public holidays.

Legislative context of works approval

The legislation and regulations relevant to this appeal investigation is summarised below with the relevant requirements or activities regulated (see Table 2).

Table 2 Summary of relevant legislation and regulations and relevant requirements/ activities regulated

Legislation / Regulation	Decision/approval number	Relevant requirements / Activities regulated
<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>	EPBC2010/5622 Granted 8 December 2017 Expires 7 August 2034	Comply with clearing permit and implement Hydrology Assessment and Monitoring Plan and Restoration Plan
<i>Planning and Development Act 2005 (WA)</i>	Development approval – Shire of Serpentine Jarrahdale OCM152/03/14 Approval 24 March 2014 OCM195/06/14 Approval 15 March 2016 State Administrative Tribunal (SAT) Order DR389 of 2013 Approval 24 December 2014	Regulates Extractive activity (Extraction of sand)
<i>Environmental Protection Act 1986 (WA)</i>	Native vegetation clearing permit CPS 4935/02 Approved 29 January 2019 Expires 7 August 2034	Clearing of no more than 11.6 hectares of native vegetation
<i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>		Emissions from the storage of hydrocarbons (diesel)

4.2 Location of sensitive receptors

The location of sensitive land uses including dwellings located towards the west and northeast of the premises within the annual morning and afternoon prevailing wind directions from the Decision Report are below (Figures 2 and 3).

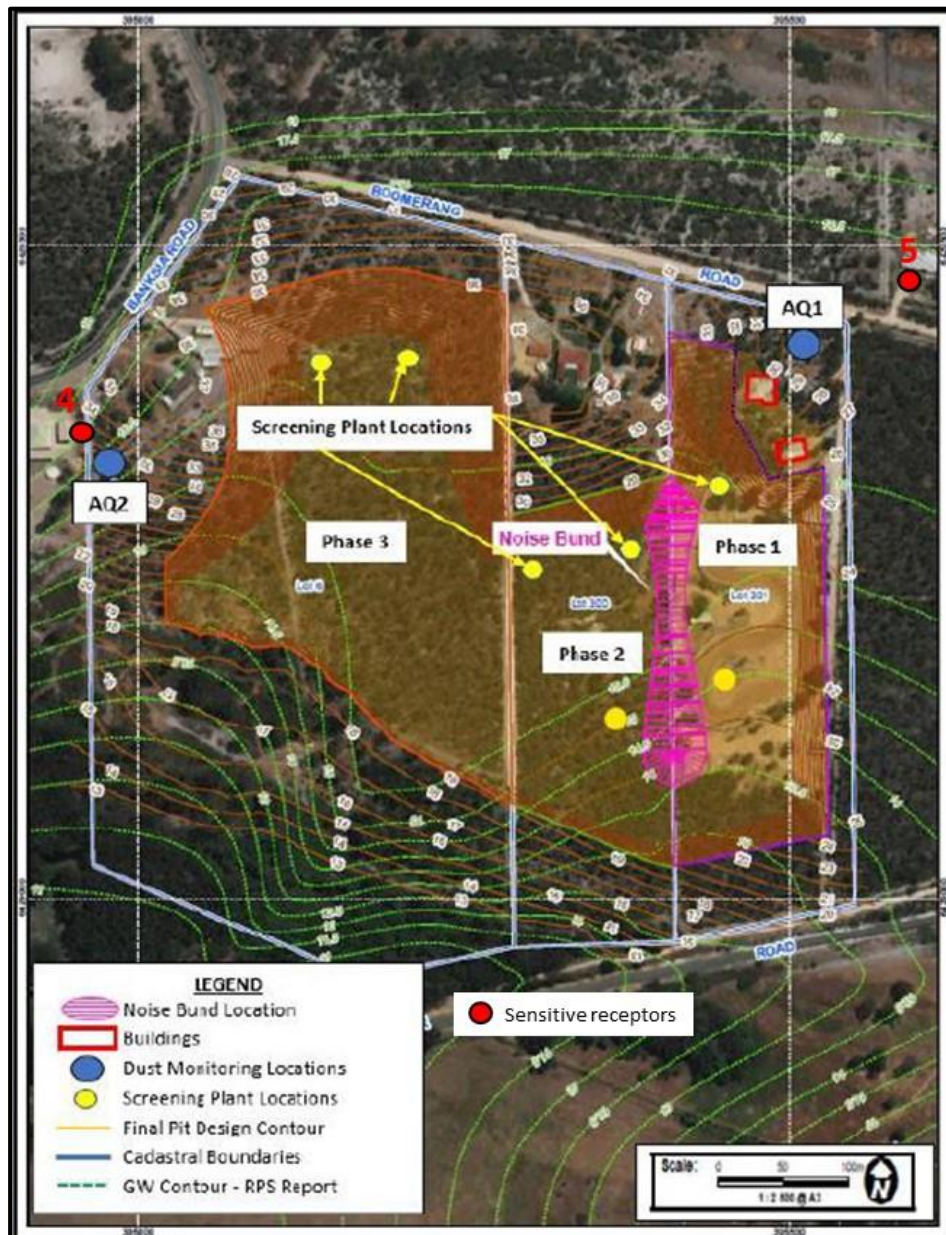
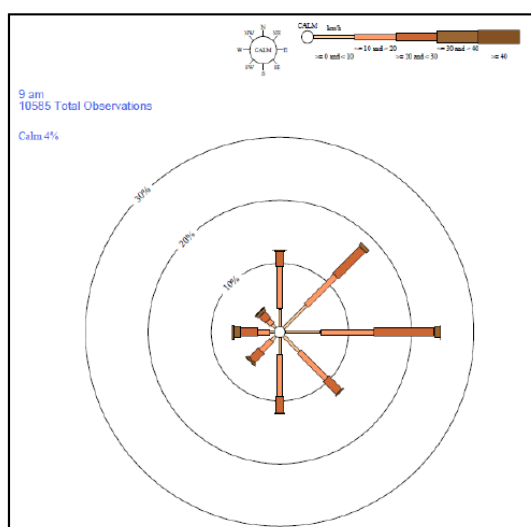


Figure 2 Locations of screening plant, closest sensitive receptors (4 and 5) and dust monitors (AQ1 and AQ2)

9am prevailing wind direction



3pm prevailing wind direction

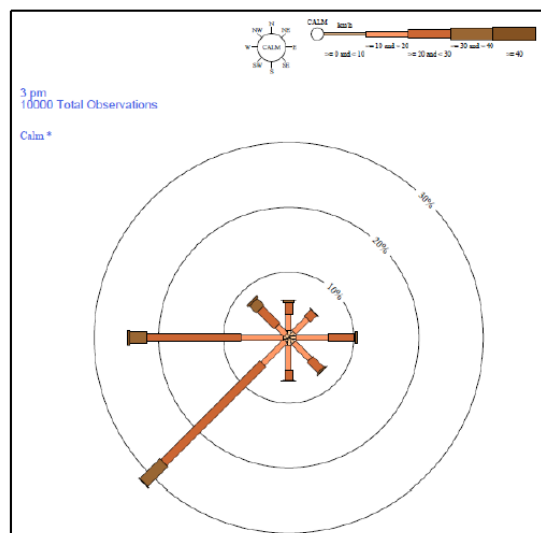


Figure 3 Prevailing morning and afternoon wind direction

4.3 Dust management and monitoring conditions in the works approval

Works approval W6163/2018/2 includes the following conditions to manage and regulate dust:

- condition 1 – specified the installation of 2 dust monitor in accordance with the relevant Australian Standard¹⁶ at specified locations
- condition 2 – requires the works approval holder to submit a Compliance Report including certification by a third party that dust monitors have been installed as per the relevant Australian Standard
- condition 6 – specifies infrastructure, equipment and operational requirements for the control and minimisation of dust including a water cart, dust screens on fences and dust monitors
- condition 7 – requires the works approval holder to ensure that no visible dust from the primary activity (not defined in works approval – decision report implies ‘Screening activities’) screening plant being installed crosses the boundary of the premises
- condition 8 – specifies a buffer between the location of material stockpiles and the premises boundary; requires the works approval holder to manage dust by wetting down unsealed roads, stockpiles and operational areas
- condition 11 – requires the works approval holder to undertake continuous ambient air quality monitoring for PM₁₀, wind direction and wind speed during time-limited operations in accordance with specifications
- conditions 18 and 19 – compliance reporting of time-limited operations including environmental performance, monitoring and compliance against conditions

¹⁶ AS/NZS 3580.1.1: Methods for the sampling and analysis of ambient air – Guide to siting air monitoring equipment.

- conditions 10 and 21 - require the works approval holder to record and report on complaints about alleged emissions from the premises, including investigation or responding to any complaint; maintain records in relation to requirements of conditions
- condition 24 - requires the works approval holder to submit the Addendum to the Environmental Management Plan 30 days prior to the screening operations commencing.

Appendix 1 Appeal process

The Minister assesses the merits of a decision

Environmental appeals follow a merits-based process. This means the Minister can consider all the relevant facts, legislation and policy aspects of the decision and decide whether it was correct and preferable.

A merits review cannot overturn the original decision to grant a works approval. But if the appeal is upheld, the works approval conditions might change or an amendment might not go ahead.

We report to the Minister, as does the decision-making authority

To decide an appeal's outcome, the Minister for Environment must have a report from both:

- the Appeals Convenor [see section 109(3) of the EP Act], and
- the authority that originally made the decision under appeal [see section 106(1)].

To properly advise the Minister in our report, our investigation included:

- review of the appeal and supporting documents from the appellant
- review documents from DWER
- consultation with the works approval holder on 1 February 2022
- consultation with the appellant on 1 February 2022.

Table 3 Documents we reviewed in the appeals investigation

Document	Date
DWER Works Approval W6163/2018/1 and Decision Report	October 2021
Appeal submission and supporting documents	October 2021
DWER response to appeal 044/21	November 2021
Works approval holder responses to appeal 044/21	November 2021 February 2022 March 2022
Environmental Management Plan, Prepared by RPS for Hanson Construction Materials Pty Ltd; 10 August 2021	August 2021
DWER; Guideline: Risk assessments, <i>Part V, Division 3, Environmental Protection Act 1986</i>	February 2017