Regional Development Assessment Panel Agenda

Meeting Date and Time: Wednesday, 5 February 2025; 9:30am
Meeting Number: RDAP/35
Meeting Venue: 140 William Street, Perth

A live stream will be available at the time of the meeting, via the following link:
RDAP/35 - 5 February 2025 - Shire of Capel

PART A – INTRODUCTION

1. Opening of Meeting, Welcome and Acknowledgement
2. Apologies
3. Members on Leave of Absence
4. Noting of Minutes

PART B – SHIRE OF CAPEL

1. Declarations of Due Consideration
2. Disclosure of Interests
3. Form 1 DAP Applications
   - 3.1 Lot 103 Boyanup Road West, Stratham - Extractive Industry - excavation of sand – DAP/23/02583
4. Form 2 DAP Applications
5. Section 31 SAT Reconsiderations

PART C – OTHER BUSINESS

1. State Administrative Tribunal Applications and Supreme Court Appeals
2. Meeting Closure

Please note, presentations for each item will be invited prior to the items noted on the agenda and the presentation details will be contained within the related information documentation

ATTENDANCE

DAP Members

Clayton Higham (Presiding Member)
Francesca Lefante (Deputy Presiding Member)
Neema Premji (Specialist Member)
Cr John Fergusson (Local Government DAP Member, Shire of Capel)
Cr Peter McCleery (Local Government DAP Member, Shire of Capel)

Minute Secretary

Kristen Parker (DAP Secretariat)

Officers in Attendance

Zoe Hendry (DAP Secretariat)

PART A – INTRODUCTION

1. **Opening of Meeting, Welcome and Acknowledgement**
2. **Apologies**
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PART B – SHIRE OF CAPEL

1. Declarations of Due Consideration

2. Disclosure of Interests

3. Form 1 DAP Applications

3.1 Lot 103 Boyanup Road West, Stratham - Extractive Industry - excavation of sand – DAP/23/02583

4. Form 2 DAP Applications

Nil.

5. Section 31 SAT Reconsiderations

Nil.

Part B – Item 3.1 - LOT 103 BOYANUP ROAD WEST, STRATHAM - EXTRACTIVE INDUSTRY DEVELOPMENT PROPOSAL

Form 1 – Responsible Authority Report
(Regulation 12)

DAP Name:	Regional DAP	
Local Government Area:	Shire of Capel	
Applicant:	Accendo Australia	
Owner:	Seatrek Holdings Pty Ltd	
Value of Development:	$2.5 million ☐ Mandatory (Regulation 5) ☒ Opt In (Regulation 6)	
Responsible Authority:	Shire of Capel	
Authorising Officer:	Bob Wallin, Planning Coordinator	
LG Reference:	PA205/2023	
DAP File No:	DAP/23/02583	
Application Received Date:	7 November 2023 (latest revision being January 2025)	
Report Due Date:	28 January 2025	
Application Statutory Process Timeframe:	447 Days (Extension of time granted by applicant to address various concerns listed by the Shire and State Authorities)	
Attachment(s):	1. Development Application dated January 2025. 2. Location Plan. 3. Vegetation Plan. 4. Access Plan. 5. End Landform Plan. 6. Schedule of submissions (public). 7. Schedule of submissions (applicant response). 8. Schedule of submissions (agencies). 9. Independent advice on proposed end landform.	
Is the Responsible Authority Recommendation the same as the Officer Recommendation?	☐ Yes ☒ N/A	Complete Responsible Authority Recommendation section
	☐ No	Complete Responsible Authority and Officer Recommendation sections

Responsible Authority Recommendation

It is recommended that the Regional Development Assessment Panel resolves to:

Accept that the DAP Application reference DAP/23/02583 is appropriate for consideration as the “Industry-Extractive” land use is compatible with the objectives of the Rural zone in accordance with Clause 16 (2) of the Shire of Capel Local Planning Scheme No. 8.

Approve DAP Application reference DAP/23/02583 and accompanying plans for an Extractive Industry at Lot 103 Boyanup Road West, Stratham, in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of the Shire of Capel Local Planning Scheme No. 8, subject to the following conditions:

Conditions

1. This decision constitutes planning approval only and is valid for a period of 8 years from the date of approval. If the subject development is not substantially commenced within 2 years of the licence being issued, the approval shall lapse and be of no further effect.

2. Resource extraction is only permitted for a maximum of 5 years after the issue of the Extractive Industry Licence.

3. Extraction must be undertaken in accordance with the agreed staging plan, as approved by the Shire. Commencement of the subsequent extraction stage shall be subject to the previous extraction site having substantially commenced rehabilitation.

4. Unless otherwise approved in writing by the Shire, the development may only proceed generally in accordance with the attached approved plans, as dated, marked and stamped by the Shire, subject to any amendments required as a consequence of the conditions of this approval or any subsequent Extractive Industry Licence issued by the Shire.

5. The maximum pit floor depth shall be 15m AHD and a minimum 1m above the current maximum groundwater level (MGL) and no dewatering works are to be undertaken without prior Department of Water and Environmental Regulation consultation. The Local Government is to be notified within 24 hours if the water table is intercepted.

   Such exposure or interception of the groundwater shall be remedied to the satisfaction of the Shire in consultation with the Department of Water and Environmental Regulation.

6. All works associated with the extractive industry be setback at least 20m from any boundary, with the exception of the earth bund as identified in Figure 5.1 of Appendix B of the Noise Management Plan.

Prior to the commencement of development/issuing of an Extractive Industry Licence

7. Prior to commencement of development, the unconstructed road reserve is to be constructed and maintained to the satisfaction of the Shire of Capel, which includes:
   - Upgrade intersection access to the constructed section of Boyanup Road West with a 30m asphalt sealed apron;
   - Widening of access track to min 6.1 metres with a 100mm gravel seal (over existing limestone); and
   - Pruning of vegetation up to 4m high that encroaches the road access.

8. Prior to the commencement of development, suitable arrangements being made with the Shire of Capel for the payment of a road reinstatement co-contribution for road deterioration purposes associated with Restricted Access Vehicle(s) in accordance with the WALGA co-contribution rates specified within the User Guide, estimating the incremental cost impact on sealed roads from additional freight tasks. Road Deterioration Co-contribution is to be made in arrears on the submission of the annual compliance report as required by the Extractive Industry Licence in accordance with the Shire of Capel Extractive Industry Local Law 2016.

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9. Prior to the issue of an Extractive Industry Licence, the approved pit boundaries shall be surveyed by a suitably qualified surveyor, with the location of such pegs being to the satisfaction of the Shire.

10. Prior to the commencement of development, a Rehabilitation Management and Monitoring Plan shall be submitted to the specifications and satisfaction of the Shire of Capel and approved by the Shire. The Rehabilitation Management and Monitoring Plan shall include but not be limited to the following:
    - 1 in 6 slope treatments;
    - Ongoing maintenance including timelines and watering, post planting;
    - Weed suppression measures;
    - Staging Plan for rehabilitation;
    - Erosion treatments/controls;
    - Planting arrangements including species, densities, configurations;
    - Groundwater Separation;
    - Bi-annual audit demonstrating ongoing maintenance until the Shire is satisfied that native revegetation is sustainably established;
    - Demonstrated consistency with Water Quality Protection Note 15 (WQPN 15) and the Guidelines for Preparing Mine Closure Plans[1]; and
    - Include a finished rehabilitated level at least 1m above the highest groundwater level.

11. Prior to the issue of an Extractive Industry Licence, the assigned rehabilitation bond for Stages 1 and 2 shall be provided to the Shire in the form of a bond or bank guarantee in pursuant with the Shire's Schedule of Fees and Charges.

12. Prior to issue of an Extractive Industry Licence, suitable arrangement shall be undertaken to quantify water requirements for all aspects of the proposed extraction and provide evidence of a secure water source, to the satisfaction of the Shire.

13. Prior to issue of an Extractive Industry License, the Table 3 of the Dust Management Plan dated January 2025 shall be updated to the satisfaction of the Shire to include:
    - Minimum response timeframes for water trucks;
    - Option for an on-site water supply to the satisfaction of the Shire of Capel; and
    - Treatment for stabilisation of the earth bund required in the Noise Management Plan.

14. Prior to issue of an Extractive Industry License, the Water Management Plan being updated to the satisfaction of the Shire of Capel to include:
    - Drainage management details addressing:
        - Staging;
        - Basin sizes;
        - Standards for surface water bund and diversion bund;
        - Location and construction details; and
        - runoff calculations and assumptions.

15. Prior to issue of an Extractive Industry License, the Weed Management Plan shall be updated to the satisfaction of the Shire to include:
    - Minimum of bi-annual weed control including agreed seasonal times;
    - Details confirming implementation by a suitably qualified contractor; and
    - Audit evidence of activity following control actions.

16. Prior to issue of an Extractive Industry License, the Dieback Management Plan shall be updated to the satisfaction of the Shire to include a 'close look wash down facility/area'.

General Conditions of Operations:

17. Prior to exporting materials off site, the earth bund is to be constructed in accordance with Figure 5.1 of the Appendix B of the Noise Management Plan dated January 2025 and maintained for the life of the approval, and removed prior to the last stage of rehabilitation being completed.

18. A Drainage Management Plan is to be submitted for approval, to the satisfaction of the Shire. The approved Draining Management Plan is to be implemented and maintained during the life of the extraction activity.

19. Details of road signage to be erected along the proposed haulage transport route. The installation of the signs shall be completed to the satisfaction of the Shire. Signage shall include signs on both approaches to along Boyanup West Road, and be a maximum of 100m from the access point onto Boyanup West Road.

20. An Annual Audit of Compliance shall be prepared by a suitably qualified independent expert and submitted to the Shire annually. The Annual Audit of Compliance shall include:
    a) Details to demonstrate compliance with the conditions of this Development Approval;
    b) Tonnage of sand removed from the site and the period within which the sand was removed;
    c) Details of compliant registers associated with dust and noise management, including response actions and timeframes.
    d) Progress report on the approved Rehabilitation Management and Monitoring Plan including:
        i. Details of completed, ongoing and future rehabilitation areas
        ii. Photos of rehabilitated areas
        iii. Monitoring and reporting details, if available
        iv. Start and completion dates, and expected start dates, if applicable, and
        v. A map depicting the rehabilitation areas and their completion progress.

21. The maximum number to truck movements shall not exceed 100 truck movements (50 in and 50 out) a day. Consideration by the Shire will be given for granting additional numbers to the stated hourly movements per day, with any variation to be approved in writing by the Shire's Chief Executive Officer.

22. The Extractive Industry license holder is to maintain (grading and watering) the section of unconstructed road reserve to the satisfaction of the Shire, at the licence holder's expense.

23. There shall be no storage of hydrocarbons on-site. On-site refuelling of equipment will be from a mobile service vehicle carrying appropriate spill prevention and clean-up equipment. No major repairs or maintenance shall take place on site.

24. The hours of operation shall be from 7.00am to 7.00pm Monday to Friday, and 7:00am to 1:00pm Saturday. No operations shall be permitted on Sundays or Public Holidays.

25. The pit boundary survey pegs shall remain in place for the duration of the operation to the satisfaction of the Shire.

26. The maximum volume of material to be stockpiled on site at any one time is 5,000m³ or for anticipated cubic volume cartage on the following operating day, whichever is the greater, with a maximum height of 4m.

27. All stockpiles shall be removed prior to the expiry of this approval.

28. Haulage vehicle speeds on site and on the road reserve abutting Boyanup West Road shall be limited to 10km per hour.

29. Trucks going to and from the Approved Development are not to operate on a school day, at the time when a school bus is using the section of Boyanup West Road between Bussell Highway and the access point.

30. The following Management Plans, once approved by the Shire, shall be implemented to the satisfaction of the Shire over the life of the operation:
    (a) Dust Management plan;
    (b) Noise Management Plan;
    (c) Dieback Management Plan;
    (d) Rehabilitation Plan;
    (e) Weed Management Plan;
    (f) Water Management Plan.

Advice Notes

1. Any proposed clearing of native vegetation is prohibited unless done under a clearing permit issued in accordance with the Environmental Protection Act 1986, or the clearing is exempt from the need for a clearing permit.

2. Groundwater shall not be exposed, extracted or dewatered during the operation of the extraction activities unless the appropriate approval has been obtained from the Department of Water and Environmental Regulation.

3. The proponent is advised of their obligations under the *Environmental Protection (Noise) Regulations 1997.*

4. In relation to Condition 11, the calculation of bonds will be in accordance with the Shire's Local Planning Policy 6.2 – Extractive Industries and the Shire's Fees and Charges Schedule.

5. The applicant is advised to liaise with the Department of Water and Environmental Regulation regarding approvals required for any proposed screening related to extraction activity. Further information is available regarding Industry Regulation Guide to Licensing at http://www.der.wa.gov.au/our-work/licences-and-works-approvals or by contacting DWER regarding works approvals and licenses at info@dwer.wa.gov.au or 6364 7000

6. The applicant is advised to liaise with the Department of Water and Environmental Regulation prior to clearing vegetation. For further information and applying, please use the following link https://www.der.wa.gov.au/our-work/clearing-permits/46-clearing-permit-application-forms For further information please contact DWER by email at admin.nvp@dwer.wa.gov.au or by telephone (6364 7098)

7. The applicant is advised that if it is intended to use licensed groundwater to support the proposed extraction, they contact DWER's Bunbury water licensing branch on 97264111 to amend their existing licence under the *Rights in Water and Irrigation Act 1914.* It is further advised that if additional water is required over and above their current licensed allocation, the proponent should note that no additional water is available other than via a trade/agreement with another licensee.

8. In relation to Condition 16, a Dieback Management Plan is to be prepared, approved, and implemented to the satisfaction of the Shire, in consultation with DBCA, consistent with the *Best Practice Guidelines for Management of Phytophthora Dieback in the Basic Raw Materials Industries*

9. The applicant is advised that "Acid sulfate soils (ASS) risk mapping indicates that a portion of the site is located within an area identified as representing a moderate to low risk of ASS occurring within 3 metres of the natural soil surface. Please refer to Department of Water and Environmental Regulation's (DWER) acid sulfate soil guidelines for information to assist with the management of ground and/or groundwater disturbing works: https://www.der.wa.gov.au/your-environment/acid-sulfate-soils/69-acidsulfatesoils-guidelines."

10. In respect of Condition 5, the applicant is advised that:

    a) proposed extraction is to be implemented in accordance with DWER's Water quality protection note (WQPN) no. 15 '*Basic raw materials extraction*' (July 2019) where appropriate to the site situation to ensure environmental risks are appropriately mitigated;
    b) that pit level and groundwater monitoring will be required to ensure separation distances to groundwater are maintained.

11. The applicant is advised that the *Environmental Protection (Noise) Regulations 1997* apply to all construction noise.

12. The applicant is advised that the Shire has no records of any approval being granted for the existing outbuilding located on the property. It is advised to liaise with the Shire's Development Services team regarding options to resolve this matter.

13. The applicant is advised to liaise with the Shire of Capel's Development Services team (Environmental Health division) regarding on-site effluent disposal requirements and drinking water requirements.

14. The applicant is advised that if mineral sands are extracted, a separate mining approval will be required and to liaise with the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) regarding processes and requirements.

15. In respect to Condition 5, a maximum pit floor level may be reduced to 14m AHD subject to providing additional data to the satisfaction of the Shire of Capel and DWER that provides longer term historical data.

16. In respect to Condition 25, this condition is to prevent accidental vehicle intrusion or ground surface disturbance within the setback areas.

Details: outline of development application

Region Scheme	Greater Bunbury Region Scheme
Region Scheme - Zone/Reserve	Rural
Local Planning Scheme	Shire of Capel Local Planning Scheme No.8 (LPS8)
Local Planning Scheme - Zone/Reserve	LPS8: Rural
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan - Land Use Designation	N/A
Use Class and permissibility:	LPS8: 'Industry – Extractive' - A
Lot Size:	78.6ha
Existing Land Use:	Agriculture - Extensive
State Heritage Register	No
Local Heritage	☒ N/A ☐ Heritage List ☐ Heritage Area
Design Review	☒ N/A ☐ Local Design Review Panel ☐ State Design Review Panel ☐ Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

Proposal:

The applicant is seeking development approval for the extraction of sand on the subject lot, being Lot 103 Boyanup Road West, Stratham.

An updated proposal was lodged with the Shire on January 2025, supported by additional information was provided following advertising. The updated development application addressed previous issues raised by the Shire (see **Attachment 1** – application). The development application was re-referred to key government agencies to assist the Shire's assessment of the latest revision. The key changes include:

- Reducing the extraction footprint from 7.4ha to 6.1ha;
- Increasing minimum setbacks from 10m to 20m;
- Providing updated management plans associated with noise, dust and water management;
- Providing updated data on groundwater conditions for the 2024 winter season and additional monitoring sites.

The proposed extraction:

- Has an area of 6.1ha, representing 7.7% of the subject land (see **Attachment 2** – extraction area) located in the southeastern portion of the site that forms part of a ridge line running north to south. The proposed extraction area is cleared land except for isolated native trees (see **Attachment 3**) and is setback 20m from the eastern and southern boundaries;
- Is expected to yield 400,000 tonnes of sand;
- Is to be accessed via an unconstructed portion of road reserve that forms part of Boyanup Road West (a regional distributor and RAV-4 classified road), travelling west to Bussell Highway (Primary Distributor Road) (see **Attachment 4** – access plan). The proposal access point will be asphalt sealed, up to the length of a RAV-4 vehicle at the intersection with Boyanup Road West. Signage will be installed, advising service trucks of where to enter the road network;
- Is to occur over four stages ranging in size from 1.2ha to 1.7ha; and
- Have a project life of two years (200,000m^3 per year) subject to resource demand.

It is estimated that 70% of the haulage is proposed to be undertaken from October to May (7-month period). Estimated vehicle movements are divided into two scenario's:

a) 50 truck movements per day (to and from); or
b) 100 truck movements peak fluctuations (maximum) (to and from).

The number of truck movements will vary depending on campaigns, but would be conditioned to restrict the proposal to scenario a) by default in any determination for approval, with an option to seek approval to haul beyond that figure for limited periods.

Following extraction, the site is to be re-contoured to allow rehabilitation to pasture for grazing with a 1 in 4 gradient (see **Attachment 5** - end landform).

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Background:

There are no previous applications associated with the subject land. It is noted that there is an outbuilding, however, there is no records of a development approval or a building permit for this structure. It is noted that a development application would be required as the structure requires a setback variation to the southern boundary. This item can be addressed separately through compliance.

Legislation and Policy:

Legislation

- *Planning and Development Act 2005* (P&D Act);
- *Planning and Development (Local Planning Schemes) Regulations 2015* (LPS Regulations);
- *Planning and Development (Development Assessment Panels) Regulations 2011* (DAP Regulations);

State/Local Planning Framework

- Greater Bunbury Region Scheme (GBRS)
- State Planning Policy 2.5 - Rural Planning
- State Planning Policy 2.4 – Basic Raw Materials
- State Planning Policy 3.7 – Planning in Bushfire Prone Areas
- State Planning Policy 5.4 – Road and Rail Noise
- Shire of Capel Local Planning Scheme No. 8 (LPS8)
- Shire of Capel Local Planning Policy 6.2 – Extractive Industries (LPP6.2)

Site Context

The subject land is zoned Rural. The property fronts Bussell Highway on its western boundary and has access to Boyanup West Road to its southern boundary. Land to the west is zoned "Rural Residential" and forms part of an estate which is characterised by lots of approximately 2ha in size. Land to the north, south and east is zoned "Rural" with immediately abutting lots ranging in size from 11ha to 119ha.

The nearest dwelling is located approximately 133m from the southern boundary. Land to the east and northeast contains a ridgeline with significant areas of remnant vegetation. Please see Figures 1 and 2 below for zoning details and Figure 3 for aerial mapping and Figure 4 for contours.

The western portion of the subject land is included within Special Control Area 4 Transport Corridor and the entire site is located within Special Control Area 6 – Strategic Mineral sand Basic Raw Materials. Please refer to sections below for further details on the purpose and intent of these Special Control Areas.

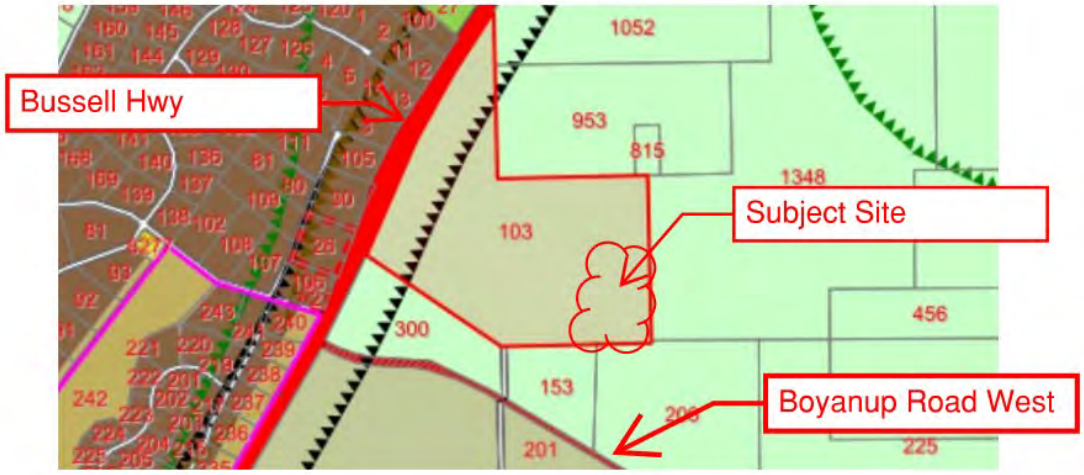


Figure 1: Extract of Local Planning Scheme No. 8 Scheme Map.

- LPS8 Reserves
  - Public Open Space
  - Environmental Conservation
  - State Forest
  - Civic and Community
  - Public Purposes
  - Infrastructure Services (IS)
  - Education (E)
  - Emergency Services (ES)
  - Heritage (H)
  - Recreational (R)
  - Cemetery (CE)
  - Drainage / Waterway
  - Railways
  - Primary Distributor Road
  - District Distributor Road
  - Local Distributor Road
  - Local Road

Figure 2: Extract of Zoning Legend.

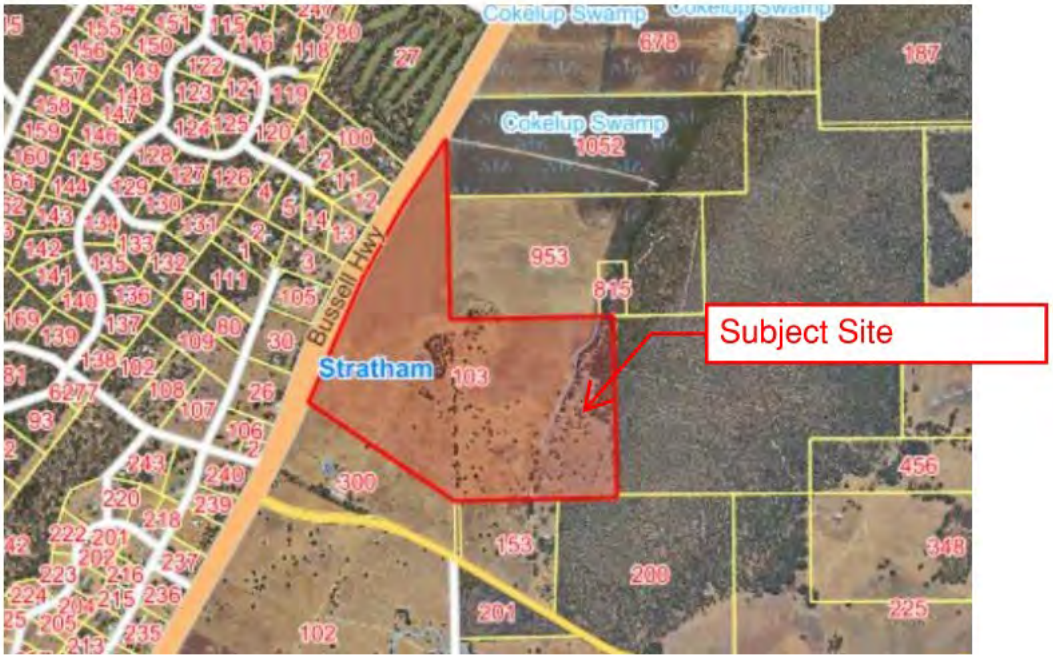


Figure 3: Extract of aerial mapping.

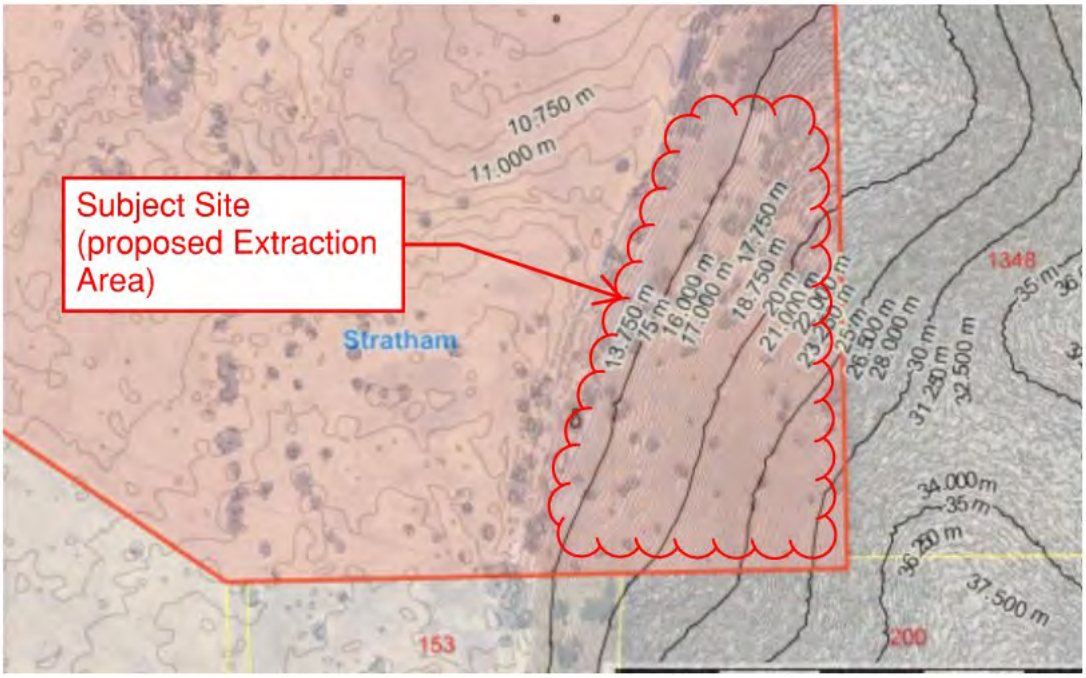


Figure 4 – Extract of contour mapping.

Consultation:

Public Consultation

The original application was advertised through the Shire's website for a period of 28 days from 20 November 2023 to 18 December 2023. In addition, the proposal was referred to 109 surrounding landowners within a 1km radius as well as being referred to surrounding landowners. A total of thirty-five (35) submissions from community members were received raising, with 31 raising objections (see **Attachment 6**).

In summary, the key issues relate to:

- Impacts on remnant vegetation and fauna
- Traffic safety
- Amenity impacts associated with noise and dust
- Impacts on landscape (visibility) and
- Proximity to sensitive land uses (dwellings).

The applicant has provided responses to submissions (see **Attachment 7**).

Referrals/consultation with Government/Service Agencies

The proposal was referred to relevant local and State government agencies for a period of 42 days. A total of 7 submissions were provided by agencies (see **Attachment 8**) during the first round of advertising. Additional advertising was undertaken to selected state government agencies to enable technical advice on amended plans submitted. An additional 3 submissions were received, creating a combined total of 10 submissions (see **Attachment 8)**.

The applicant prepared updated documents and undertook additional studies, including the collection of more comprehensive water environment data. The updated documents were referred to Department of Energy, Mines, Industry Regulation and Safety (DEMIRS), Department of Biodiversity, Conservation and

Attractions (DBCA) and Department of Water and Environmental Regulation (DWER) and comments received have been incorporated in **Attachment 8**).

The applicant has provided responses to the original submissions (see **Attachment 7**).

A summary of the original submissions from External Agencies is included in the table below.

Agency	Summary of issues/comments
Comments from original application	
Main Roads Western Australia (MRWA)	• No objections.
Department of Planning Lands and Heritage (DPLH)	• No approvals required under Aboriginal Heritage Act.
Department of Primary Industries and Regional Development (DPIRD)	• Weed management plan required to be implemented during extraction • Seasonal groundwater separation to be at least 0.5m to final contours and • 20m boundary setbacks to be achieved
Department of Water and Environmental Regulation (DWER)	• Detailed requirements for crushing to be provided (if proposed) • Need to provide a maximum pit floor depth to ensure groundwater is not intercepted • Need for updated bore monitoring data (including winter season and additional locations) • Demonstrate an acceptable water source supply for site (dust) management • Need to obtain a clearing permit Conditions to address: a) Staged implementation of rehabilitation b) Management of environmental risk c) Management of use and storage of hazardous chemicals d) Dieback management and e) Noise management.
Department of Health	• Advice was provided on the following elements: o waste water treatment o drinking water management and o noise and dust management plans which are to include a complaints register.
Department of Biodiversity, Conservation and Attractions (DBCA)	• Site located within a Banksia woodlands Threatened Ecological Community (TEC) buffer area and contains habitat suitable for threatened fauna

	• The development will need a 20m buffer from tree trunks for proposed retained trees to ensure protection of drip lines • Recommends a 1 in 6 batter slope where possible to reduce erosion • The applicant is advised of the need for a clearing permit.

Following advertising, the applicant responded to the submissions and updated the application proposal. This was referred to the key State government agencies (DBCA, DWER and DPIRD.

These agencies are generally satisfied with the updated proposal (see Attachment 8).

The applicant has been provided the opportunity to review the new submissions and raises no objections to the comments raised.

One key change was to increase the maximum pit floor depth to 15m AHD which is addressed through a condition.

Internal consultation

Internal Shire technical team comments are summarised in the table below.

Internal Departments	**Summary of comments**
Environmental Health	• Construction works need to comply with noise regulations • Need to comply with the noise management plan • The bund on the southern side is to be constructed prior to extraction works commencing and • Dust management will require water suppression along the internal haulage route when noting prevailing afternoon summer wind directions and the location of a dwelling within 300m of this route.
Technical Services (Engineering)	• The proposed 1 in 4 slope should be increased to 1 in 6 as the proposed slope presents constraints for productive agricultural land use • A 1 in 4 slope is difficult to access by machinery, susceptible to erosion from stock and adds difficulty for vegetation to mat. Further, this slope is not readily suitable for accommodating a dwelling • A visual impact screen should be provided in the setback on the southern boundary to screen development from the neighbouring dwelling • The Water Management Plan requires further information regarding location of retention ponds, stormwater management, noting that this may not be possible to locate within the extraction footprint

	• Condition haulage numbers above 100 per day to be subject to CEO approval process • Need to include signage at crossover access point • Need details on construction standards for proposed "access track" located on unconstructed portion of local road reserve • Need for a dieback management plan demonstrating best practice, including a closed loop washdown facility and • Any imported soil required for rehabilitation to meet AS 4419:2018 standards.
Parks, Waste and Natural Resource Management	• Priority flora, Threatened Ecological Communities and Western Ringtail Possums are recorded within the extraction footprint. The survey data was not sufficient to identify potentially impacted species. • Areas to the north and south of the extraction area are environmentally sensitive and surface drainage may be interrupted, impacting wetlands to the north. It is recommended revegetation in the northern portion with suitable habitat for Western Ringtail Possum and Black Cockatoo habitat species.

The Shire also requested independent third-party advice from an environmental consultant regarding the suitability of the end landform that contains a 1 in 4 slope and ground water impacts (see **Attachment 9**).

These matters are addressed in more detail in the planning assessment section below.

Planning Assessment:

Greater Bunbury Region Scheme (GBRS)

The table below details the objectives of the GBRS and provides comments.

GRBS requirements/objectives	Officer Comments
Clause 12. (e) Purpose of Zone Rural zone purpose: *"To provide for the sustainable use of land for agriculture, assist in the conservation and wise use of natural resources including water, flora, fauna and minerals, provide a distinctive rural landscape setting for the urban areas and accommodate carefully planned rural living developments."*	The application has potential to satisfy the purpose of the Rural Zone subject to conditions. This will ensure a suitable end landform and rehabilitation outcomes that will preserve the rural amenity landscape setting. Appropriate management plans will ensure that operational activity does not adversely impact local amenity or the water environment. **Satisfied**

Clause 6 (h) of the GBRS Scheme identifies its purpose is to: *"(h) protect strategic minerals and basic raw materials of State and regional importance and provide for the efficient and timely extraction of minerals and raw materials and subsequent rehabilitation of affected land."*	The proposal can be conditioned to ensure an appropriate finished landform and site rehabilitation that will create a sustainable rural land use outcome. **Satisfied**

Planning and Development (Local Planning Scheme) Regulations 2015 – Schedule 2 Part 7 (the Regulations)

Clause 67 of the Regulations detail matters to be considered by local government when considering an application for development approval. It states that the local government is to have due regard to the following matters to the extent that, in the opinion of the local government, those matters are relevant to the development the subject of the application. The relevant clauses and comments are detailed in the table below.

Requirement	Comment
(a) the aims and provisions of this scheme and any other local planning scheme operating within the Scheme area;	The proposed extractive industry is consistent with the objectives of the Rural zone under Local Planning Scheme 8 (LPS8). Please see section on LPS8 below. **Acceptable**
(b) the requirements of orderly and proper planning including any proposed local planning scheme or amendment to this scheme that has been advertised under the *Planning and Development (Local Planning Scheme) Regulations 2015* or any other proposed planning instrument that the local government is seriously considering adopting or approving;	The proposed extractive industry is reasonably located and reflects the requirements of the established planning framework for the locality. The discretionary nature of the land use requires the Shire to assess its suitability in the location and seek to explore avenues that may enable the activity to be supported under appropriate conditions. The proposal area is limited in extent to an area primarily cleared of existing remnant vegetation and is setback from the public realm. The proposal is staged to reduce impacts and is supported by a rehabilitation plan. Suitable arrangements are proposed to address environmental impacts associated with die back, weed management and water management. Further, amenity impacts from haulage, dust, and noise are addressed and can be enforced through standard conditions. **Acceptable**
(c) any approved State planning policy;	The proposal is consistent with relevant State Planning Policies. Please see sections below for further details that demonstrates consistency with objectives and requirements. **Acceptable**
(g) any local planning policy for the Scheme area;	The Shire's LPP 6.2 Extractive Industries applies. Please see below table for a more detailed assessment. **Acceptable**

(n) the amenity of the locality including the following: (i) environmental impacts of the development; (ii) the character of the locality; (iii) social impacts of the development;	An analysis of the landscape setting (see section on Special Control Area 4 – Transport Corridor below) highlights that the extraction area will have limited-to-no visibility from public receptor points along Bussell Hwy and Boyanup West Road and will also have limited visibility from the nearest dwelling. Impacts on landform are addressed in more details below. Impacts on the vegetation are limited due to the sparce and isolated remnant trees as supported by fauna assessment. Impacts on the water environment have been assessed and determined acceptable by DWER (see Attachment 8 – Submission 10). **Acceptable**
(o) the likely effect of the development on the natural environment or water resources and any means that are proposed to protect or to mitigate impacts on the natural environment or the water resource;	Impacts on remnant vegetation is limited due to restricted area of extraction identified to minimise the need for removal of trees. DBCA indicates that clearing of vegetation can be addressed through the clearing permit stage and conditions can ensure surrounding trees are protected. Impacts on remnant vegetation will be addressed separately through a clearing permit process. Water environment considerations are addressed through supporting documents that DWER have indicated are suitable subject to conditions. **Acceptable**
(p) Whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved;	The extraction area has been defined by the need to preserve existing trees where possible. This has reduced the extent of the resource proposed to be extracted to an area of 6.1ha that contains mainly existing cleared grazing land. The site will have limited visibility to the public realm or nearest dwellings due to distance, topography and existing vegetation. Details associated with the proposed end-landform can be addressed through conditions and is discussed in more detail below. **Acceptable**

(q) The suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence, landslip, bush fire, soil erosion, land degradation or any other risk;	There is no evidence of flooding, landslip or other environmental risks. Issues related to the end landform are discussed in more detail below. **Acceptable**
(r) The suitability of the land for the development taking into account the possible risk to human health or safety.	There is potential to address impacts relating to risk to human health through conditions. **Acceptable**
(s) the adequacy of: (i) the proposed means of access to and egress from the site, and (ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles;	The proposed access to Boyanup Road West will require construction of a crossover and bituminised apron to minimise potential for dragging materials onto the road network. The existing road network is designed and classified appropriately to accommodate the proposed volume and type of vehicles. **Acceptable**
(t) The amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety;	The level of vehicle traffic is considered reasonable given the status and function of the roads proposed to be used. The element of haulage is considered suffice based upon the network's capacity and required upgrades to accommodate such traffic. **Acceptable**
(v) The potential loss of any community service or benefit resulting from the development other than potential loss that may result from economic competition between new and existing businesses;	No loss of any community service or benefit is anticipated, and instead the support for the activity will contribute to several existing projects within the area that are requiring sand deposits for construction purposes. **Acceptable**
(iv) the history of the site where the development is to be located;	The site is presently being used for grazing and the proposed end landform subject to conditions, will be designed to continue this use once the extraction has been completed. Details regarding the end landform is discussed in more detail below. **Acceptable**
(v) the impact of the development on the community as a whole notwithstanding the impact of the development on particular individuals;	Impacts on the development on the community will be generally related to traffic movements, noise and dust. There is scope to address impacts of dust and noise through management plans. The road network is designed to accommodate traffic volumes and MRWA is satisfied with he function and safety of the intersection of Boyanup West Road and Bussell Hwy. **Acceptable**

(y) Any submissions received on the application;	Submissions are considered in **Attachment 6**.
(za) The comments or submissions received from any authority consulted under clause 66.	The updated plans (January 2025) have responded to issues raised by submissions, addressing concerns relating to rehabilitation, impacts on the water environment and dust and noise impacts. For further information please refer to **Attachment 8** that provides information on the range of issues raised and suggested responses.

State Planning Policy 2.4 Planning for Basic Raw Materials (SPP 2.4)

The intent of SPP 2.4 is to:

"… ensure basic raw materials (BRM) and extractive industries matters are considered during planning and development decision-making to facilitate the responsible extraction and use of the State's BRM resources."

The policy includes five policy objectives. The key relevant policy is:

"ensure the extraction of BRM avoid, minimises or mitigates any adverse impacts on the community, water resources and biodiversity values."

The impacts on water have been addressed to the satisfaction of DWER with the updated plans providing additional data on groundwater conditions and surface water treatments.

Impacts on the biodiversity have been addressed by the limited footprint of the extraction area being limited to land primarily cleared of remnant vegetation, noting there is opportunity to separately assess removal of this vegetation through a clearing permit process.

Impacts on the community have been addressed through dust and noise management plans and the existing road network is suitable for accommodating proposed haulage.

Impacts

State Planning Policy Rural Planning (SPP 2.5)

The intent of SPP 2.5 is to:

"… to protect and preserve Western Australia's rural land assets due to the importance of their economic, natural resource, food production, environmental and landscape values. Ensuring broad compatibility between land uses in essential to delivery this outcome."

Section 5.9 addresses consideration of basic raw materials outside the Perth and Peel planning regions. The following table provides the policy provisions and comments.

Policy Provision	Comments
Significant Geological Supplies and their buffers are not to be developed for other purposes until the resource is extracted, or unless development is compatible with the future extraction of the resource	N/A
Significant Geological Supplies and significant basic raw materials resources, and an indicative separation distance or buffer, should be identified in sub-regional and/or local planning strategies	The site is identified in a local planning strategy and Special Control Area.
Region and local planning schemes should identify Significant Geological Supplies and significant basic raw material resources, and include provision for their protection, access and use	Please see above.
Basic raw material resources and sites should be identified in local planning strategies and schemes as required	Please see above.
Regional and local planning schemes should not generally prohibit the extraction of basic raw material resources	LPS8 lists Extractive Industry as an “A” discretionary use.
Sequential land use planning is encourage whereby extraction and appropriate rehabilitation can take place on a programmed basis in advance of longer term use and development	N/A - The land is zoned ‘Rural’ and no future land use intensification is proposed.
Sensitive zones and/or land uses may be approved where it can be demonstrated they will not limit the existing or potential extraction of basic raw materials	N/A - No new sensitive land uses or zones are proposed in the locality.
Where a basic raw material resource is located with native vegetation or significant biodiversity values, extraction of the resource may require referral under Part IV of Part V of the *Environmental Protection Act 1986*. Environmental regulation of the proposal may required vegetation retention and/or protection of other environmental assets.	The extraction footprint is generally cleared of remnant vegetation. On this basis, the clearing permit process is considered the appropriate mechanism to address this issue. **Complies**
Planning decision makers are to have due regard to advice from environmental agencies and consider potential impacts on fragmentation and connectivity of remnant vegetation	Advice has been obtained from relevant State government agencies. Issues raised can be addressed through conditions.

	Complies.
Where a basic raw material resource is located in a public drinking water source area, extraction of the resource may be subject to achieving separation distances to the groundwater table to protect water quality. Separation distances for water supply infrastructure, and other management measures to protect water quality, should be applied in planning decision making.	N/A

State Planning Policy 3.7 – Bushfire

A significant portion of the extraction area is located within a bushfire prone area (see Figure 5 below).

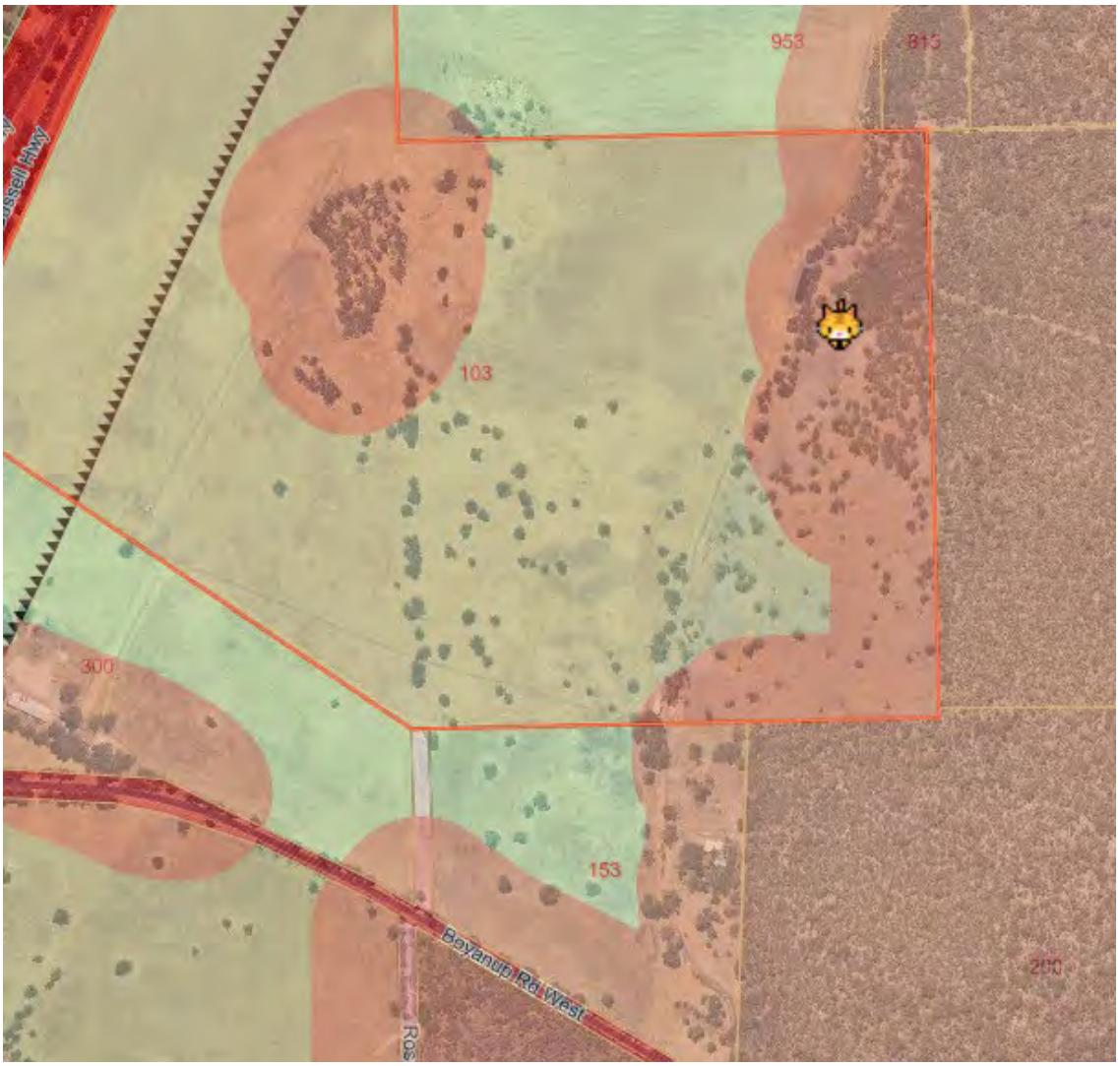


Figure 5 – extract showing bushfire prone land (pink highlighted areas)

The proposal is considered reasonable from a bushfire risk perspective on the basis that:

- the use is not considered a "vulnerable land use"
- no permanent physical structures are proposed

- access to the site is reasonable.

State Planning Policy 5.4 Road and Rail Noise (SPP 5.4)

The policy intent of SPP5.4 is to:

- Minimise the adverse impact of road and rail noise on noise-sensitive land use and/or development within the specified trigger distance of strategic freight and major traffic routes and other significant freight and traffic routes.
- Ensure that the community is protected from unreasonable levels of transport noise, whilst also ensuring the future operations of these transport corridors.

The proposed use is not a sensitive land use and does not impact the future operation of the transport corridors.

Local Planning Scheme No.8 (LPS8)

Land Use
Extractive Industry is listed as an 'A' use under LPS8 (discretionary following advertising) in Table 3 – Zoning Table of LPS8. Clause 18(2) of LPS8 defines an 'A" use class designation as follows:

"The use is not permitted unless the local government has exercised its discretion by granting development approval after advertising the application in accordance with clause 64 of the deemed provisions."

The use is capable of approval, subject to consistency with other provisions within LPS8, following advertising.

The subject land is zoned Rural under LPS8 and the table below details the objectives of the Rural zone, alongside Officer comments.

Objectives of the Rural Zone	Officer Comments
To provide for the maintenance or enhancement of specific local rural character.	The proposal can be conditioned to address operational activity, staging and end landform outcomes to ensure potential impacts on local rural character are managed appropriately and end land use and landscape outcomes are appropriate for the local setting. Furthermore, rehabilitation outcomes are a vital part of creating longevity with rural character, and will be scrutinised regularly through annual auditing and compliance checks. **Complies**
To protect extensive agricultural activities such as cropping and grazing and intensive uses such as horticulture as primary uses, with other rural pursuits and rural industries as secondary uses in circumstances where they demonstrate compatibility with the primary use.	The proposal can be conditioned to ensure the end landform is appropriate for ongoing grazing or other agricultural activities. This is discussed in more detail below. **Complies**

To maintain and enhance the environmental qualities of the landscape, vegetation, soils and water bodies, in order to protect sensitive areas especially the natural valley and watercourse systems from damage.	The proposal can be conditioned to ensure the maintenance of environmental qualities of the site. **Complies**
To provide for the operation and development of existing, future and potential rural land uses by limiting the introduction of sensitive land uses in the Rural zone.	. The use is not considered out of character with the area, as demonstrated by several other examples within the Shire. The use, when managed appropriately through compliance of conditions and adequate management plans, is not considered to be sensitive to the point of being detrimental to adjoining properties and their amenity. Furthermore, the Shire's LPS8 only allows such a use to be permitted in a select few zones, including the Rural Zone. **Complies**
To provide for a range of non-rural land uses where they have demonstrated benefit and are compatible with surrounding rural uses.	The proposed extractive industry use is acceptable in rural areas generally. Site specific elements associated with this application are discussed in more detail below. **Complies**

Schedule 4 – Additional site and development requirements by zone

The table below provides details of the relevant additional development requirements and comments.

Requirements for the Rural zone	**Officer Comments**
Setbacks: Primary street – min 20m Secondary street - min 20m Side/rear – min 20m	 Eastern boundary: 20m - **Complies** Southern boundary: 20m - **Complies** Northern boundary: Greater than 20m **Complies** Western boundary: Greater than 20m **-Complies**
Where appropriate, land uses which generate off site impacts must demonstrate an appropriate separation distance from a sensitive land use or that potential impacts will be acceptable in order to preserve rural character and amenity, in accordance with state	The proposal seeks to extract resources within the recommended 500m separation distance for sensitive land uses recommended in the EPA guidelines. Additional management controls and background studies have been submitted to address potential

government guidance, to the satisfaction of the local government.	impacts associated with noise and dust impacts. The Noise Management Plan is supported by an Environmental Noise Assessment that demonstrates that activity will comply with the requirements of the Noise Regulations. Conditions can be applied to ensure impacts are managed to acceptable levels. **Complies**

Special Control Area 4 – Transport Corridors (SCA4)

The subject land is located within SCA4 which has the following purpose and objectives.

Purpose:

"To protect the function and safety of the key travel routes within the Scheme area, along with the amenity and visual character of adjacent land and to ensure that the requirements of State Planning Policy 5.4 – Road and Rail Noise (SPP 5l.4) are satisfied by all proposed development and land use."

"Objectives:
(a) To delineate land within which SPP 5.4 applies.
(b) To ensure that SPP 5.4 is properly considered and implemented where development or a change of use is proposed on land within which SPP 5.4 applies.
(c) To protect major transport corridors and freight operations from incompatible urban encroachment.
(d) To maintain the safety of major transport corridors through the minimisation of distractions and access points."

The proposal does not raise any concerns regarding impacts on the function and impacts of the transport corridor. Impacts on visual character are considered in the table below.

Visibility from public receptor points
Boyanup Road West Comments The extraction area is screened from Boyanup West Road by topography, setbacks and location of existing vegetation. (see photo's below)

Boyanup West Road



View from intersection of Bussell Hwy and Boyanup Road West looking east towards extraction area.



View from Boyanup Road West (approximately 100m from intersection of Bussell Hwy) looking east towards extraction area.



View from Boyanup Road West (approximately 50m from proposed access point) looking east.

Bussell Highway Comments

The extraction area is screened from Bussell Highway (north and south bound lanes) by setbacks and location of existing vegetation. (see photo's below).



View from Bussell Hwy from north bound lanes looking north east towards extraction site (south of intersection with Boyanup Road West).



View from Bussell Hwy from north bound lanes looking east directly towards extractive industry site.



View from Bussell Hwy from south bound lanes looking south east towards extractive industry site.



View from Bussell Hwy from south bound lanes looking south east towards extractive industry site (approximately 2km north of intersection with Boyanup Road West.



View from Bussell Hwy from south bound lanes looking south east towards extractive industry site (approximately 300m north of Boyanup Road West intersection).

Potential views from nearest dwelling



Aerial view with contours (nearest dwelling – see red outline). The land rises from 20m ADH at dwelling to the east edge of extraction area (see blue outline) to approximately 31m ADH.

Comments

The landform combined with existing vegetation and location of water tanks and outbuildings will screen the majority of the extraction from the dwelling. An earth bund is proposed to further screen development from the dwelling.

Special Control Area 6 - Strategic Minerals and Basic Raw Materials (SCA6)

The purpose of SCA6 is:

"To identify areas where basic raw materials and strategic mineral resources need to be protected from incompatible land uses in line with the GBRS Strategic Minerals and Basic Raw Material Resource Policy 2018."

An extract of the mapping is provided below which shows the subject land within the buffer associated with land to the east identified as possessing strategic minerals (Titanium-zircon) (please see Figure 6 below).

The proposed activity is consistent with the intent of SCA6 as it proposes to access a raw material and will not in itself introduce incompatible land uses.

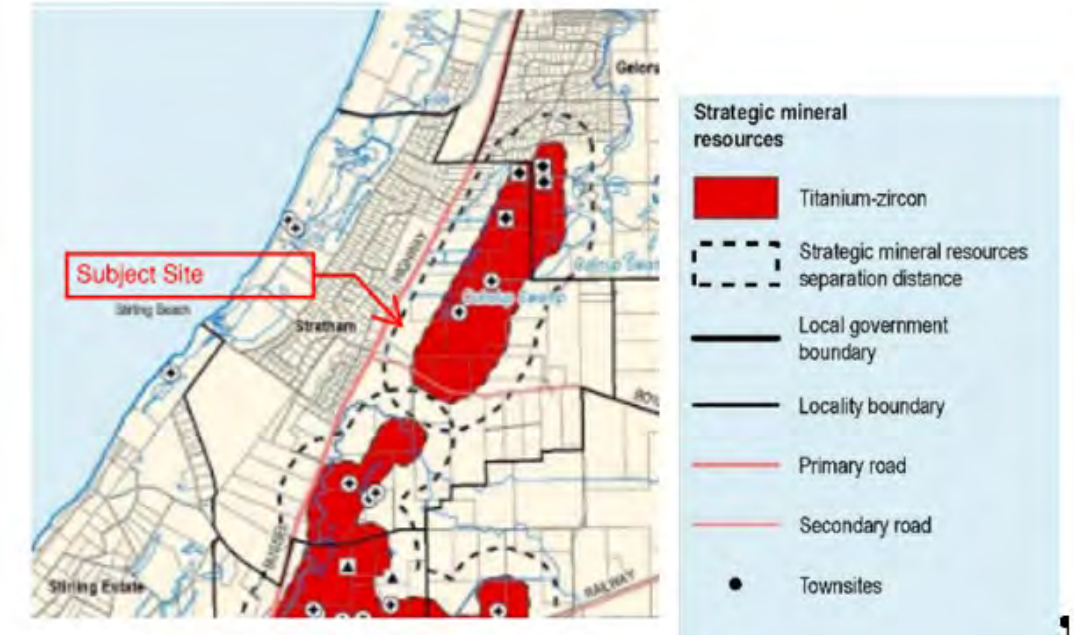


Figure 6: Extract from Local Planning Strategy mapping

Local Planning Policy 6.2 - Extractive Industries (LPP 6.2)

The intent of this policy is to provide guidance in assessing proposals for extractive industry and provide operators and the community more certainty around the outcomes of such proposals. The policy had undergone extensive consultation with the community and operators and adopted by the Council at its Ordinary Council Meeting in June 2023. It has since been consistently applied since adoption.

LPP6.2 sets out acceptable development and performance criteria for the assessment of extractive industry development applications. In the event that a development application does not meet the 'Acceptable Development' provisions, a performance based assessment is undertaken against the criteria listed in 'Performance Criteria' to determine the proposal's suitability.

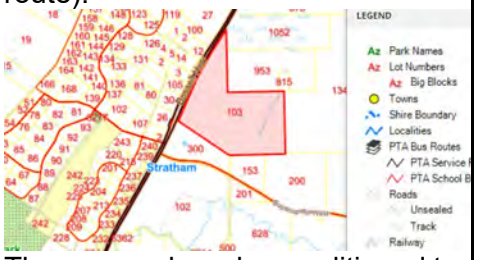
An assessment of the proposal against the Acceptable Development / Performance Criteria of LPP6.2 is provided as follows:

Performance Criteria	Acceptable Development	Assessment of Proposal
Element: Amenity		
PC1.1.1 Development is to demonstrate a negligible impact on the amenity of residential areas by	AD1.1.1 Hours of operation are limited to 7am to 7pm Monday to Friday and 7am	The proposed hours align with the hours listed in the Acceptable Development details (proposed 7am to 6pm Monday to Friday

way of vehicular traffic, noise, dust, blasting and vibration.	to 1pm on Saturday. No operation on Sundays or recognised public holiday days.	and 7am to 1pm on Saturdays. **Satisfied**
PC1.1.2. Development does not result in land degradation, or a landform that prejudices the productive end use of the site in accordance with the objectives of the zone.	AD 1.1.2 Development is located, designed and rehabilitated compatible with long-term planning and environmental protection.	The proposed rehabilitation plan can be conditioned/modified to be compatible. These details are discussed in more detail below. **Complies subject to conditions**
Element: Environmental		
PC1.2.1 With advice from relevant state government departments, development is located to minimise the impact upon native flora and fauna; groundwater quality, quantity and use; surface drainage and surface water quality including discharge of sediment and sites of cultural and/or historic significance on or near the land.	AD1.2.1 Development does not prejudicially affect native flora and fauna; groundwater quality, quantity and use; surface drainage and surface water quality including discharge of sediment and sites of cultural and/or historic significance on or near the land.	There is potential to condition and control impacts on ground and surface water qualities. In respect to flora and fauna, the majority of the proposed extraction site is cleared, with the exception of minor isolated pockets of remnant vegetation. Given the isolated and limited nature of vegetation, and the fact that it doesn't form part of a wider environmental linkage, it is reasonable to allow this element of the proposal to be addressed separately through a clearing permit process. **Satisfied**
PC1.2.2 Development is located and managed to minimise the spread of Phytophthora (Dieback).	AD1.2.2 Dieback is managed in accordance with Best Practice Guidelines – Management of Phytophthora Dieback in Extractive Industries (2005 – Dieback Working Group) as detailed within an agreed	This matter can be conditioned to ensure best practice is applied in respect to dieback management. A dieback management plan has been included as part of the amended proposal (January 2025). **Satisfied**

	Dieback Management Plan.	
PC1.2.3 Development is located and managed to achieve a high level of surface and groundwater resource protection to provide soil depth for rehabilitation, future land use and a buffer against groundwater contamination and exposing groundwater.	AD1.2.3 Excavation shall not occur within 2 metres of the estimated maximum ground water level.	A final groundwater separation distance of 1m is proposed with updated data being provided. DWER have reviewed the updated studies and support the proposal in terms of achieving an acceptable groundwater separation subject to a minimum pit level being set at 15m AHD. **Satisfied**
PC1.2.4 Final excavation batters to achieve rehabilitated slopes compatible with future land use, existing soil structure, topography, and positive environmental outcomes.	AD1.2.4 Batter slopes with gradients up to 1:6 when rehabilitated to pasture for agricultural land uses and/or native revegetation.	A proposed 1 in 4 batter is proposed. This is discussed in more detail below. It is noted that this matter can be resolved through conditions, should the DAP support the Officer's Recommendation. **Unsatisfied**
PC1.2.5 Development is located and managed to achieve a high level of staged rehabilitation.	AD1.2.5 Sites to be rehabilitated in accordance with an agreed Environmental Management Plan and Rehabilitation Implementation Plan prepared and implemented in accordance with application and bonding requirements as specified in Appendix 1 of this Policy. For hard rock extraction	A rehabilitation plan has been prepared and can be modified/conditioned to achieve long term sustainable end land use outcomes. This matter is discussed in more detail below. **Complies subject to conditions**

	sites, an end-of-life pit plan is to be provided and agreed upon between the Shire and applicant at least 5 years prior to the expiration of the approval's validity.	
Element: Buffers		
PC1.3 Development to demonstrate satisfactory mitigation and management measures in accordance with SPP4.1 Industrial Interface and Guidance Note 3 – Separation Distances Between Industrial and Sensitive Land Uses (EPA – 2005	AD1.3.1 Buffer distances to be in accordance with Guidance Note 3 – Separation Distances Between Industrial and Sensitive Land Uses (EPA – 2005).	A reduced buffer is proposed (closest setback of a sensitive land use is approximately 150m). Management plans are proposed to address impacts of noise and dust and are generally considered acceptable. **Satisfied**
Element: Visual Impact		
PC1.4 Through Development of an adopted Rehabilitation Plan, the final landform shall not have a significant detrimental impact on visual amenity of the landscape when viewed from surrounding sites.	AD1.4.1 Visual screening to be provided through retention of existing vegetation and /or provision of an appropriate landscaping screen/bund to the satisfaction of the Shire. No walls or solid fences will be considered.	The site will have limited visual impact when viewed from Boyanup Road West, and from existing dwellings (as demonstrated in the visual assessment above). A review of landscape impacts from Bussell Highway has been undertaken, noting that visual impacts will be limited due to setbacks, existing vegetation and topography. **Satisfied**
Element: Transport		
PC1.5 Development satisfactorily addresses the following issues: PC1.5.1 The proposed haulage route is not to have a detrimental impact on safety and amenity of residents, and local road users.	AD1.5.1 Haulage is to be wholly contained to the 'Tandem Drive 4' Network route, as identified by Main	The proposed haulage route is contained within the Tandem Drive 4 network, noting that MRWA raises no objections to the proposal. **Satisfied**

	Roads Western Australia.	
PC1.5.2 The application is accompanied by a Traffic Management Plan to demonstrate that haulage periods that conflict with school pick and drop off times are acceptable in their impact to the safety of the road network.	AD1.5.2 Haulage traffic is to be proposed at times of the day which will minimise conflict with school pick up and drop off hours (7:30am-9am and 2:30pm-4pm Mondays to Fridays).	The proposal seeks to use roads that form part of the school bus service (see below – red lines represent PTA school bus service route).  The proposal can be conditioned to ensure haulage does not impact school bus movements, by limiting times etc. **Satisfied**
PC1.5.3 The applicant is to demonstrate that the haulage traffic will not have adverse impacts on the locality by virtue of noise, dust pollution, and safety, and that suitable arrangements be made by the developer to ensure the road is maintained to an appropriate standard.	AD1.5.3 Where available, haulage traffic is to utilise road networks which have a sealed surface, and appropriate designed to accommodate the proposed vehicle types.	The haulage traffic route will be appropriately sealed (once conditioned) and designed to accommodate the vehicle types proposed and is supported by MRWA. **Satisfied**
PC1.5.4 Development does not create hazards to other road users, impact on sustainability of the transport network, nor negatively impact on the amenity of the residences along the route, in terms of: • Access points to the operation site. • Existence of any other extractive industry or heavy haulage in the vicinity and cumulative effects on the transport network.	AD1.5.4 Development application is accompanied by a Traffic Impact Assessment that demonstrates the local road network capacity is sufficient to accommodate the additional traffic and proposed truck volumes generated by the development.	No traffic impact assessment has been undertaken given: • the development is unlikely to generate more than 10 vehicle movements during peak hours; • the limited life of the project; • the location of the development (outside metropolitan centre); • conditions proposed to limit conflict with school bus movements;

		• advice from MRWA regarding the proposed use of their network. **Satisfied**

Key elements of proposal:
The following sections provide analysis of key issues associated with the application, either raised during submissions or through internal assessment of the application.

Operational Elements
Traffic safety and truck movements

The proposal will generate a maximum of 100 truck movements (50 in, 50 out) a day using the route to and from Boyanup Road West via Bussell Highway.

Public submissions raised concerns regarding the safety of the Bussell Highway and Boyanup West Road intersection, and the ability of the road network to accommodate additional traffic, with a focus on the safety of the intersection, noting the 110km speed limit.

The proposed access will be via a section of unconstructed road reserve (see Figures 7 and 8 below).

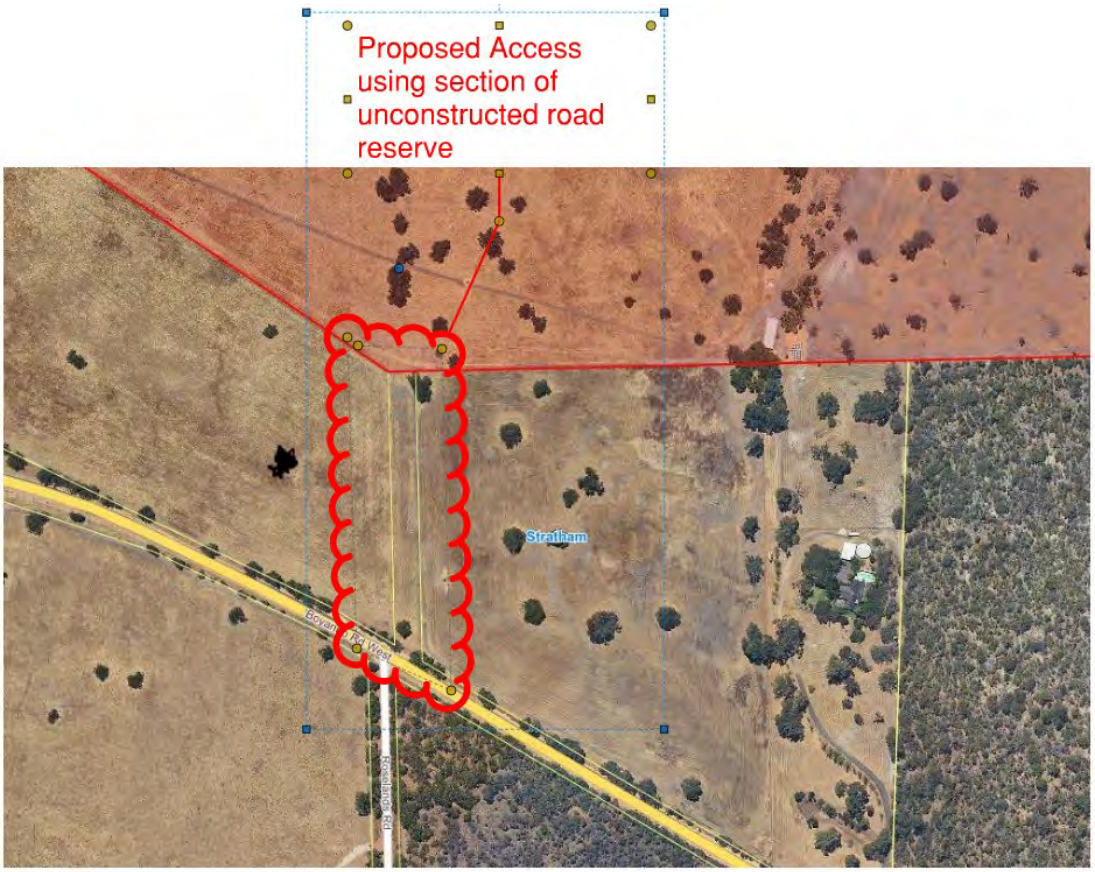


Figure 7 – Extract of aerial showing proposed access.



Figure 8 – street view looking north from Boyanup Road West.

Conditions are recommended for the construction of the access through the unconstructed road reserve which will include a bitumen seal apron at the intersection to minimise potential for dragging gravel/dust materials on the road network. This element has been proposed by the applicant as part of the application.

In respect to the wider road network, the section of Boyanup Road West abutting the site has recently been upgraded (last 3 years), including sealing and construction of a shoulder and is designed to form part of the RAV network.

Bussell Highway is reserved “Primary Regional Road” under the GBRS and is controlled by MRWA. The intersection at Bussell Highway is located on a relatively flat section of land, free of visual obstructions and on a section of Bussell Highway that is relatively straight. as shown in Figures 9 and 10 below.

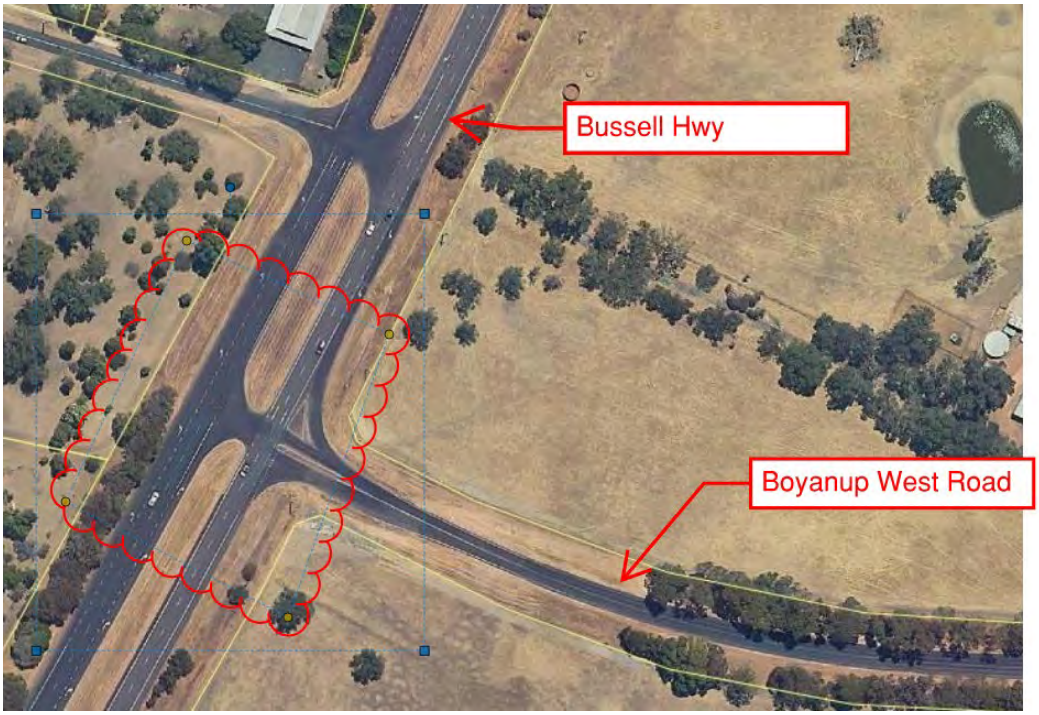


Figure 9 – Aerial extract of intersection.



Figure 10 – Aerial extract showing 90 degree alignment of Bussell Highway intersection.

MRWA has raised no objections to the proposal.

On this basis, the proposed access and haulage route is considered appropriate, subject to conditions to:

a) Construct the section of unconstructed road reserve to include a bitumen sealed apron; and
b) Contribute a proportional amount towards the ongoing maintenance of Boyanup Road West.

Dust Management

The proposal is accompanied by a Dust Management Plan (DMP). The key dust generation is related to two parts, extraction and haulage. In relation to extraction, dust can be managed through adherence to the staging plan that limits exposed areas and the use of earth bunds. This element of the proposed operations is considered reasonable when, noting:

a) the location of existing vegetation;
b) only one sensitive receptor is within 500m of the extraction area which is screened by vegetation and topography;
c) only one sensitive receptor is located within 300m of the proposed internal haulage route and
d) the prevailing wind directions (inland breeze in morning from east and coastal sea breeze in the afternoon from the west) in summer when dust is likely to be greater issue.

In relation to haulage, the pink line in Figure 11 below shows the proposed route that seeks to maximize the separation distance from the dwelling located immediately south of the extraction area.

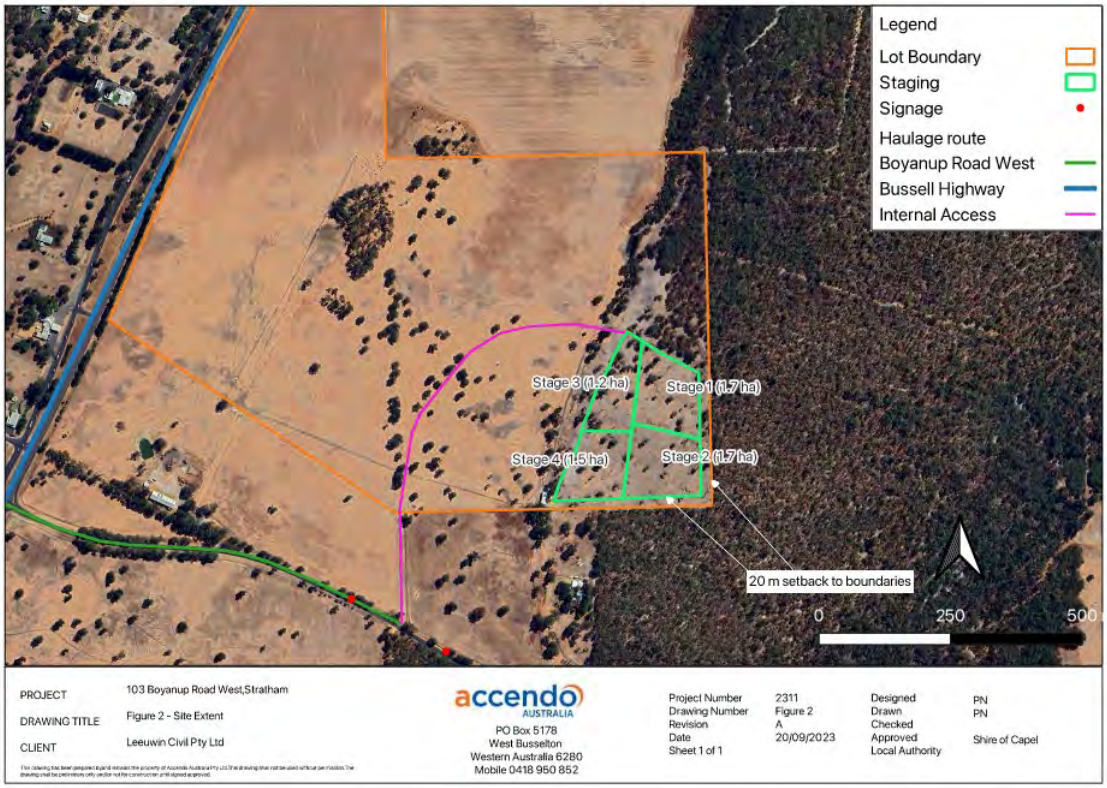


Figure 11 – Proposed haulage route.

The route will ensure a separation distance of 300m at the point immediately west of the dwelling (see Figure 12 below). The dwelling is located uphill (19m AHD) of the unconstructed road reserve which sits at 13.2m AHD. Further, there are trees and vegetation near the dwelling that provides potential dust screening.

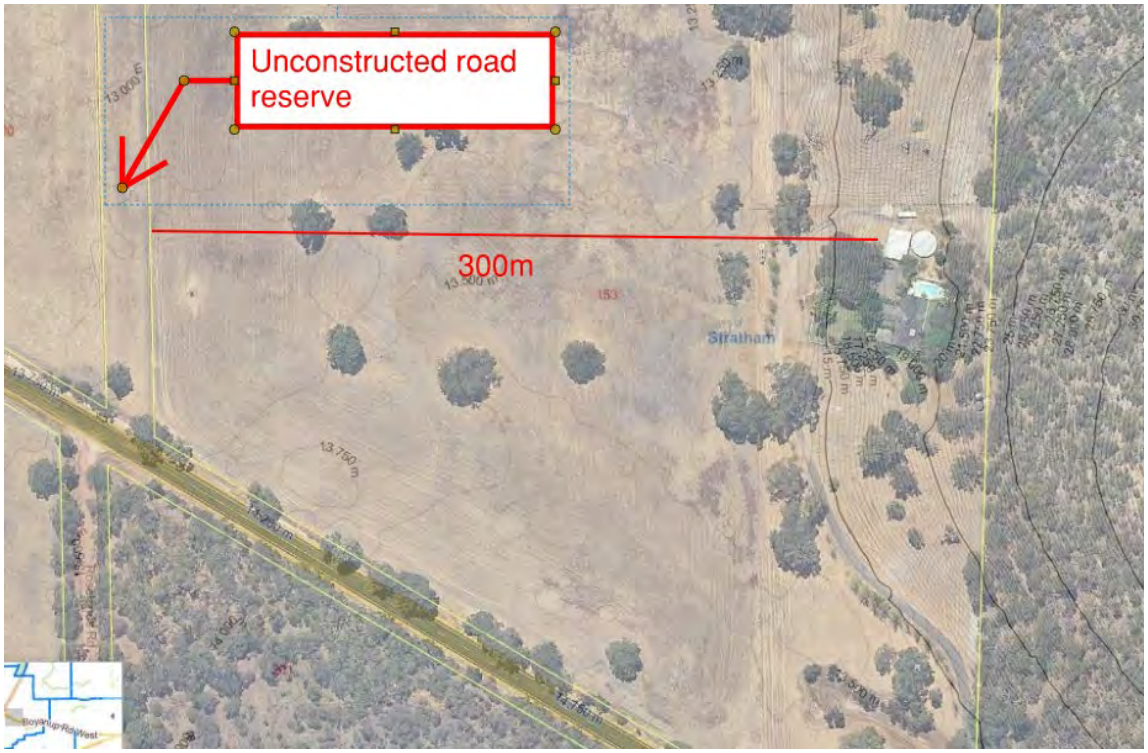


Figure 12 – Separation distance of internal haulage route to dwelling.

The DMP contains contingency arrangements that include:

- Water carts within 18 hours of being required by the local government;
- Wind fencing to be erected within 18 hours o being required by the local government;
- Works to cease in the interim while these measures are implemented; and
- Monitoring and keeping a complaints register.

These measures are considered acceptable, subject to a condition limiting speed on site to 10km per hour (consistent with the noise management plan) and adding a contingency for an on-site water supply. A condition is recommended to adhere to the requirements of the dust management plan and any issues that do present can be addressed through ongoing compliance action from the Shire.

Noise Management

A noise management plan has been prepared and is supported by an Environmental Noise Assessment prepared by a suitably qualified consultant.

There is one sensitive receiver located within the EPA's recommended 500m separation distance on the basis that the proposal is accompanied by appropriate technical documents. The extract below shows the separation distance to dwellings from the extraction area edge with the closest dwelling being 140m to the south (see Figure 13). The next nearest property is over 650m with a total of seven dwellings being within 1km of the extraction site.

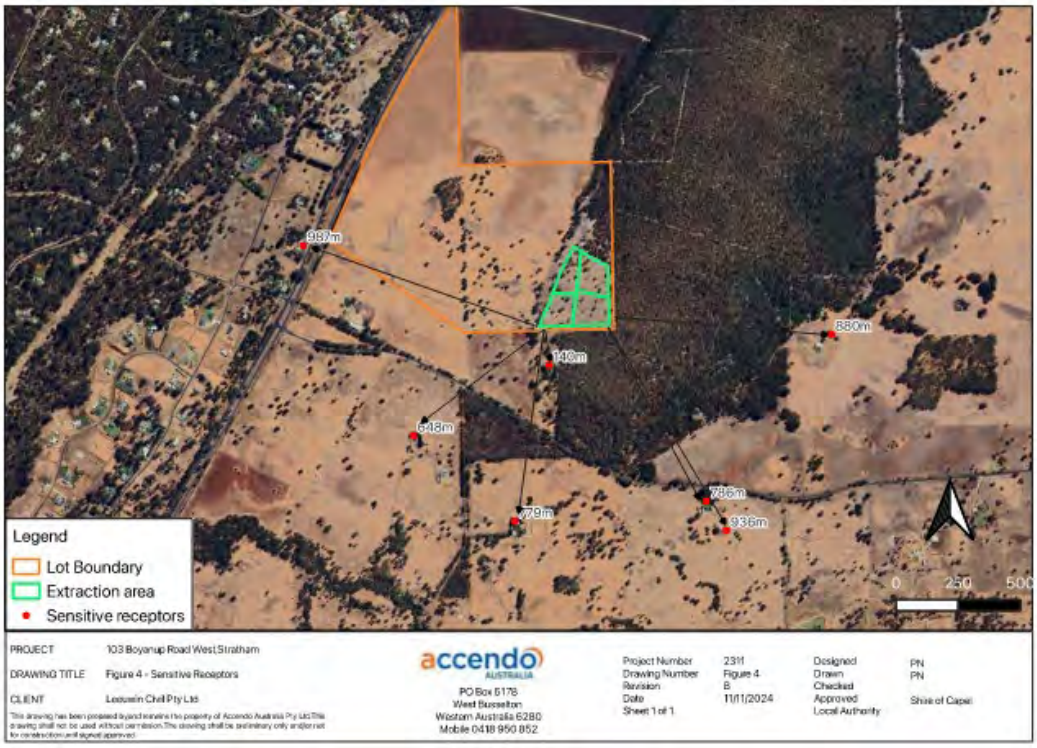


Figure 13 - Sensitive receptors map to existing dwellings.

Noise generated from the activity is related to:

- Machinery use (extraction and rehabilitation);
- Safety equipment (beepers on machinery); and
- Haulage.

It is noted that no grading/screening of materials is proposed on site. The management plan to address noise impacts includes:

- Daily planning;
- Maintenance of machinery;
- Use of flashing lights/broadband alarms instead of tonal reserving alarms on excavators/loaders;
- Speed restrictions;
- Construction of noise bunds; and
- Maintenance of a complaints register.

These measures are considered reasonable and a condition to comply with the Noise Management Plan is proposed.

<u>Dieback Management</u>

The existing condition of the site being predominantly cleared and used for grazing requires the site to be classified as ‘uninterpretable’ and that a precautionary management approach be adopted.

Dieback management measures are proposed relating to topsoil removal, excavation and rehabilitation. A condition requiring management of the site in accordance with best practice is recommended, and that the Shire be provided a Dieback Management Plan to its satisfaction, which would uphold the appropriate level of standards required to ensure a desirable outcome.

<u>Stockpile Management</u>

Stockpile management is an issue that requires further control and can be addressed through a condition limiting the extent and height of stockpiles to

minimise visual impact, dust nuisance and site safety. It is noted that the applicant seeks to minimise stockpiles where practical to supply the following day's operational requirements. The Shire's general approach to stockpiling is to seek a condition limiting the cubic meterage of the pile itself, as well as its height, as this has proven to be an acceptable outcome in past decisions.

Water Management

Following advertising, the applicant has updated plans to address concerns regarding:

- Containment of stormwater runoff;
- Suitability of groundwater data, including winter levels and suitable sample locations.

The updated documents have been reviewed by DWER and considered satisfactory subject to conditions (see **Attachment 8** – Submission 10). Elements associated with stormwater, wetlands and groundwater are detailed below.

Stormwater Management

The updated Water Management Plan (January 2025) has addressed issues raised during the initial advertising period. This has included details for a surface water bund and diversion bund (see Figure 14).



Figure 14 – Extract of surface water management

Further information is required regarding basin sizes, location, design and construction standards. It is proposed to address these details through conditions that require resolution prior to the issue of an extractive industry licence.

Groundwater Management

The amended Water Management Plan (WMP) (January 2025) has been prepared to address concerns identified during the advertising period. Additional monitoring sites and data over the winter period 2024 has now been included. The WMP demonstrates a groundwater separation of at least 1m can be achieved. DWER

have advised that this arrangement is satisfactory, subject to the pit floor level being set to 15m AHD.

Multiple Use Wetland and Dam

The land to the west of the extraction area is identified as a multiple use wetland (see Figure 15 below). There is an existing dam north of the extraction area. The Water Management Plan manages impacts through:

- A 40m setback
- Control of erosion and sediment through diversion drains;
- Containing stormwater within the extraction pit area.

Theses treatments will ensure no adverse impacts on either the multiple use wetland or water quality in the dam.

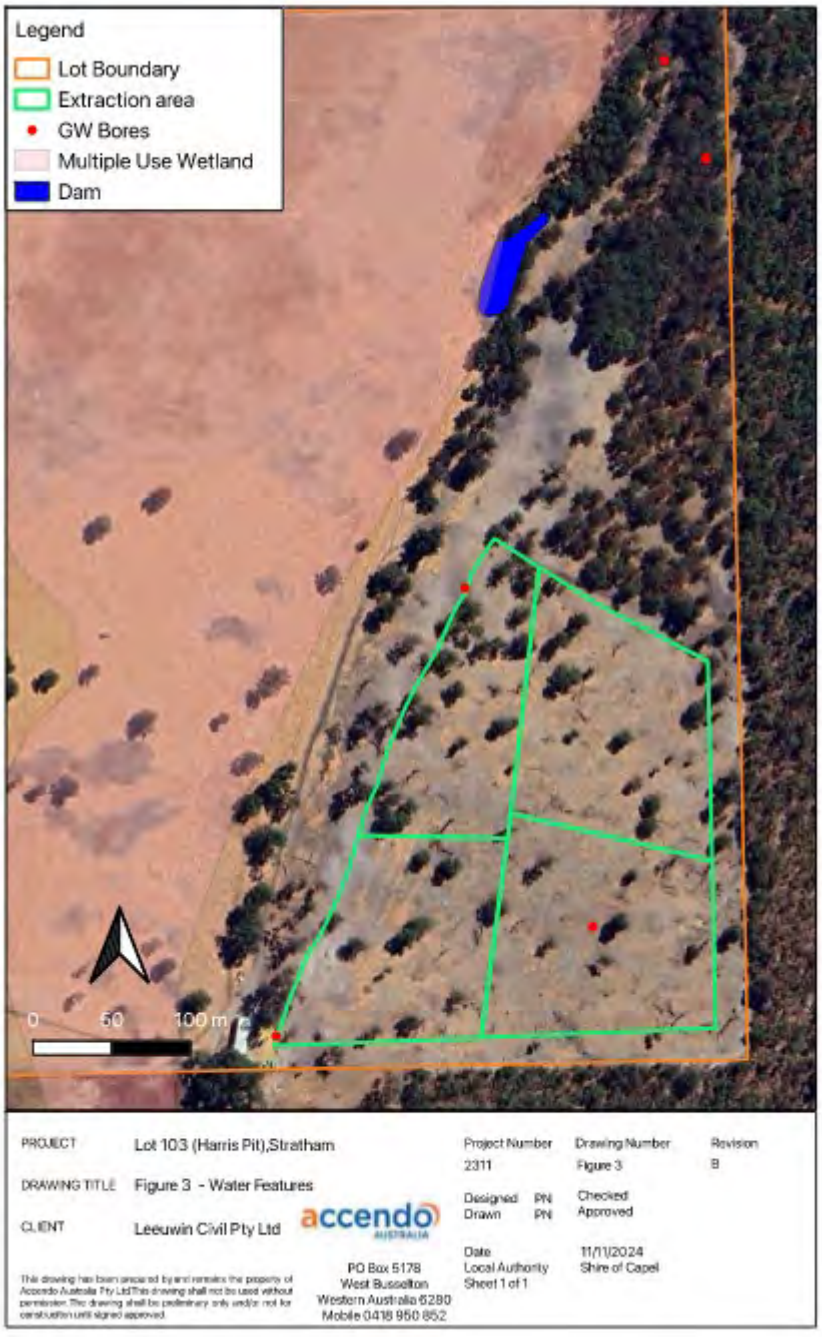


Figure 15 – Extract from WMP showing location of Multiple Use Wetland and Dam.

Staging

The proposed extraction is to be undertaken in four stages (see Figure 16 below). The proposal is to undertake excavation on the eastern edge first, which also represents the highest portion of the site and then excavate west towards the lower land. The proposed stages are less than 2ha each. This proposed staging plan is considered reasonable and conditions are recommended.

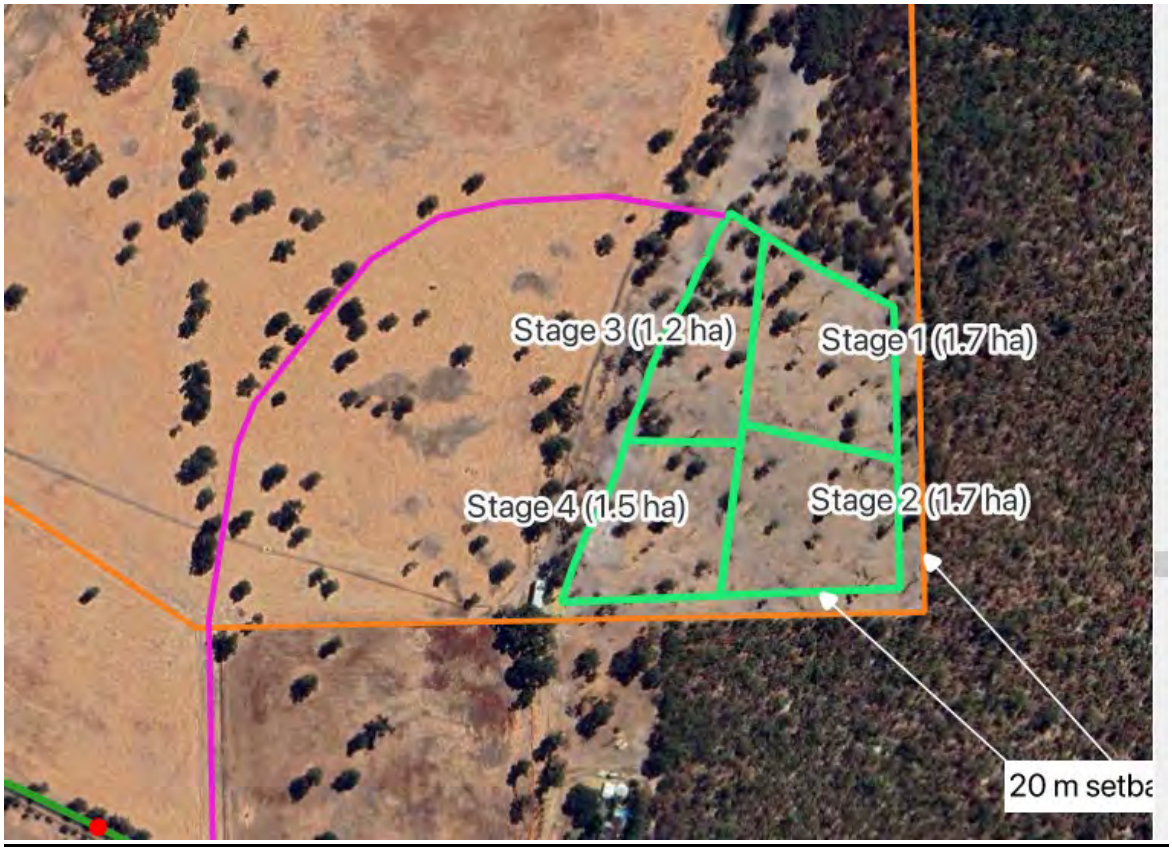


Figure 16 – extract of staging.

Removal of remnant vegetation

The proposal seeks to extract sand from the western face of the ridge line for a length of 240m to 340m at the base of the ridge. The proposed extraction area contains of mostly cleared grazing/pasture land with scarcely scattered trees. Tree species mainly consist of Marri, Jarrah and Peppermint. Other species such as WA Christmas tree, Bull Banksia and Woody Pear being present in smaller numbers.

The extraction area has been restricted to an area with limited existing remnant vegetation, it being historically cleared and used for grazing. Existing trees are isolated and park land cleared.

A Fauna Assessment has been undertaken and shows the extent of habitat trees showing trees without hollows or with one or more hollows but none being suitable for Black Cockatoos (see Figure 17 below).

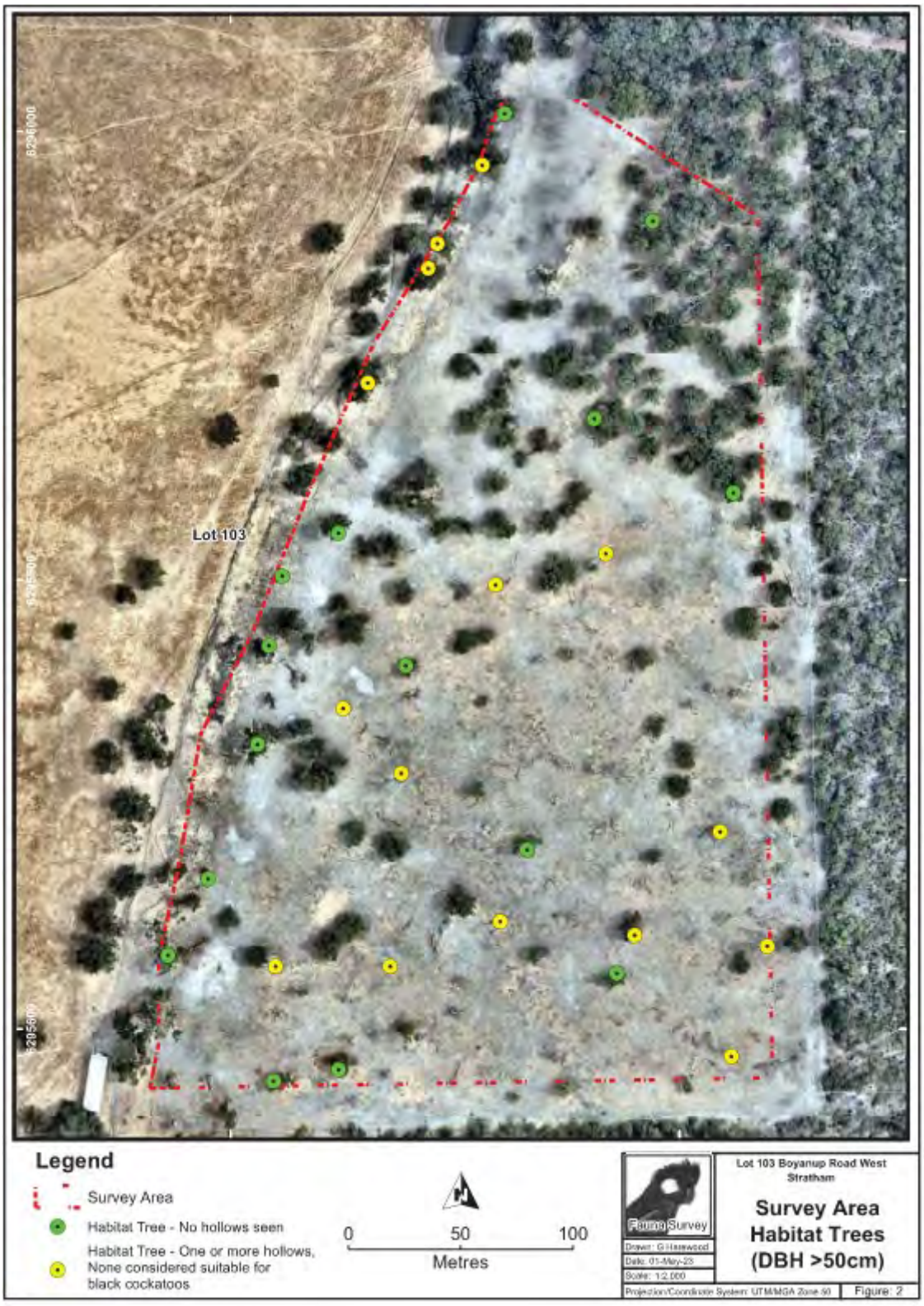


Figure 17 – Extract of habitat trees.

Clearing of vegetation will be subject to a separate clearing permit process. In this instance, neither DBCA nor DWER have outlined any specific concerns that need addressing as part of this development application stage, and would generally provide an indicative position on such applications if it was unlikely to be supported through follow-up approval processes.

A guide to the assessment of applications to clear native vegetation (December 2014) provides a table on clearing principles to be used for assessors considering the clearing permit assessment process. This includes the following:

"Principle (b) *Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.*

Principle (g) *Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.*

Principle (h) *Native vegetation should not be cleared if the clearing on the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."*

In this instance, it is unlikely that these principles will prove fatal to a clearing permit assessment based on the isolated nature of the vegetation and limited to no impact on surrounding vegetation.

End Land Use and Form

The proposed rehabilitation plan intends for the land to be used for pasture grazing, consistent with the 'Agriculture – Extensive' land use of LPS8, and this use aligns with the intent of the Rural zoning.

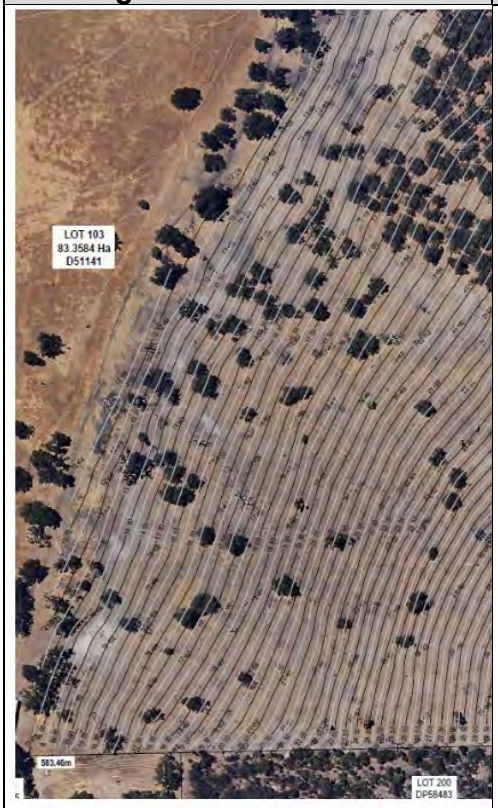
Existing Landform	**Proposed Landform**
	

Figure 18 - Existing and proposed landform.

The proposed landform seeks to create a batter slope of 1 in 4 (see Figure 18). This slope may be considered in the Shire's LPP 6.2 Performance Criteria (PC1.2.4) where the final excavation batters achieve rehabilitated slopes compatible with future land use, existing soil structure, topography, and positive environmental outcomes. The Acceptable Development Criteria of LPP 6.2 requires a 1 in 4 slope.

In considering the acceptableness of this proposal, the following comments are provided:

- Landform - The site forms part of a ridge that runs north south, starting on the northern side of Boyanup Road West and continuing north for approximately 4.5km. The proposed end landform as proposed will break this continuity by creating a steep depression.

- Suitability for grazing/pasture - The Shire engaged independent third-party consultants for advice on this matter (Syrinx) (**Attachment 9**). In summary, the advice concludes:
    - Livestock can access a 1 in 4 slope for forage or movement.
    - Cattle can utilise slopes of up to 30% (1 in 3.33) or even steeper, yet they prefer flat ground and lower slope.
    - The slopes proposed will be subject to erosive pressure from livestock as the weight of animals is not distributed evenly over four hooves. The amount of pressure exerted on the soil is dependent on the species in terms of hoof and weight which increases with age. For instance, a human exerts four to six times less pressure than cattle and two to five times less than a sheep.
    - Erosion impacts are greater from grazing, the steeper the slopes, noting that a 1 in 6 slope, property prepared can be stable with grazing pressure.

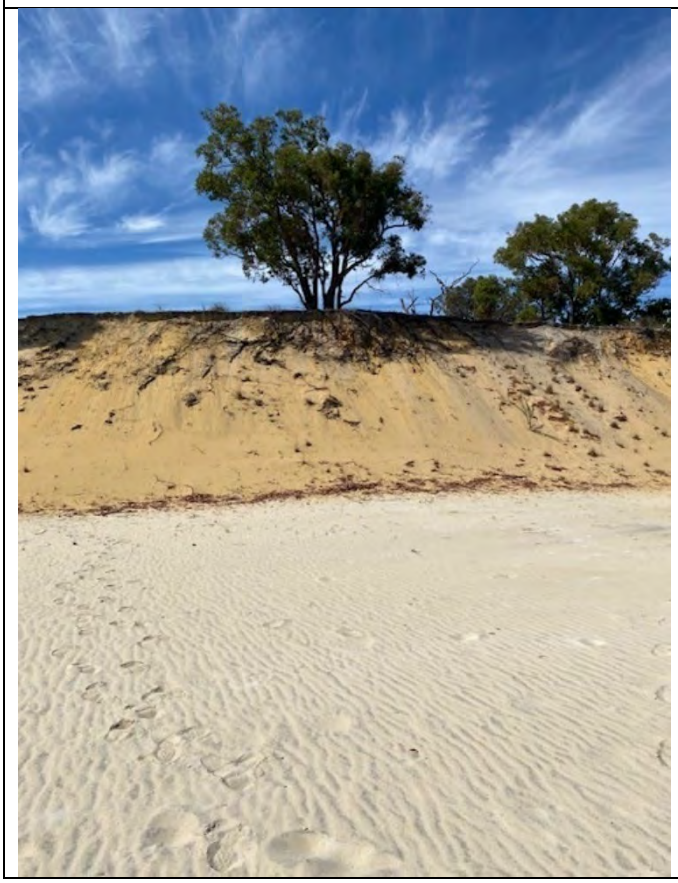
- In the context of this application, the steeper slope can result in:
    - Changes in water drainage as steeper slopes shed water more easily leading to increased soil erosion and loss of nutrients. The ability of vegetation to slow water floor and access water to the root zone is compromised resulting in lower recharge upslope and higher recharge in the lower sections of the slope. This may result in the upper slopes to be devoid of vegetation, particularly after grazing.
    - Reduction in vegetation cover due to the above-mentioned faster runoff and poorer infiltration.
    - Changes in groundwater and surface water levels and distribution as steeper slopes may lead to changes in flow paths/direction of water. This may impact plants and ecosystems to the east which have adapted to specific groundwater levels.
    - Steeper slopes may result in changes to the hydraulic gradient, subsequently resulting in lower areas being more water logged and encouraging animals to move up slope, exacerbating erosion. Further water-logged areas will influence the types of vegetation, impacting the overall ecological balance, and supporting weeds that are difficult to control (ie Arum Lilly), reducing the pasture value. It is noted that the lower lands on the site (west of the proposed extraction area) are already susceptible to water logging and form part of a multiple use wetland.

In summary, Syrinx finds that a 1 in 4 slope will likely compromise the stability of the landform. The extent of this erosion will depend on stocking rates, the type of animal and the frequency that the animal uses the slope.

The Shire's LPP 6.2 requires a landform that is compatible with future land uses, topography and achieving a positive environmental outcome if a slope of greater than 1 in 6 is proposed. This requirement has been set based on practical experience with existing approvals that demonstrate difficulty in achieving desired sustainable land use and landscape outcomes. Please see examples in the table below of rehabilitation outcomes within the Shire where a 1 in 4 batter has resulted.

Rehabilitation outcomes with 1 in 4 slope	**Description**
	Calinup Road – Pasture rehabilitation after 2 years.
	Calinup Road – Pasture rehabilitation after 2 years (close up showing erosion and lack of coverage).

	Calinup Road – Pasture rehabilitation after 2 years (close up showing erosion).
	Ducane Road 1 in 4 slope- Revegetation (completed in last 3 months) showing limited vegetation success.

	Ducane Road - Revegetation (completed in last 3 months) and shows exposed tree roots creating a steep ridge line at the top where the soil is partially stabilised by existing vegetation.
	Ducane Road - Revegetation (completed in last 3 months) Noting 1 in 4 batter approximately 10m in height at maximum point.

	Ducane Road - Showing wider view highlighting the context and artificial steepness, noting that natural dunes of this steepness are associated with mobile dune systems.

Based on these sub-par standard examples, experiences with similar developments within the Shire, and the Shire's policy position, the proposed 1 in 4 slope is not considered appropriate and will unlikely result in a sustainable land form for ongoing grazing or pasture use.

On this basis, it is recommended that the rehabilitation plan be modified to require a 1 in 6 slope and be conditioned accordingly.

Conclusion

The amended plans (January 2025) have addressed the issues raised during the first round of advertising, including operational elements associated with noise, dust, ground water and surface water management, staging, haulage, hours of operation. It is considered that these elements can be adequately addressed through conditions.

The key issue relates to rehabilitation outcomes associated with the proposed end landform. The proposed 1 in 4 slope is not considered an acceptable outcome and conditions are recommended to require a minimum of 1 in 6 batter.

Alternatives

It is acknowledged that the land use can be supported under the Zoning Table of LPS8, and that a majority of the concerns raised in this report can be addressed through the imposition of conditions on a development approval. The Shire believes that the development in its proposed form is not considered acceptable due to the level of inconsistency with the State and local planning rramework.

However, the Panel may take the view that the development should be refused on the grounds that negative impacts of the development cannot be reasonably managed or mitigated appropriately.

As such, the Shire has provided an alternative recommendation for refusal is provided as follows, should the DAP be of the opinion that the development is not supportable:

It is recommended that the Development Assessment Panel resolves to:

Refuse DAP Application reference DAP/23/02583 and accompanying plans in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015* and the provisions of the Shire of Capel Planning Scheme No.8, for the following reasons:

Reasons:

1. The proposed development does not meet clause 16 (2) for the Objectives of the Rural Zone in the Shire of Capel Local Planning Scheme No. 8.

2. The proposed development does not meet the policy provisions of the Shire of Capel Local Planning Policy 6.2 - Extractive Industries with respect to development criteria:

    - AD1.2.1
    - AD1.2.3
    - AD1.2.4
    - AD1.3.1
    - AD1.4.1

3. The proposed development does not satisfactorily address the requirements of the *Planning and Development (Local Planning Schemes) Regulations 2015* Clause 67(2) sub clauses (a), (b), (c), (g), (n), (o), (p), (q), (t) and (y).

EXTRACTIVE INDUSTRY (SAND) OPERATIONS PLAN

LOT 103 BOYANUP ROAD WEST, STRATHAM

January 2025

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Limitations

This report has been prepared by Accendo Australia Pty Ltd in accordance with the scope limitations provided in this report, or as otherwise agreed, between the Client and Accendo.

This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

This report has been prepared based upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report, which Accendo has not independently verified or checked beyond the agreed scope of work. Accendo does not accept liability in connection with such unverified information.

The conclusions and recommendations in this report are based on assumptions made by Accendo described in this report where and as they are required. Accendo disclaims liability arising from any of the assumptions being incorrect.

The report is based on site specific conditions encountered and information received at the time of preparation of this report or the time that site investigations were undertaken. Accendo disclaims responsibility for any changes that may have occurred after this time.

The preparation of this report has been undertaken and performed in a professional manner, in consideration of the scope of services and in accordance with environmental consulting practices. No other warranty is made.

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1 INTRODUCTION

1.1 Background

Leeuwin Civil Pty Ltd (the applicant) is proposing to extract sand from a 5.4 hectare (ha) area within Lot 103 Boyanup Road West, Stratham (herein referred to as the subject site) (refer to **Figure 1** and **Figure 2**).

The applicant's details are as follows:

Leeuwin Civil Pty Ltd
(08) 9754 7944
995 Gale Rd, Kaloorup WA 6280

This application is made for a five year period however, the exact life of the project is difficult to estimate as it will be dependent on supply and demand trends.

The available volume of sand (*insitu* volume of approximately 200,000 m^3) is to be extracted, commencing to the north of the subject site and moving in a southerly direction (refer to **Figure 2**).

This document has been submitted to fulfil the relevant requirements provided within the Shire of Capel's *Local Planning Scheme No. 8* and the Shire of Capel's *Local Planning Policy No. 6.2 Extractive Industries*. It is intended to provide the Shire of Capel, the public and relevant government agencies with an understanding of the proposal and the environmental strategies and commitments proposed to address various environmental and social issues.

2 EXISTING ENVIRONMENT

2.1 Location and Layout Plans

The subject site is located within Lot 103 Boyanup Road West, Stratham. The Lot is wholly owned by Justin Harris (refer to **Appendix A** for Certificate of Title). Authorisation for Leeuwin Civil to act on the landowner's behalf for this proposal has been provided (refer to **Appendix B**).

The subject site is located within the municipality of the Shire of Capel, approximately 10 km north of the Capel town centre and approximately 170 km south of Perth (refer to **Figure 1**).

2.2 Land Use and Zoning

The subject site is zoned "Rural" under the Shire of Capel's *Local Planning Scheme No. 8* (LPS 8). The subject site is located within the "Special Control Area – Basic raw materials" under the LPS 8. The proposed extractive industry is a permitted land use within this zone subject to development approval from the Shire of Capel.

Land use abutting the boundaries of the subject site are zoned 'Rural' to the north, east and south. Properties to the west of the subject site, on the western side of Bussell Highway, are zoned 'Special Rural'.

The subject site is currently used for the grazing of cattle.

2.3 Topography and Soils

The current topography of the subject site can be described as sloping with the elevation ranging from 15 m Australian Height Datum (AHD) in the west to 32 m AHD in the south eastern corner (refer to **Appendix C**).

The subject site is located on the Perth Coastal Zone consisting of coastal sand dunes and calcarenite within the Spearwood system. The Spearwood systems consists of "*Sand dunes and plains with yellow deep sands, pale deep sands and yellow/brown shallow sands"* (Tille 2006).

The subject site is located within the Spearwood S1b phase consisting of 'dune ridges with deep siliceous yellow brown sands or pale sands with yellow-brown subsoil and slopes up to 15%' (Natural Resource Information (NRInfo)) (DPIRD 2023).

2.3.1 Acid Sulfate Soils

Acid Sulfate Soils (ASS) is the common name given to naturally occurring soil and sediment containing iron sulfides. They have become a potential issue in land development projects on the Swan Coastal Plain when the naturally anaerobic conditions in which they are situated are disturbed and they are exposed to aerobic conditions and subsequently oxidise. When oxidised, ASS produce sulfuric acid, which can result in a range of impacts to the surrounding environment. ASS that has oxidised and resulted in the creation of acidic conditions are termed "Actual ASS" (AASS), and those that have acid generating potential but remain in their naturally anaerobic conditions are termed "Potential ASS" (PASS).

ASS risk mapping (DWER 2021) indicates that there is a nil risk of ASS occurring within the majority of the subject site. However, a limited area in the north west of the subject site is mapped as having a 'high to moderate risk' of ASS occurring (refer to **Figure 3**). This proposal involves the excavation of material above the watertable (at least 1 m separation to maximum groundwater levels will be maintained at all times) and no dewatering will be undertaken during excavation works. Accordingly, the potential impacts

associated with ASS are expected to be low and therefore no further investigations regarding ASS are considered necessary.

2.4 Climate

The climate of the locality is classified as Mediterranean with warm to hot summers and cool wet winters.

The closest weather recording station is Bunbury (Station 9965). Temperatures are highest on average in February, at approximately 30°C. July has the lowest average temperature of the year of 7.3°C.

Rainfall for the area is approximately 730 mm per annum with approximately 90% of the rain falling during the winter months, April to October inclusive.

During the summer months the dominant wind in the mornings is from the south-east at 10-14 knots, swinging to the south-west at 20-25 knots in the afternoon. During winter, the winds are most commonly 10-14 knots with no dominant prevailing direction. During storms, winds from the west and north-west can reach 40 knots (BoM 2020).

Rainfall intensity has been calculated using the Bureau of Meteorology (BoM) Intensity-Frequency-Duration (IFD) data system which yields the two hour 1 in 10 (10%) annual exceedance probability storm event for the subject site as 40.2 mm/hr.

2.5 Vegetation and Flora

The vegetation within the subject site is in a 'completely degraded' (Keighery 1994) condition due to prolonged land degradation processes including land clearing, and livestock grazing. A fauna survey was undertaken (Harewood 2023) which describes the vegetation within the subject site as totally degraded 'pasture/bare ground with widely scattered trees including marri (*Corymbia calophylla*), jarrah (*Eucalyptus marginata*), peppermint (*Agonis flexuosa*) and dead unidentified species' (refer to **Plate 1**). Very occasional individuals of the WA Christmas Tree (*Nuytsia floribunda*), Bull Banksia (*Banksia grandis*) and Woody Pear (*Xylomelum occidentale*) were observed during the survey. An area of approximately one hectare in size to the north east of the subject site described as a 'peppermint low woodland with very occasional emergent eucalypts' has been excluded from the extraction footprint (Harewood 2023) (refer to **Plate 2**).



Plate 1. Completely degraded pasture with scattered trees (vegetation at the bottom of the hill is excluded from the extraction footprint).



Plate 2. Peppermint low woodland which has been excluded from the extraction footprint.

2.5.1 Threatened Ecological Communities

An ecological community is defined as "a naturally occurring assemblage that occurs in a particular type of habitat" (PWS 2015). A Threatened Ecological Community (TEC) is one that has declined in area or was originally limited in distribution. Uncommon ecological communities that do not strictly meet TEC defined criteria, or are inadequately defined, are listed by the DBCA as a Priority Ecological Community (PEC).

As well as protection under State legislation, selected ecological communities are also afforded statutory protection at a Federal level pursuant to the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act provides for the protection of TECs, which are listed under section 181 of the Act, and are defined as "Critically Endangered", "Endangered" or "Vulnerable" under Section 182.

A search of the Department of Biodiversity Conservation and Attraction's (DBCA's) and EPBC Act databases found three TECs endorsed under State and Commonwealth legislation and policy recorded within proximity to the subject site. This included the Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region ecological community, the Tuart (*Eucalyptus gomphocephala*) Woodlands and Forests of the Swan Coastal Plain ecological community and the Clay Pans of the Swan Coastal Plain ecological community.

None of the vegetation within the subject site is representative of these TECs due to the absence of clay soils, the 'completely degraded' condition of the vegetation and the absence or limited numbers of key indicator species such as Banksia spp. and *Eucalyptus gomphocephala*.

2.5.2 Environmentally Sensitive Areas

Section 51B of the *Environmental Protection Act 1986* (EP Act) allows the Minister to declare an Environmentally Sensitive Area (ESA). Once declared, the exemptions to clear native vegetation under the regulations do not apply in these areas. TEC's areas within 50 m of any Declared Rare flora (DRF) and defined wetland areas constitute ESAs. However, a number of other areas of environmental significance are also listed. Current declared ESAs are listed in the *Environmental Protection (Environmentally Sensitive Areas) Notice 2005*.

Approximately 2 ha in the south west of the subject site is mapped within an ESA associated with a TEC situated approximately 400 m to the south of the subject site. As discussed within **Section 2.5.1**, no TECs are present within the subject site.

2.6 Fauna

A search of the DBCA's Threatened Fauna database (NatureMap) was undertaken to establish whether species declared as 'Rare or likely to become extinct' (Schedule 1), 'Birds protected under an international agreement' (Schedule 3) and 'Other specially protected fauna' (Schedule 4) as listed under the *Biodiversity Conservation Act 2016* have been recorded in proximity to the subject site. The NatureMap Report identified 18 threatened species, one Priority 1 species, one Priority 2 species, four Priority 3 species, five Priority 4 species and one 'Other specially protected fauna' species (refer to **Table 1**), within a 5 km radius of the subject site. A search of the EPBC Act *Matters of National Environmental Significance* database identified one 'Critically Endangered' species, four 'Endangered' species and four 'Vulnerable' fauna species within a 2 km radius.

Table 1: Significant fauna potentially occurring within proximity of the subject site as identified by State and Commonwealth database searches

Species	DBCA Status	EPBC Act Status	Likelihood of Occurrence
*Botaurus poiciloptilus (*Australasian Bittern)	T	Endangered	Unlikely, absence of suitable habitat.
Calyptorhynchus banksii subsp. naso (Forest Red-tailed Black Cockatoo)	T	Vulnerable	Possible, limited habitat in the form of paddock trees.
Calyptorhynchus baudinii (Baudin's Cockatoo)	T	Endangered	Possible, limited habitat in the form of paddock trees.
Calyptorhynchus latirostris (Carnaby's Cockatoo)	T	Endangered	Possible, limited habitat in the form of paddock trees.
Dasyurus geoffroii (Western Quoll, Chuditch)	T	Vulnerable	Possible, however very limited/degarded habitat and unlikely to rely on the area.
Falco hypoleucos (grey falcon)	T	Vulnerable	Possible but unlikely to rely on the area due to the limited/degraded habitat.
Pseudocheirus occidentalis (Western Ringtail Possum, ngwayir)	T	Critically Endangered	Possible but unlikely to rely on the area due to the limited/degraded habitat.
Setonix brachyurus (Quokka)	T	Vulnerable	Unlikely, outside of known extent
Sternula nereis nereis Australian Fairy Tern)	T	Vulnerable	Unlikely, absence of suitable habitat.

While migratory bird species may infrequently visit the subject site, they will not rely on it for their persistence in consideration of its degraded condition. They have therefore been omitted from the list above.

Fauna habitat within the subject site is totally degraded and therefore, with respect to fauna in general the survey area does not appear to represent habitat of significance and is only likely to support a very depauperate fauna assemblage dominated by a small range of mainly common bird species (Harewood 2023).

A targeted fauna assessment was undertaken by Greg Harewood which included a literature review, a daytime reconnaissance survey and a nocturnal spotlighting survey. The field component of the fauna assessment was carried out on the 22 April 2023 (day survey) and the 26th April (night survey) (refer to **Appendix D**).

The black cockatoo habitat tree assessment identified 16 trees within the proposed extraction area with a diameter at breast height (DBH) >50 cm. Five of these appeared not to contain hollows of any size. The remaining 11 trees contained apparent or obvious hollows, all of which were assessed as being unlikely to be suitable for black cockatoos to use for nesting purposes, due to the hollows apparent small size, unsuitable orientation and/ or low height above ground level. While some of the hollows present in these trees have large entrances none of the hollows were considered by Harewood to be suitable for black cockatoos after close examination with a drone. No hollows showed any conclusive evidence of use by any fauna (Harewood 2023).

Given the relatively small numbers of scattered trees defined as quality foraging habitat (marri, jarrah and banksia) it is not possible to define the area of this resource, however the fauna survey estimates there is approximately less than 0.1 ha based on canopy extent (Harewood 2023).

No evidence of western ringtail possums (WRPs) (i.e. scats, dreys or individuals) was observed during the day or night survey. Furthermore, the small peppermint woodland area of what appears to be suitable habitat (Harewood 2023) has been omitted from this application. This indicates that WRPs are unlikely to utilise the subject site for any purpose.

2.7 Hydrology

2.7.1 Groundwater

The subject site is located within the Bunbury West subarea of the proclaimed Bunbury Groundwater Area.

Groundwater monitoring bores located within the extraction area and approximately 140 m to the north of the extraction area (refer to **Figure 4**) have been monitored monthly for groundwater levels from January 2021 to December 2022. Data from this monitoring period indicates a maximum groundwater elevation of 10.4 m AHD in the northern bores and 11.0 m AHD in the bore within the extraction area in September 2022 (refer to **Appendix E**). With an approximate distance of 300 m between these bores and their location at approximately the same topographical elevation (14 m AHD), it can be assumed that a groundwater gradient of approximately 1:0.002 is present across the site. Given the distance between the southern bore and the south western corner of the extraction area is also approximately 300 m with similar elevations, the maximum groundwater at the south western corner of the excavation area will be approximately 11.6 m AHD.

Additional groundwater monitoring bores (refer to **Figure 4**) were installed prior to the 2024 winter period and were monitored monthly for groundwater levels in April and then from June to September. The bore located at the centre of the extraction area (MW3) was damaged by cattle and therefore was only approximately 11 m BGL at peak groundwater time. No groundwater was observed in this bore at any stage. Due to this, the assumption was made that groundwater levels in the area remain less than 11 m BGL or approximately 13 m AHD. To ensure a separation to groundwater of at least 1 m, and to take into consideration long term historical variation, maximum excavation levels of 15 m AHD will be excavated at the centre of the site with a slope reflecting natural ground levels being constructed across the subject site to the west.

2.7.2 Surface Water

The subject site is located in the Wonnerup subarea of the unproclaimed Capel surface water area, approximately 400 m to the north of the *Rights in Water and Irrigation* (RiWI) *Act 1914* proclaimed Capel River System surface water area. The subject site is not proclaimed under the *Country Areas Water Supply Act 1947* as a public drinking water source area.

A dam is located to the north of the subject site. A buffer of at least 100 m to this dam will be maintained at all times. Whilst not defined as a watercourse on public databases, a drainage depression named as the Gynudup Brook in DWER databases is located to the west of the subject site. No surface water flow was observed in this depression throughout the winter wet period (refer to **Plates 3** and **4**). However, it is proposed to provide a buffer of at least 50 m to this depression at all times.



Plate 3. View looking north along Gynudup Brook adjacent to the middle of the extraction area.



Plate 4. View looking north along Gynudup Brook adjacent to the southern corner of the extraction area.

2.7.3 Wetlands

Wetlands within Western Australia are classified on the basis of landform and water permanence pursuant to the Semeniuk (1995) classification system (refer to **Table 2**).

Table 2. Wetland classifications (Semeniuk 1995).

Water Longevity	Landform				
	Basin	Channel	Flat	Slope	Highland
Permanent Inundation	Lake	River	-	-	-
Seasonal Inundation	Sumpland	Creek	Floodplain	-	-
Intermittent Inundation	Playa	Wadi	Barlkarra	-	-
Seasonal Waterlogging	Dampland	Trough	Palusplain	Paluslope	Palusmont

Areas of wetlands in Western Australia have been mapped and this mapping has been converted into a digital dataset that is maintained by the Department of Biodiversity, Conservation and Attractions (DBCA) and is referred to as the '*Geomorphic Wetlands of the Swan Coastal Plain*' dataset. This dataset contains information on geomorphic wetland types and assigns management categories that guide the recommended management approach for each wetland area. The wetland management categories and management objectives are listed in **Table 3**.

Table 3. DBCA wetland management categories (Semeniuk 1995).

Category	Description	Management Objectives
Conservation	Wetlands support a high level of ecological attributes and functions.	Highest priority wetlands. Objective is to preserve and protect the existing conservation values of the wetlands through various mechanisms including: • Reservation in national parks, crown reserves and State owned land, • Protection under Environmental Protection Policies, and • Wetland covenanting by landowners. No development or clearing is considered appropriate. These are the most valuable wetlands and any activity that may lead to further loss or degradation is inappropriate.
Resource Enhancement	Wetlands which may have been partially modified but still support substantial ecological attributes and functions	Priority wetlands. Ultimate objective is to manage, restore and protect towards improving their conservation value. These wetlands have the potential to be restored to Conservation category. This can be achieved by restoring wetland function, structure and biodiversity.
Multiple Use	Wetlands with few remaining attributes and functions	Use, development and management should be considered in the context of ecologically sustainable development and best management practice catchment planning through landcare.

There is one Multiple Use (MU) wetland (UFI 13329) mapped to the west of the extraction site (refer to **Figure 4**).

MU wetlands are assessed as possessing few remaining ecological attributes and functions, which is characteristic of these mapped areas within the property. While such wetlands can still contribute to regional or landscape ecosystem management, including hydrological function, they are considered to

have low intrinsic ecological value. Typically, they have minimal or no native vegetation remaining (less than 10%). Accordingly, there is no legislative requirement to protect or retain them and as such MU wetlands do not preclude development.

The management objective for MU wetlands is to preserve the hydrological functions in the context of the proposed development (EPA 2008). The current water cycle within the subject site consists of inputs from rainwater being infiltrated on site or flowing through the drainage lines into the wider drainage system. The development is not proposing to alter this process, with all water being retained within the excavated areas to enable infiltration through stormwater pits to ensure water quality is maintained.

2.8 Dieback

Given that native vegetation has largely been altered within the subject site to enable the establishment of pasture, dieback indicator species are largely absent and therefore it is not possible to detect whether dieback is present or absent. On this basis, it is reasonable to classify the subject site as 'uninterpretable', denoting that a precautionary management approach should be adopted in relation to dieback.

2.9 Crown Land and Reserves

The subject site is not located within Crown land. A DBCA land of interest (Register No. 2684/750) is located approximately 350 m to the south of the subject site on the opposite side of Boyanup Road West. The proposed operations are not likely to impact this site.

2.10 Aboriginal Heritage

All Aboriginal sites in Western Australia are provided protection under the *Aboriginal Heritage Act 1972* in which it is an offence for anyone to excavate, damage, destroy, conceal or in any way alter an Aboriginal site without the Minister's permission.

An online search for relevant Aboriginal heritage information was undertaken using the Department for Planning, Lands and Heritage (DPLH) *Aboriginal Cultural Heritage Inquiry System* that incorporates both the heritage site register and the heritage survey database (DPLH 2023). The Aboriginal Cultural Heritage Directory provides locations and information about Aboriginal cultural heritage in Western Australia. The system contains past survey reports, places, cultural landscapes, protected areas, local Aboriginal cultural heritage services and Native Title Parties.

Results of the database search revealed that there have been three heritage surveys undertaken covering the subject site as follows:

- Heritage Survey Area 104079: Bunbury-Wellington Regional Planning Study: Working Papers no. 6, Aboriginal Heritage and Planning Survey;
- Heritage Survey Area 20283: An addendum to a desktop preliminary Aboriginal heritage Survey for Water Corporations proposed development of the Yarragadee Aquifer extending to the Blackwood Groundwater area; and
- Heritage Survey Area 104608: Bunbury-Wellington Regional Planning Study: Aboriginal Heritage and planning survey: working paper no. 6.

While these surveys did not constitute a comprehensive 'site identification', 'site avoidance' or 'work area/programme clearance' survey, no Aboriginal heritage sites are identified as being present within the subject site. The closest Aboriginal heritage site is the Capel Bussell Highway (ID 5813) located approximately 2 km to the southwest of the excavation area (refer to **Figure 5**).

2.11 Surrounding Residents

The subject site has been designed to maximise setbacks to the closest sensitive receptors, where possible. This has involved extensive analysis of the local landform, environmental characteristics, land uses and location of sensitive receptors.

The key amenity issues for sensitive premises associated with the proposal are:

- Visual amenity;
- Dust; and
- Noise.

The Environmental Protection Authority's (EPA) *Guidance for the Assessment of Environmental Factors* (June 2005) provides generic separation distances to assist in the determination of suitable buffers where industry may have the potential to affect the amenity of a sensitive land use. In particular, for extractive industries, a buffer distance of 300 m to 500 m is recommended from sensitive land uses.

The closest residential dwellings to the subject site are provided below and shown in **Figure 6.**

Table 4. Residential dwellings within 1,000 m of the subject site.

Resident No.	Distance to subject site (m)
1	140 m
2	648 m
3	779 m
4	786 m
5	880 m
6	936 m
7	987 m

The closest residential dwelling to the subject site is located 140 m from the southern boundary. The applicant has attempted consultation with this neighbour however the neighbour has not been willing to engage. It should be noted that this residence is for sale and the applicant is willing to undertake consultation with any parties looking to purchase the property. Ongoing consultation will be undertaken for the life of the quarry.

Management measures associated with noise and dust are discussed in further detail in **Sections 5.5** and **5.6**, respectively.

3 PLANNING FRAMEWORK

3.1 State Planning Strategy 2050

The *State Planning Strategy 2050* comprises a range of strategies, actions, policies and plans to guide the planning and development of regional and local areas in Western Australia.

In relation to Basic Raw Materials (BRM), the key outcome for the Strategy is '*accessible and affordable supplies of BRM are available close to demand*'.

The proposal is consistent with this outcome as a nearby and relatively environmentally unconstrained resource will be provided to the South West region.

3.2 Statement of Planning Policy No. 2 Environmental and Natural Resources Policy

In relation to basic raw material resources, this policy recommends that planning strategies, schemes and decision making should:

- Identify and protect important and economic mineral resources; and
- Identify and protect important basic raw material resources and provide for their extraction.

The extraction proposal is consistent with the intent of this policy as it will enable the extraction of a basic raw material from the site while ensuring the protection of the nearby environmental values associated with wetlands and groundwater.

3.3 Planning Policies

3.3.1 Existing and Surrounding Land Uses

Land use abutting the boundaries of the subject site is rural based to the north, east and south. Properties to the west of the subject site on the other side of Bussell Highway are zoned 'Special Rural'.

3.3.2 Shire of Capel Local Planning Scheme No. 8

The subject site is zoned "Rural" under the Shire of Capel's *Local Planning Scheme No. 8*. The proposed extractive industry is a permitted land use within this zone subject to development approval from the Shire of Capel.

The subject site is located within the "Special Control Area – Basic raw materials" under the *Local Planning Scheme No. 8.* The purpose of this Special control Area is outlined within the draft scheme as 'To identify areas where basic raw materials and strategic mineral resources need to be protected from incompatible land uses in line with the GBRS Strategic Minerals and Basic Raw Materials Resource Policy 2018'. The draft scheme contains the following objectives in relation to the Special Control Area:

a) To identify land within the Scheme area which contains mineral resources and basic raw materials of State or regional significance.
b) To prevent mineral resources and basic raw materials of State or regional significance being sterilised by incompatible development and land uses.
c) To encourage the mining of mineral resources and extraction of basic raw materials in accordance with acceptable environmental standards.

d) To promote the rehabilitation and restoration of mining and extraction sites, after works have been completed, in a way that is consistent with the long-term use of the land.

3.3.3 Shire of Capel's Local Planning Policy No. 6.2 Extractive Industries

The Shire of Capel's *Local Planning Policy No 6.2 Extractive Industries* contains the following objectives:

1. Ensure extractive industries do not adversely affect the environment or the amenity of the locality during or after extraction.
2. Ensure extractive industries are in the most appropriate locations.
3. Ensure volumes of extraction occurs where the available haulage routes and road hierarchy are satisfactory or can be upgraded to support an extractive industry without affecting the safety of road users and the sustainability of the transport network.
4. Achieve a high level of stage rehabilitation to native vegetation where required or where clearing of remnant vegetation is proposed and approved.
5. Achieve a high level of groundwater resource protection.
6. Clearly outline matters required to be addressed by proponents.
7. To provide clarity of the development assessment process for proponents and the broader community.
8. Inform the community and stakeholders of the importance of a rigorous assessment process and the reasoning for the Shire's policy stance.

Furthermore, the policy outlines the assessment criteria and policy provisions by which applications for planning consent for an extractive industry will be assessed against which includes the following:

1) Amenity
   - PC1.1.1 Development does not result in a landform that prejudices the productive use or potential use of agricultural land on site or in the surrounding locality.
   - PC1.1.2 Development and the volume of truck movements does not unduly disrupt surrounding residents by way of vehicular traffic, noise, dust, blasting and vibration.
   - PC1.1.3 Consultation has occurred with the local community and relevant government agencies.
   - PC1.1.4 The site can be rehabilitated in a way that is compatible with the long-term planning and environmental protection for the site and surrounding area.
2) Environmental
   - PC1.2.1 Development is located to minimise the impact upon native flora and fauna; groundwater quality, quantity and use; surface drainage and surface water quality including discharge of sediment and sites of cultural and/or historic significance on or near the land.
   - PC1.2.2 Development is located and managed to minimise the spread of Phytophthora (Dieback).
   - PC1.2.3 Development is located and managed to achieve a high level of surface and groundwater resources protection to provide soil depth for rehabilitation to native vegetation, future landuse and a buffer against groundwater contamination and exposing groundwater.
   - Pc1.2.4 Final excavation batters to achieve rehabilitated slopes compatible with future landuse, existing soil structure, topography, and positive environmental outcomes.
   - PC1.2.5 Development is located and managed to achieve a high level of staged rehabilitation.
3) Buffers

   PC1.3 Development is sited in accordance with the principles of the State Planning Policy 4.1 State Industrial Buffer Policy and Guidance Note 3 – Separation Distances Between Industrial and Sensitive Land Uses (EPA -2005)

4) Visual Impacts

PC1.4 Development is unobtrusive and does not prejudicially affect the natural landscape.

5) Transport

PC1.5 Development satisfactorily addresses the following issues:

PC1.5.1 Proximity and interaction with school bus routes.

PC1.5.2 Transport route is to be suitable for the proposed development and truck volumes.

PC1.5.3 Proposed route shall have appropriate Restricted Access Vehicle allocation to match proposed vehicle configurations.

PC1.5.4 Development does not create hazards to other road users, impact on sustainability of the transport network, nor negatively impact on the amenity of the residences along the route, in terms of:

- Access points to the operation site.
- Existence of any other extractive industry or heavy haulage in the vicinity and cumulative effects on the transport network.
- Comment of Main Roads WA.

PC1.5.5 Dust can be managed to ensure traffic safety and protection of rural and residential amenity.

Extractive industries within Rural zoned areas are expected to be approved, where such operations can meet the requirements of these provisions and the Scheme, provided they do not have an adverse impact on Prime Agricultural land. A Development Approval after a minimum 21 day advertising period is required.

4 EXTRACTION ACTIVITIES

The sand quarry will cover an area of approximately 5.4 ha, with a current maximum elevation ranging from 15 m AHD to 30 m AHD. It will be excavated to a maximum depth of 15 m AHD commencing in the north east and moving initially in a southerly direction in stages less than 2 ha in size (refer to **Figure 2**). The proposal does not include any crushing or screening of material.

A 10 m buffer to the drip line of all trees outside of the extraction area and a 20 m buffer to the property boundary will be maintained.

It is estimated that the total maximum volume of sand to be removed will be approximately 200,000 m^3 with up to 200,000 m^3 excavated each year, depending on supply and demand.

The planned end use of the quarry is to restore a natural soil profile and return the area to pasture, ensuring that there is no net loss of agricultural land.

4.1 Operational Works

Using a loader, the topsoil (where available) will be stripped and placed in stockpiles. Overburden, if present, will be removed using a dump truck and stockpiled to the perimeter of the proposed pit area.

4.1.1 Truck Movements

Access from the property will be via Boyanup Road West (a RAV -4 classified road), travelling west to Bussell Highway (refer to **Figure 7**). The road intersection will be asphalt, with sealing up to the length of a vehicle followed by a gravel access track. Signage will be erected on both the West and East extents of the road access advising of trucks entering.

It is proposed to extract a maximum of approximately 200,000 m^3 or bank cubic metres (BCM) per year. The average daily extraction rate:

= 200,000 BCM / 52 weeks / 5 working days per week
= 769 BCM per day.

It is estimated that approximately 70% of the haulage is proposed to be undertaken from October to May (8 months). Therefore, the average daily extraction rate (main season):

= 200,000 BCM x 70% / 32 weeks / 5 working days
= 875 BCM per day.

The average daily extraction rate (LCM):

= 875 BCM x 1.15
= 1006 LCM

It is proposed to utilise 22 tonne semi-trailers with a capacity of approximately 39.6 LCM of gravel. Accordingly, the average daily truck movements during the main season are as follows:

= 1006 LCM/ 39.6 LCM truck capacity
= 25 truck movements per day x 2 (to and from)
= 50 trips per day x 2 (peak fluctuations)
= 100 trips per day maximum.

Given the highly variable nature of the campaigns, these calculations are estimates only, there may be periods in which these daily truck numbers are exceeded.

4.1.2 Sand Extraction

The sand will be excavated by a bulldozer to a stockpile or loaded directly to waiting trucks for transport. A summary of the proposed sand extraction activities is provided below:

- Prior to excavation commencing the site will be ground surveyed, the excavation footprint marked out and a 1 m contour plan developed.
- The topsoil/overburden will be stripped and stockpiled using a loader.
- An excavator or front-end loader will be used to dig the sand and transport it to a stockpile.
- The sand will then be picked up by a loader and loaded to trucks for transport.
- All static and other equipment, will be located on the floor of the quarry to provide visual and acoustic screening.
- Excavation will commence in the north of the quarry and then move in a southerly direction. The face and walls of the pit will act as noise barriers.
- Upon completion of each section of quarry, the section will be reformed and back filled, where subgrade material is available, to achieve the proposed final contours.
- At the end of excavation, the floor of the quarry will be deep ripped, covered by overburden and topsoil, and rehabilitated to a constructed soil.

4.1.3 Final Contours

The slope of the final contours of the quarry will reflect the current contours of the site and will slope from approximately 30 m Australian Height Datum (AHD) in the south western corner down to 15.0 m AHD in the centre of the extraction area sloping to join the current surface level of the adjoining land to the west at approximately 15 m AHD.(refer to **Figure 8**).

Slopes of the batters at the end of excavation will be retained at 1:4 vertical to horizontal which will enable the landform to be integrated with the surrounding landscape. This batter can be readily traversed by livestock, vehicles and machinery and is considered appropriate for the site's topographical relief. This is consistent with other sand extraction operations approved by the Shire of Capel (Lot 2 Calinup Road) and other organisations such as Main Roads WA who undertakes rehabilitation of slopes steeper than 1:6.

The proposed batters of 1:4 will only occur along the edges of the pit, adjacent to remnant vegetation, whereas the remainder of the site will be flat. This will not limit the current or potential future rural landuse of the property.

4.1.4 Rehabilitation

Progressive rehabilitation will be undertaken as far as practicable. Works will commence in the north east of the subject site with the excavation at higher elevations being undertaken first. This will then be rehabilitated while the works at lower elevation to the west are being completed. Rehabilitation will be undertaken upon the completion of each stage.

Upon completion of quarrying, the following broad completion criteria will be achieved:

- A self-sustaining cover of pasture;
- Weed levels that are not likely to impact on the viability of the reconstructed soils; and
- A safe and stable landform suitable for the proposed future land use which will be productive, grazing pasturelands.

Rehabilitation is discussed in further detail in **Section 6**.

4.2 Proposed Operating Times

Typical operating hours for quarries will be adopted for the subject site which involves 7am to 6pm each Monday to Friday and Saturdays 7am to 1pm (for rehabilitation works only), excluding public holidays. The subject site will be worked by 2 - 3 persons, depending on market demand.

Boyanup Road West is a designated bus route. Correspondence with the bus company indicates there are school buses in the area which traverse Boyanup Road West at 7:50 to 8:15 in the morning and 3:35 to 4:10 (two services) in the afternoon. To ensure that trucks are not operating on designated school bus routes at the same time as the bus, trucks will not operate on Boyanup Road West between 7:40am – 8:25am and 3:25 pm – 4:20pm, Monday to Friday, during school periods. The pit operators will be careful to ensure compliance with these requirements.

4.3 Equipment

All operational equipment will work on the quarry floor to provide maximum sound and visual screening. All equipment and infrastructure will be fully portable to facilitate movement throughout the site required for staged quarrying operations. The subject site will be secured by locked gates when it is not being actively worked. The boundary fencing will be maintained to prevent inadvertent and unauthorised entry.

Equipment and facilities that may be used onsite are provided in the Table below.

Table 5. Equipment.

Equipment	Description
Site office and/or containers	May be required for the management and security of small items.
Toilet	A portable toilet may be required on site.
Water tanker	Used for dust suppression on the access roads and working floors when required.
Loader (938/966)	Loaders will be used for the movement of sand and loading road trucks.
Excavator (325/330)	An excavator may be used for the removal of sand material.
Anaconda Radial Stockpiler	Used for stockpiling sand.
Fuel storage	No fuel will be stored onsite.
Light vehicles	Access to and around the site.
Tip truck	Removal of sand from site.

4.3.1 Water Usage

Water is only required for dust suppression within the quarry and the access road. Water will be sourced from an offsite standpipe located on Queen Elizabeth Avenue in Busselton and tankered to the site for dust suppression purposes, as required.

5 ENVIRONMENTAL IMPACTS AND MANAGEMENT

The following factors are considered to represent the potential environmental and amenity impacts associated with the proposal:

- Hydrology;
- Dust;
- Noise;
- Dieback and weeds; and
- Uncontrolled discharge of contaminants to land.

These environmental factors are discussed in more detail below, together with the proposed management actions.

5.1 Visual Impact

Visual impact can occur in a number of circumstances, by the operation being set too high in the landscape, by being too close to neighbours and by insufficient visual protection.

Views of the subject site from the Boyanup Road West and Bussell Highway are obscured by roadside vegetation comprised of mature tree species. Furthermore, all native vegetation on the western boundary of the extraction footprint will be retained to further assist in visual screening from the abovementioned roads (refer to **Plates 5** & **6**).



Plate 5. View from extraction area looking west to Bussell Highway.



Plate 6. View from extraction area looking south-southwest to Boyanup Road West.

The locality has been extensively developed for agricultural land uses and therefore is not located in a visually sensitive landscape. Rehabilitation will be undertaken progressively upon the completion of each stage, and the subject site will be returned to pasture, ensuring that any potential visual impacts are short-term. Accordingly, no further management measures are proposed for potential visual impacts.

5.2 Hydrology

5.2.1 Surface Water

The current water cycle within the subject site consists of inputs from rainwater flowing downhill in a westerly direction into the wider drainage system. The development is not proposing to alter this process, as there are no drainage lines within the proposed extraction area.

No surface water features have been identified within the extraction site with a dam located to the north west of the subject site with a 100 m buffer. Therefore, the development is unlikely to impact on surface flows.

A Water Management Plan has been prepared for the subject site and is provided in **Appendix F**. This Plan documents the proposed surface water management measures associated with the extractive industry operation.

5.2.2 Groundwater

Groundwater will not be extracted or dewatered during the operation of the quarry and therefore, no impacts to groundwater levels are proposed.

Maximum excavation levels will be approximately 15 m AHD. As discussed within **Section 2.5.1** no interaction with groundwater is expected during excavation works. Furthermore, a separation of at least 1m, between the final contours and the maximum groundwater elevation will be maintained.

Accordingly, no impacts to groundwater are expected as a result of this proposal.

5.3 Vegetation and Fauna

As described in **Section 2.5**, the subject site has undergone historic disturbance and is currently comprised of a variety of pasture grasses with widely scattered trees, predominately marri (*Corymbia calophylla*), jarrah (*Eucalyptus marginata*) and peppermint (*Agonis flexuosa*). An area approximately one hectare in size in the north east of the subject site described as a 'peppermint low woodland with very occasional emergent eucalypts' has been omitted from the extraction footprint (Harewood 2023). Based on the current vegetation condition (completely degraded), it is considered very unlikely that the subject site contains any vegetation or flora of conservation significance.

A fauna survey undertaken within the subject site found a total of 16 possible black cockatoo habitat trees, of which 11 were observed to contain hollows. None of these hollows were considered suitable for black cockatoos after close examination with a drone (Harewood 2023). Furthermore, no conclusive evidence of use by any fauna of these hollows was observed during the survey.

No evidence of WRPs was observed during the day or night survey.

Based on the above, the proposal will require a referral under the Commonwealth EPBC Act and a clearing permit application to be submitted to the DWER for the vegetation clearing. Any impacts to native flora, vegetation or fauna, and appropriate management measures will be addressed through this process. Furthermore, as a component of the environmental approval process, it is proposed to protect and improve areas of onsite native vegetation (refer to **Figure 9**).

5.4 Dieback (*Phytophthora cinnamomi*)

Given that native vegetation has largely been altered within the subject site to enable the establishment of pasture, dieback indicator species are largely absent and therefore it is not possible to detect whether dieback is present or absent. On this basis, it is reasonable to classify the subject site as 'uninterpretable', denoting that a precautionary management approach should be adopted.

The primary objective of dieback management during operations is to minimise the risk of entry of dieback to the subject site. This can be achieved by preventing the importation of soil or plant material to and from the subject site. The risk of transportation via vehicles and equipment is low given that sealed roads will be utilised prior to entering the subject site.

The management measures proposed for dieback control are developed in accordance with the *Dieback Working Group (DWG) – Best Practice Guidelines* (DWG, 2005) for an uninterpretable site and are provided within **Table 6**

Table 6. Dieback management measures.

Timing	Management Measures
Topsoil removal, excavation and rehabilitation activities	Training will be provided to all personnel during an initial safety and environment induction course. This will include an explanation of the specific requirements with regard to Phytophthora dieback management.
	Fencing and lockable gates will be maintained and used to control unauthorised access to the excavation area.
	As far as reasonable and practicable haulage vehicles are to be cleaned of all loose external soil and plant material prior to entry and exit from the extraction area.

Timing	Management Measures
	Access to the subject site during operation will be restricted to the proposed roads. No other access points should be established. The access location and vehicle inspection point should be clearly sign posted.
	The extraction area will be managed to avoid ponding of surface water where vehicle access is required.
	Trucks will be loaded and covered to ensure there is no spillage of material during transport.

A risk assessment to determine the residual risk associated with dieback is provided below. The risk assessment indicates that with the application of suitable management measures the potential risk associated with dieback introduction and spread is 'Low'.

Table 7. Risk assessment associated with dieback.

Hazard	Source of Hazard	Potential Impacts	Mitigation	Likelihood	Consequence	Residual Risk
Introduction/ spread of dieback	Importation of soil/plant material. Onsite movement of soil.	Impacts to the condition of remnant vegetation. Spread to offsite locations.	Refer to Management Measures provided in **Table 6**.	1	2	Low

5.5 Noise

Noise can originate from various operations and may impact on onsite workers, or travel offsite and impact nearby sensitive premises. Both potential noise impacts are addressed by reducing the noise generated from the quarrying and processing operations.

An Environmental Noise Assessment has been undertaken for the subject site by Lloyd George and Associates in which the installation of a 4 m bund to the south of the subject site was recommended to ensure compliance with the *Environmental Protection (Noise) Regulations 1997.*

The proponent will ensure that all noise emissions comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* at all times. A Noise Management Plan has been prepared for the subject site and is provided in **Appendix G**. This Plan documents the proposed noise management measures associated with the extractive industry operation.

5.6 Dust

The proposed extractive industry activities will involve the disturbance of large quantities of soil and earthen material. Specifically, this may include the following activities:

- Earthworks during extraction activities;
- Topsoil stripping;
- Loading and transportation of material;
- Vehicle movement within the site; and

- Wind erosion of exposed surfaces.

These activities have the potential to generate dust that, if not adequately controlled, can cause nuisance and safety risks. In-pit operations tend to generate less dust than surrounding activities due to the reduced airflow within the pit. The removal and replacement of topsoil material has the highest risk associated with dust generation due to the large volumes of material involved and generally lower levels of soil moisture.

A Dust Management Plan has been prepared for the subject site and is provided in **Appendix H**. This Plan documents the proposed dust management measures associated with the extraction industry operation.

5.7 Heritage Sites

A search of the DPLH *Aboriginal Cultural Heritage Inquiry System* shows no specific sites of Aboriginal significance occurring within or in proximity to the subject site. If during the course of mining an Aboriginal cultural heritage site is discovered, the proponent will immediately advise the DPLH and abide by the *Aboriginal Heritage Act 1972*.

5.8 Domestic and Industrial Waste Products

No domestic or industrial waste will be stored onsite. Any waste material generated during the operational activities will be taken offsite for disposal at an approved landfill facility on a daily basis. Hydrocarbon wastes such as accidental oil spills will be mopped up with absorbent material and segregated for removal and disposal offsite by a licensed contractor.

An approved portable toilet system may be temporarily placed onsite during construction activities. Waste from the toilet system will be disposed of offsite at an approved treatment facility.

5.9 Hydrocarbons and Dangerous Goods Management

Hydrocarbons are the only dangerous goods that will be utilised within the proposed extraction area. However, storage of hydrocarbons on the site will not occur.

Servicing of machinery and equipment will not occur onsite further reducing the possibility of contamination.

There is the minor possibility for soil and water contamination as a result of an incidental hydrocarbon leakages or spills during the operation of machinery. Accordingly, management measures for hydrocarbon spills are provided in the Water Management Plan (refer to **Appendix F**).

6 REHABILITATION MANAGEMENT PLAN

6.1 Objectives

The objective is to return the land to a condition capable of supporting agricultural activities, with pasture production rates equivalent to or better than pre-mining production rates. This will include dryland pasture with a variety of species. Rehabilitation of pasture is more successful at steeper batters (i.e. 1:4) as opposed to revegetation with native species.

Table 8. Rehabilitation Objectives

Land Use	Closure Objectives	Completion Criteria	Performance Criteria	Measurement Tool
Agriculture	A self sustaining cover of pasture	Crops cover the extraction area after completion of the rehabilitation works.	Less than 5% bare ground	Annual monitoring as provided in **Section 6.8**
	Weed levels that are not likely to impact on the viability of the reconstructed soils	No declared weed species are present. Weed species are not competing with cover crop across the site.	Declared weed species absent from the rehabilitation area.	Annual monitoring as provided in **Section 6.8**
	A safe and stable landform suitable for the proposed future land use	No areas of erosion or soil collapse are observed.	Rehabilitation surface remains flat and stable, with no evidence of surface erosion.	Annual monitoring as provided in **Section 6.8**

6.2 Topsoil and Overburden Removal

Topsoil is an integral part of rehabilitation as it contains organic matter and a seed bank which assists in establishing vegetation when respread on disturbed areas.

Topsoil where available will be stripped and stockpiled separately, prior to commencing quarrying.

The soils will be stripped in a dry state to preserve soil structure and stripping will be undertaken in relatively still weather conditions. Management of the topsoil will involve the following:

- Stockpiles will be located sufficiently distant from quarrying operations so that they will not be disturbed prior to being used in rehabilitation.
- Soil stripping should be avoided during wet conditions.
- The dimensions of the topsoil stockpiles will not exceed 2 m in height. This is to prevent topsoil becoming anaerobic and deteriorating in soil structure, organic matter, nutrients, seed resource and populations of beneficial soil micro-organisms.

6.3 Landform Reconstruction and Contouring

Landform reconstruction and contouring will involve the following:

- The final landform will be formed to approximately 15 m AHD.
- Batters will be retained at 1:4 vertical to horizontal.

- The excavated floor will be deep ripped in two directions. The width between rip lines will be 1 m intervals.
- The topsoil and overburden will be spread over the surface where available to provide a substrate for agricultural soils.

6.4 Site Preparation

To ensure the success of the revegetation works, site preparation should occur well before planting is undertaken. This includes landform reconstruction and contouring measures as outlined in **Section 6.3** the implementation of a weed control programme as outlined in **Section 6.5**.

In the event that compacted areas are identified within the revegetation area, contour ripping may be required. Ripping loosens soil aggregates and provides a softer soil surface for the establishment of plant roots. Ripping also promotes aeration of soil, assisting in the breakdown of organic matter and water infiltration.

6.5 Weed Management

6.5.1 Weed Control

Pre-seeding weed control is only likely to be required where topsoils are used that contain weed species. Given the current land use, it is not anticipated that weed control will be other than normal agriculture practice. If required, weed control will only be conducted after overburden and topsoil have been spread and any seeds have been allowed to germinate.

Herbicides will be selected for the target species, taking into account the surrounding environment and the constraints this may present.

Based on the location and species of weeds present, the recommended weed treatments are detailed in **Table 9**. The timing for weed control is specified within **Table 10**.

Table 9. Weed control treatment.

Treatment	Suggested Constituents	Target Species
Glyphosate spray	2% Glyphosate including Pulse®, wetting agent and Chlorsulfuron	Broadleaf species e.g. *Pelargonium capitatum* Woody weeds e.g. *Zantedeschia aethiopica*
Selective grass spray	Fusilade and approved adjuvant (e.g. Pulse®)	Grass species e.g. *Ehrharta longifolia*

6.5.2 Weed Hygiene

The following weed hygiene practices will be employed:

- Machinery will be checked prior to entering rehabilitation areas to ensure that weed seeds and propagules are not transported to this area.

6.5.3 Weed Management Plan

The following weed and disease controls will be implemented within the subject site to assist in the control of invasive species and enhance the outcomes of the proposed rehabilitation works.

Table 10. Management actions for weed control.

Parameter	Action	Timing
Surface Material	Assess weed potential within topsoil material prior to removal and separate weed affected topsoil for treatment or disposal.	Prior to and during topsoil removal
	Store significantly weedy surface material separately to clean surface material.	Surface material removal
	Stockpile all surface materials in the general vicinity of its origin.	Surface material removal
Hygiene Measures	Avoid moving surface material or fill material from weed infected areas to non-infested areas.	At all times
	All earthmoving and ground engaging equipment will be cleaned of vegetation, mud and soil prior to entry and exit of the subject site.	At all times
	No soil and vegetation should be brought to the site apart from that to be used in rehabilitation and plants used in rehabilitation should be free of weeds.	At all times
Access	Control access within the quarry area to reduce the spread of weeds, especially off-road vehicle access, to prevent disturbance to vegetation and weed invasion.	At all times
	Restrict access to areas outside the subject site to reduce the spread of weeds into or out of the site.	At all times
Weed Control	Chemical spraying is to be undertaken as per **Section 6.5.1**.	Refer to **Section 6.8**
Monitoring and Reporting	Monitoring and reporting work are required to ensure that the revegetation objections are achieved.	

6.6 Rehabilitation

As previously discussed, it is proposed to return the extraction area to pasture. Ripping will be undertaken within the quarry to reduce the potential for surface erosion and promote a seed bed for establishing pasture. During this process, a number of measures will be utilised to ensure maximum efficiency with minimal disturbance. Any ripping that occurs along slopes will have regular contour banks built across the tracks to prevent erosion from water runoff.

As far as possible, topsoil will be placed along the contour to help reduce erosion. Placing the topsoil in such a manner will reduce the down slope flow of water and increase water storage. The final landform will resemble the pre-mining landform where practicable (minus the excavated material). The overburden storage area will take into consideration the surrounding landform and as far as practicable match the surrounding features.

While no specific soil preparation is anticipated, the requirement for the application of lime and/or fertiliser can be determined by soil testing once the landform has been rehabilitated.

For pasture revegetation it is essential that the species are matched to the soil types and rainfall. The location falls into the “High Rainfall Coastal” planting regime with sandy to gravelly soils. Suitable perennial legumes include birdsfoot trefoil, lucerne, strawberry clover and sulla. Perennial pasture includes perennial ryegrass, phalaris, cocksfoot and Rhodes grass. Annual pasture species include ryegrass, serradella and subterranean clover.

The actual species used will be determined by the individual season, nature of the rainfall in the preceding months and stocking/hay production proposed by the landholder which may change from time to time.

Seeding rates are 2 – 5 kg/ha depending on the species used; for example, ryegrass is seeded at 3 kg/ha whereas Rhodes grass is seeded at 4 kg/ha. Seed will be broadcast uniformly within the marked areas in overlapping passes using mechanical equipment to allow for complete and even seed coverage of the pre-prepared area.

6.7 Maintenance

Maintenance will be undertaken following planting/seeding with all activities to be conducted in response to the maintenance inspections and monitoring (as discussed below). The key elements associated with maintenance works will include suppression of smothering weeds and infill planting. The requirement to implement revegetation maintenance and infill planting measures will be determined following each monitoring event.

6.8 Monitoring and Reporting

A program of monitoring of the rehabilitation works is required to ensure that the objectives are achieved.

Maintenance inspections will be undertaken annually in spring by the proponent to determine the requirement for maintenance measures.

During these inspections, the area will be assessed to determine pasture and weed coverage within areas that have been rehabilitated.

6.8.1 Completion Criteria

To achieve the rehabilitation objectives and ensure that future management is minimised, the measurable goals for rehabilitated areas are as follows:

- Self-sustaining crop cover with less than 5% bare ground;
- Reduce weed cover to less than 10% (noting that the pasture is not considered a 'weed'); and
- Rehabilitation surface remains flat and stable, with no evidence of surface erosion.

Maintenance will continue to be undertaken as required until this criterion has been achieved or as otherwise agreed with the Shire of Capel. Following the successful completion of the revegetation program, the Shire will, upon application from the owner, refund the bond lodged against the implementation of the rehabilitation.

6.9 Scheduling

The rehabilitation will be undertaken on the completion of excavation of each stage. Accordingly, a definitive timeline for rehabilitation is not prescribed, but rather a commitment to establish pasture by the first August, following completion of the extraction works for each stage.

Rehabilitation works will be undertaken at the following specified times of year:

1. Spring/summer:
    - Excavated area to be graded to levels and contours conforming to the adjacent unaffected areas minus the thickness of the excavated material.
    - Deep ripping along the contour at 1 m intervals.
    - Embankment batters will be cut as specified in **Section 6.3**.
    - Stockpiled topsoil will be spread over the shaped surface.
2. Autumn:
    - Pre-seeding weed control.

3. Autumn/winter:
    - Seeding with appropriate agricultural seed mix.
    - If sufficient vegetation does not germinate following initial seeding, the area will be re-seeded.
4. Spring:
    - Maintenance inspections to determine extent of maintenance requirements.
    - Formal monitoring will be undertaken in areas that have been rehabilitated.

6.10 Decommissioning

Following completion of the extraction activities, the applicant will undertake the following actions to decommission the site:

- All buildings and infrastructure will be removed;
- Any hard stand surfaces will be removed and used to backfill the pit;
- Overburden will be used as backfill;
- The area will have the slopes and soils constructed to allow for the future proposed land use.

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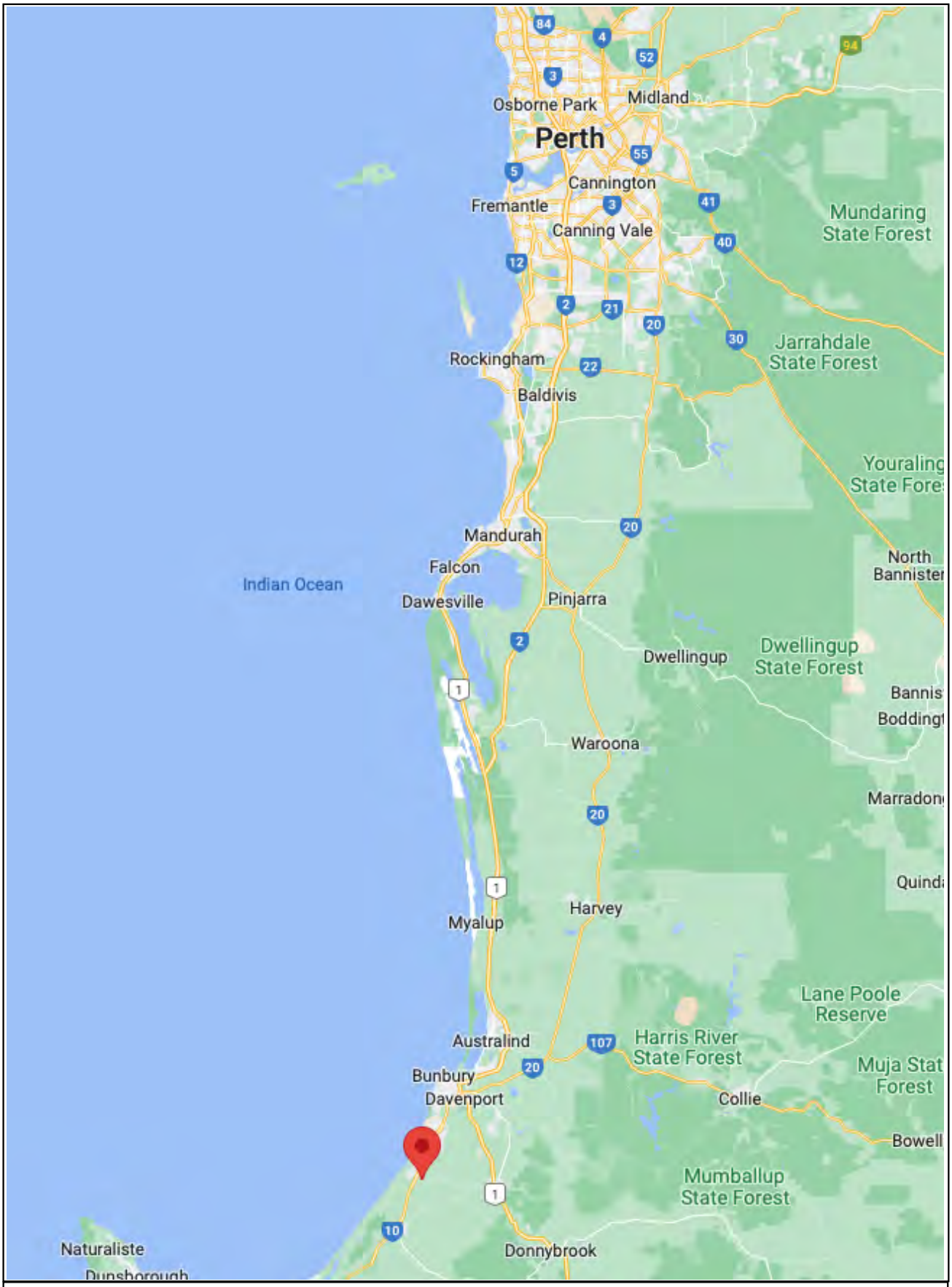
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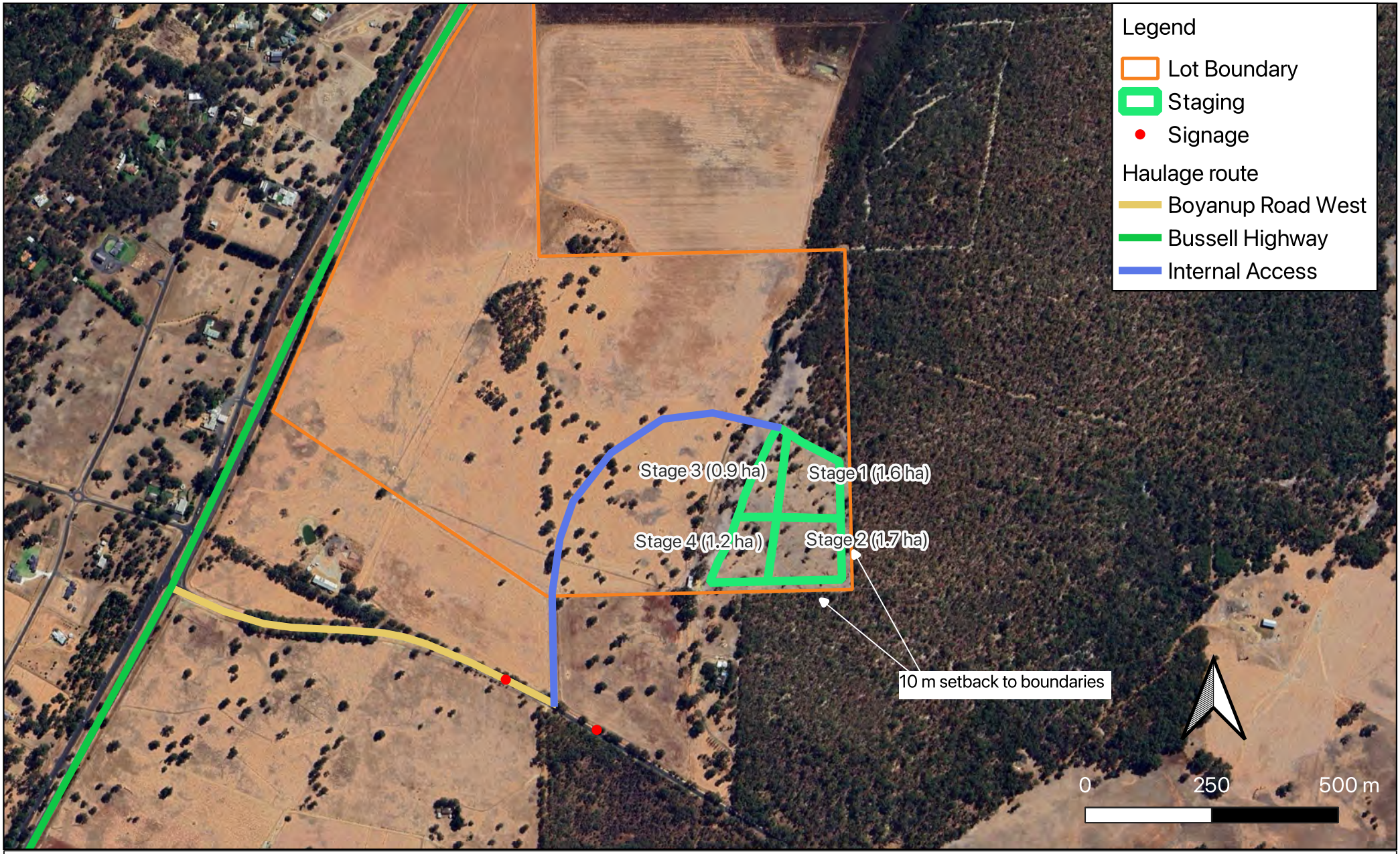
FIGURES



PROJECT	Lot 103 Boyanup Rd W, Stratham	Project Number	Drawing Number	Revision
		2311	Figure 1	A
DRAWING TITLE	Figure 1 – Site Locality	Designed PN	Checked	
		Drawn PN	Approved	
CLIENT	Leeuwin Civil Pty Ltd	Date	26/09/2023	
		Local Authority	Shire of Capel	
		Sheet 1 of 1		

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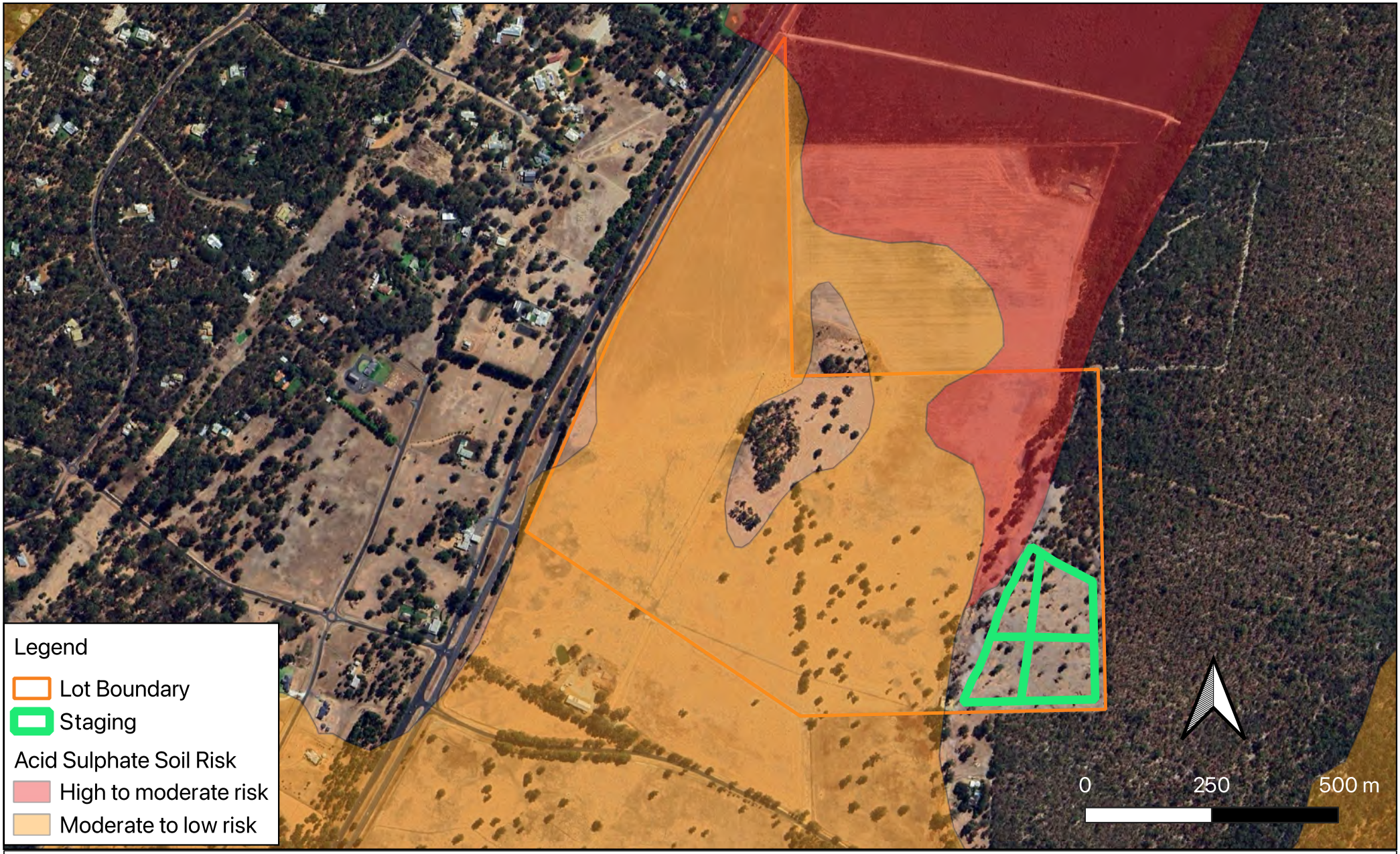


PROJECT	103 Boyanup Road West,Stratham
DRAWING TITLE	Figure 2 - Site Extent
CLIENT	Leeuwin Civil Pty Ltd

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Project Number	2311	Designed	PN
Drawing Number	Figure 2	Drawn	PN
Revision	B	Checked	
Date	21/01/2025	Approved	
Sheet 1 of 1		Local Authority	Shire of Capel

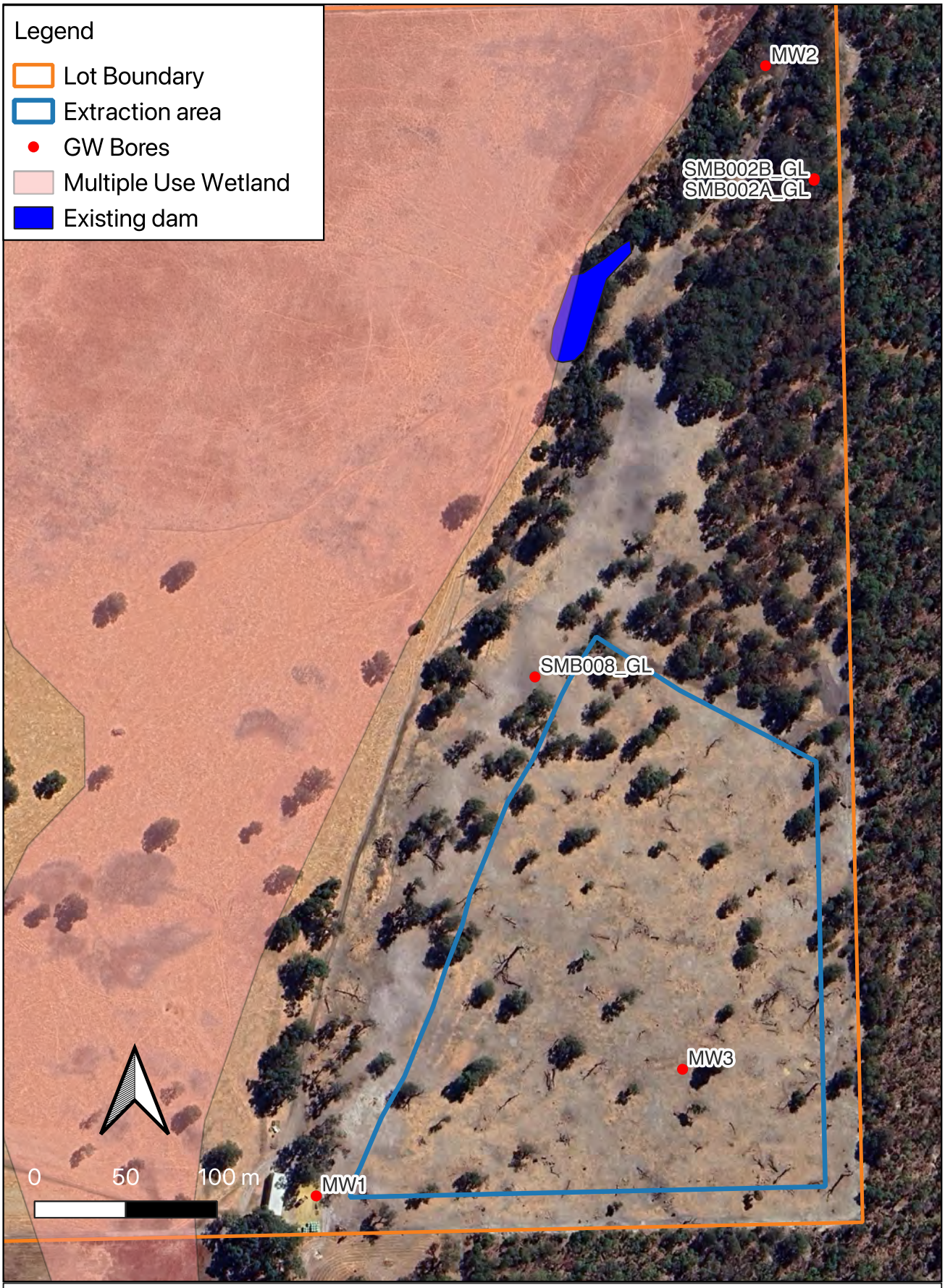


PROJECT	103 Boyanup Road West,Stratham
DRAWING TITLE	Figure 3 - Acid Sulfate Soil Mapping
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PROJECT	Lot 103 (Harris Pit),Stratham
DRAWING TITLE	Figure 4 - Water Features
CLIENT	Leeuwin Civil Pty Ltd

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Project Number	Drawing Number	Revision
2311	Figure 4	C

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PROJECT	Lot 103 (Harris Pit),Stratham
DRAWING TITLE	Figure 5 - Aboriginal Heritage Sites
CLIENT	Leeuwin Civil Pty Ltd

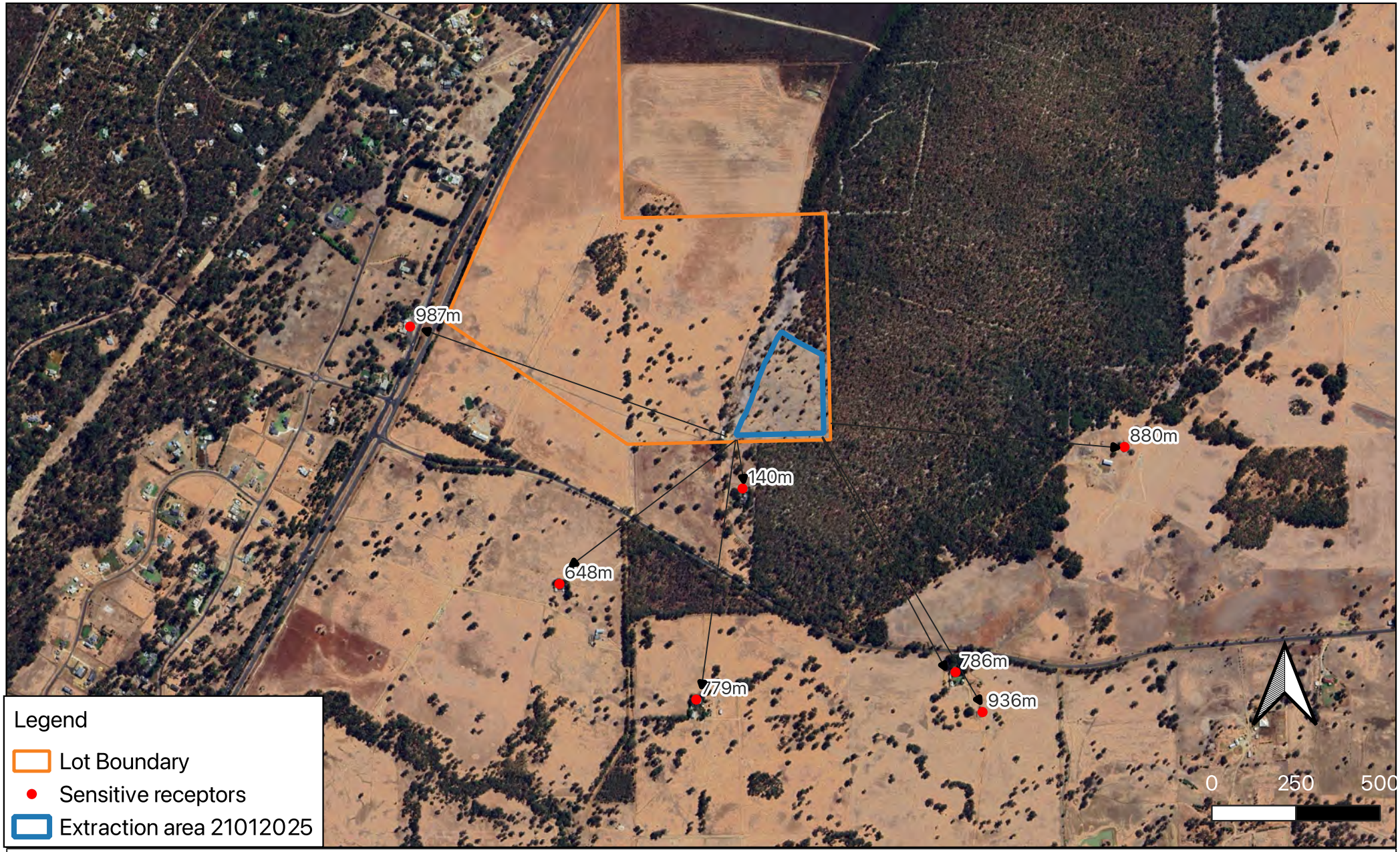
Project Number	Drawing Number	Revision
2311	Figure 5	C

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Drawn	PN	Approved	

Date 21/01/2025
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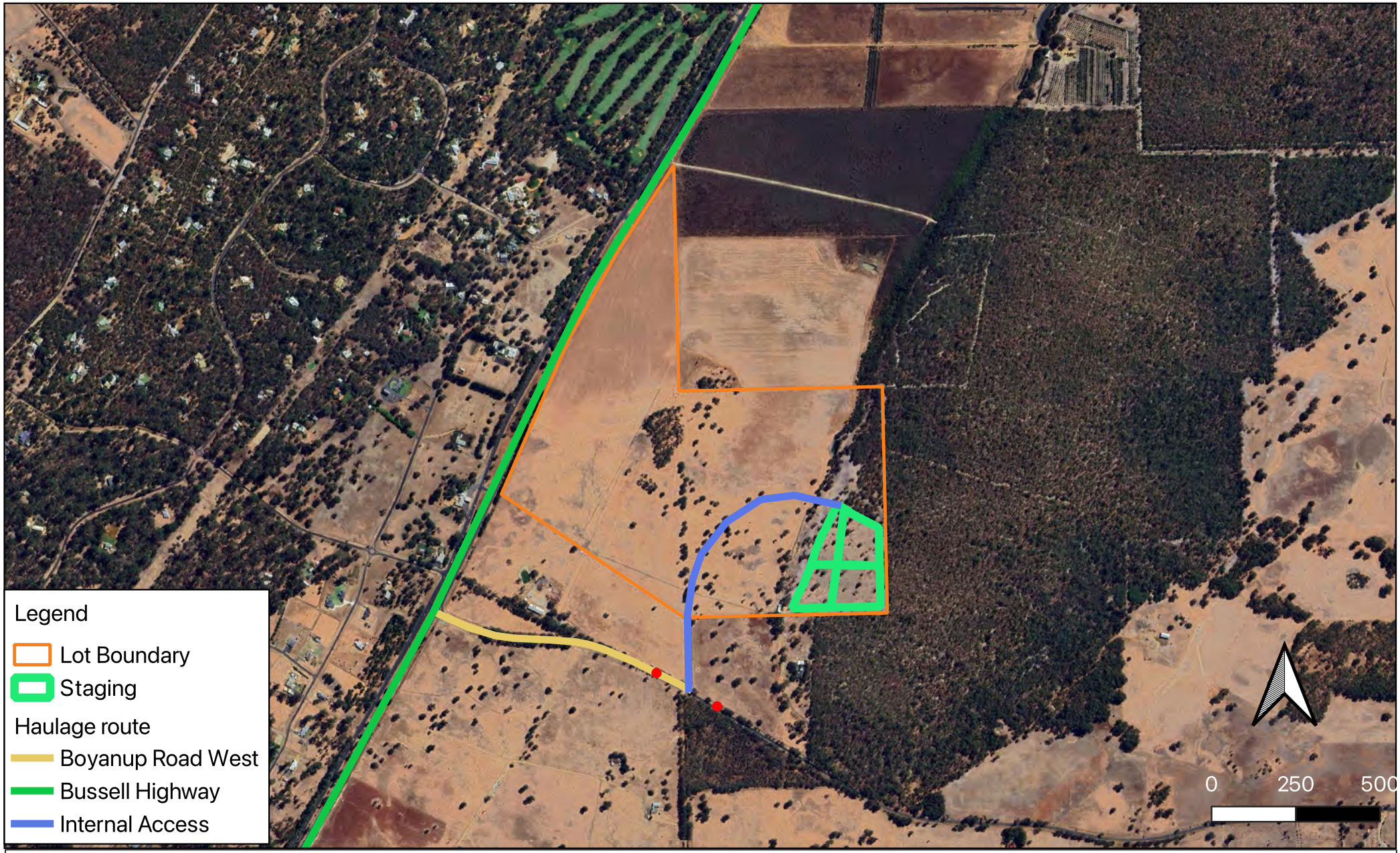


PROJECT	103 Boyanup Road West,Stratham
DRAWING TITLE	Figure 6 - Sensitive Receptors
CLIENT	Leeuwin Civil Pty Ltd

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Project Number	2311	Designed	PN
Drawing Number	Figure 6	Drawn	PN
Revision	C	Checked	
Date	21/01/2025	Approved	
Sheet 1 of 1		Local Authority	Shire of Capel



PROJECT	103 Boyanup Road West,Stratham
DRAWING TITLE	Figure 7 - Haulage Route
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Drawing Number	Figure 7	Drawn	PN
Revision	C	Checked	
Date	21/01/2025	Approved	
Sheet 1 of 1		Local Authority	Shire of Capel



PROJECT	Lot 103 (Harris Pit),Stratham
DRAWING TITLE	Figure 8 - Final Contours
CLIENT	Leeuwin Civil Pty Ltd

Project Number	Drawing Number	Revision
2311	Figure 8	C

Designed	PN	Checked	
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PROJECT	Lot 103 (Harris Pit),Stratham	Project Number	Drawing Number	Revision
		2311	Figure 9	C
DRAWING TITLE	Figure 9 - Vegetation retention			
CLIENT	Leeuwin Civil Pty Ltd	Designed PN Drawn PN	Checked Approved	
		Date	21/01/2025	
		Local Authority	Shire of Capel	
		Sheet 1 of 1		

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APPENDIX A – CERTIFICATE OF TITLE

WESTERN AUSTRALIA

TITLE NUMBER	
Volume	Folio
1451	**168**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 103 ON DIAGRAM 51141

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

SEATREK HOLDINGS PTY LTD OF 7 PARKFIELD STREET BUNBURY WA 6230
(T O505429) REGISTERED 23/9/2020

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

1. TITLE EXCLUDES THE LAND SHOWN ON PLAN 18080.
2. O505430 MORTGAGE TO WESTPAC BANKING CORPORATION REGISTERED 23/9/2020.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	1451-168 (103/D51141)
PREVIOUS TITLE:	35-36A, 1411-719
PROPERTY STREET ADDRESS:	NO STREET ADDRESS INFORMATION AVAILABLE.
LOCAL GOVERNMENT AUTHORITY:	SHIRE OF CAPEL

NOTE 1: A000001A PENDING SURVEY - PLAN 18080.

LANDGATE COPY OF ORIGINAL NOT TO SCALE 23/08/2023 11:49 AM Request number: 65510880

Landgate
www.landgate.wa.gov.au

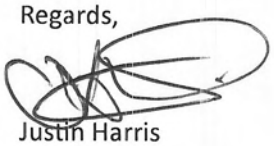
APPENDIX B – AUTHORISATION FROM LANDOWNER

5/9/2023

To Whom it May Concern,

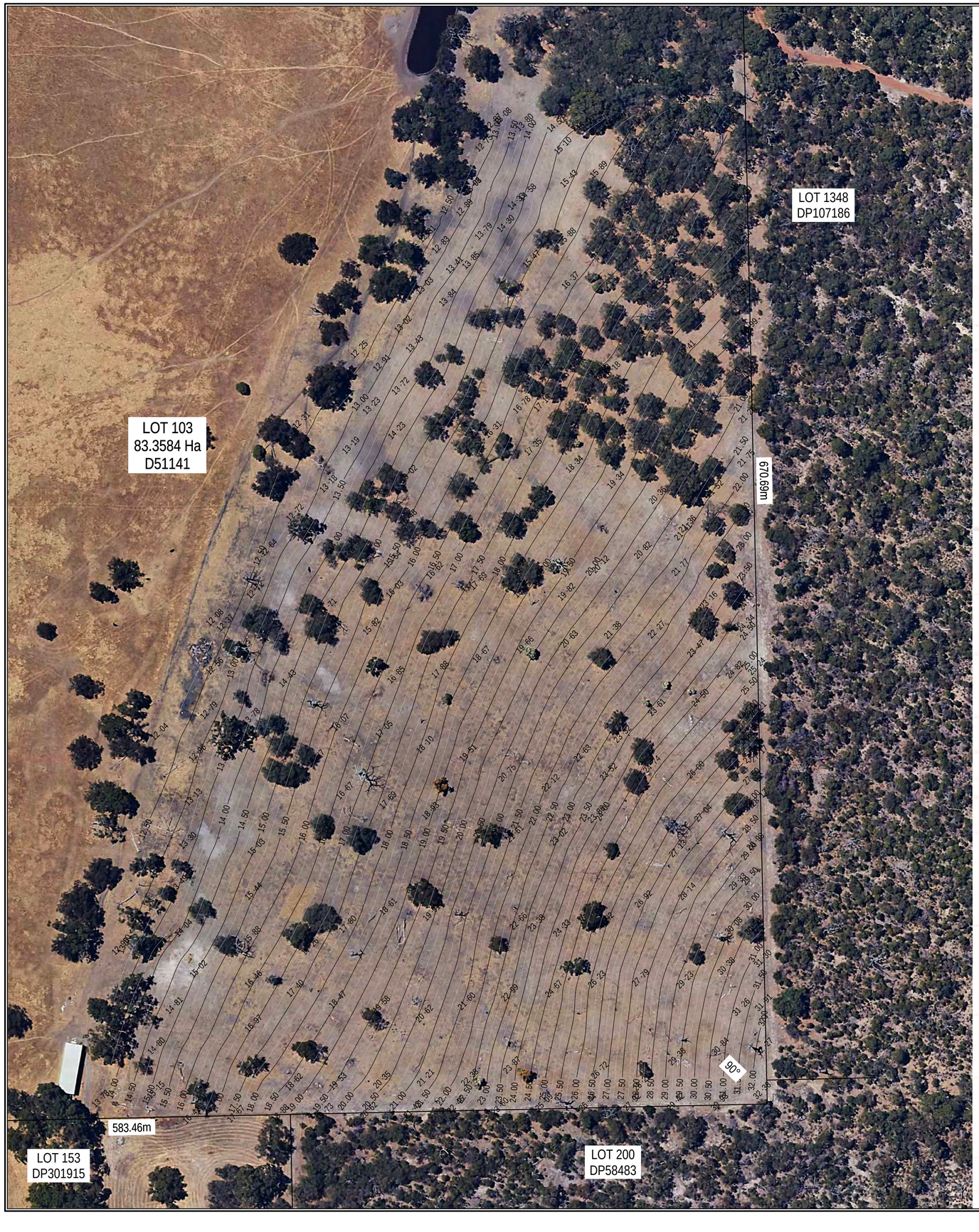
I give Leeuwin Civil authority to act on my behalf in the application for the proposed sand extraction on Lot 103 Boyanup Road West, Stratham.

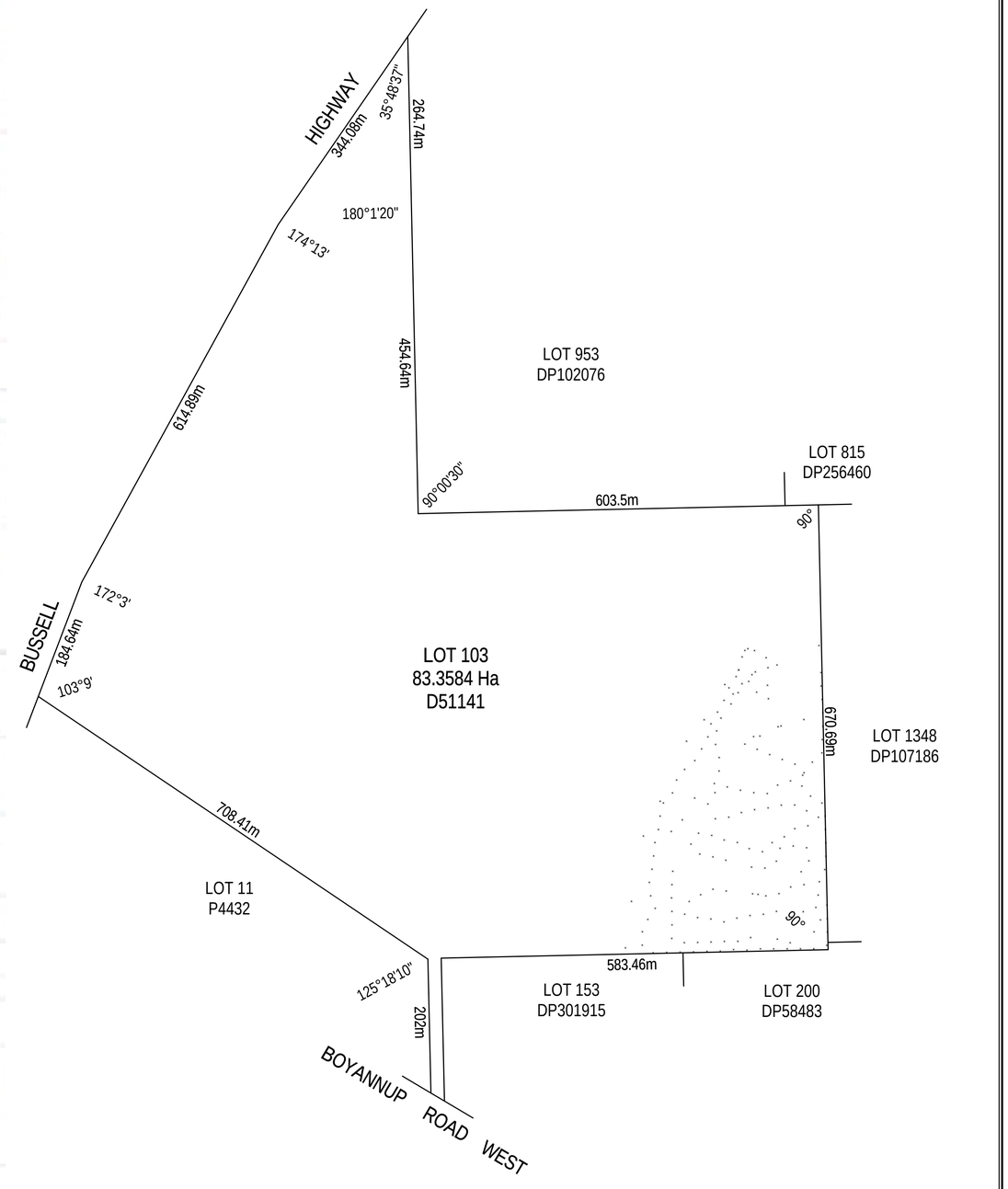
Regards,



Justin Harris

APPENDIX C – SITE CONTOUR SURVEY





LOCALITY DIAGRAM (NOT TO SCALE)

LEGEND

27.13 EXISTING SURFACE HEIGHT

BOUNDARY

NOTES:
1. Limited boundary marks found. Boundary resurvey recommended if building on or close to boundary.
2. Datum is AHD established from VRS / GPS.
3. Above ground services located by survey. Underground services plotted from plans supplied by the relevant authorities. No liability is accepted for errors in underground service locations. All services to be located on site prior to any work being done.
4. No boundary marks found unless otherwise noted.
5. Contour interval is 0.25m.
6. PDF to be used in conjunction with DWG file supplied. Some point heights may have been omitted for clarity; see DWG file.

Rev.	Description	Drawn	Date	Checked
A	INITIAL ISSUE	TJ	30/8/23	MR

The contents of this plan are date stated within the revision panel. All consultants and persons wishing to utilise this data should satisfy themselves of this plan's currency by contacting Survcon.

The boundaries depicted on this plan were not re-established as part of this survey, therefore this plan does not guarantee their accuracy. Re-establishment of the cadastral boundaries is recommended for any proposed works on or near existing boundaries.

Scale: 1:1000 A1 ORIG ALL DISTANCES IN METRES 0 10 20 30 40 50

Surveyor: MR
Survey date: 18/7/2023
Precal/Cad: N/A

N

FEATURE AND CONTOUR SURVEY
LOT 103 ON DIAGRAM 51141,
BOYANUP ROAD, STRATHAM

Client: **LEEUWIN CIVIL**

Survcon SURVEYING SERVICES
PO Box 365
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Fax: (08) 9756 8000
mail@survcon.com.au
www.survcon.com.au

PROJ MNGR.	Michael Riddle	DATUM	MGA50 AHD

JOB NUMBER 9238_SS_A TYPE REVISION

APPENDIX D – FAUNA SURVEY

Fauna Assessment



Lot 103
Boyanup Road West

Stratham

May 2023
V2

On behalf of:
Accendo Australia
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WEST BUSSELTON WA 6280
M: 0418 950 852
E: kirsten@accendoaustralia.com.au

Prepared by:
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APPENDIX A: Habitat Tree Details

SUMMARY

This report details the results of a targeted fauna assessment over a section of Lot 103 Boyanup Road West, Stratham (the survey area)(Figure 1). The survey area has a total extent of about 9.1 hectares (ha).

Leeuwin Civil Pty Ltd (in collaboration with the landowners) are investigating the viability of developing a sand pit with the survey area and the removal/modification of areas of vegetation potentially in use by native fauna will possibly be required.

The fauna assessment was primarily undertaken to document black cockatoo habitat and to determine the possible presence of western ringtail possums and other conservation significant fauna species and/or their habitat.

The assessment has included a literature review, a daytime reconnaissance survey and a nocturnal spotlighting survey. The field component of the fauna assessment was carried out on the 22 April 2023 (day survey) and the 26 April 2023 (night survey). All survey work and reporting has been carried out by Greg Harewood (Zoologist).

Key Findings

Most of the survey area has been cleared for livestock grazing and consists of pasture/bare ground with widely scattered trees including marri (*Corymbia calophylla*) jarrah (*Eucalyptus marginata*), peppermint (*Agonis flexuosa*) and dead identified species (Figure 1).

An approximate one hectare area of peppermint low woodland with very occasional emergent eucalypts is present in the north east section of the survey area. A small number of scattered flooded gum (*Eucalyptus rudis*) and paperbarks (*Melaleuca rhaphiophylla*) border the survey area along its lower lying western boundary. The only other variation to vegetation cover is a small grove of marri dominated open woodland location in the south west section of the survey area.

Other tree species present in small numbers include the WA Christmas tree (*Nuytsia floribunda*), Bull Banksia (*Banksia grandis*) and Woody Pear (*Xylomelum occidentale*).

The broad scale fauna habitats present are all totally degraded and therefore, with respect to fauna in general the survey area does not appear to represent habitat of significance and is only likely to support a very depauperate fauna assemblage dominated by a small range of mainly common bird species.

The black cockatoo habitat tree assessment identified 30 trees within the survey area with a DBH of ≥50cm. Half of these trees (15) appeared not to contain hollows of any size. The remaining (15) trees contained apparent or obvious hollows, all of which were assessed as being unlikely to be suitable for black cockatoos to use for nesting purposes, due to the hollows apparent small size, unsuitable orientation and/or low height above ground level. While some of the hollows present in these trees have large entrances none of the hollows were considered by the Author to be suitable for black cockatoos after close examination with a drone. No hollows showed any conclusive evidence of use by any fauna.

Quality foraging habitat within the survey area can mainly be defined as the areas containing marri, jarrah and banksia It is not possible to define the area of this resource as the relatively small number of trees are generally scattered in cleared paddocks, but the total area is likely to be very small (i.e. less than 0.1 ha based on canopy extent).

No evidence of western ringtail possums was observed during the day or night survey despite the presence of a small area of what appears to be suitable habitat.

1. INTRODUCTION

This report details the results of a targeted fauna assessment over a section of Lot 103 Boyanup Road West, Stratham (the survey area)(Figure 1). The survey area has a total extent of about 9.1 hectares (ha).

Leeuwin Civil Pty Ltd (in collaboration with the landowners) are investigating the viability of developing a sand pit with the survey area and the removal/modification of areas of vegetation potentially in use by native fauna will possibly be required.

Information obtained as part of this fauna assessment report will be used in conjunction with other environmental investigations to guide project planning which will aim to minimise potential environmental impacts. The outcome of the survey and information supplied in the fauna survey report will also be used to inform the environmental assessment and approvals process.

2. SCOPE OF WORKS

The scope of works was to conduct a targeted survey for black cockatoo habitat and western ringtail possums. The assessment has therefore involved:

1. Targeted searches for black cockatoo habitat/site use (habitat trees, existing and potential nest hollows, foraging and roosting habitat);
2. Targeted western ringtail possum (WRP) survey; and
3. Report for summarising methods and results.

Note: For the purposes of this proposal the term black cockatoo is in reference to Baudin's cockatoo *Zanda baudinii*, Carnaby's cockatoo *Zanda latirostris* and the forest red-tailed black cockatoo *Calyptorhynchus banksii naso.*

3. METHODS

The field component of the fauna assessment was carried out on the 22 April 2023 (day survey) and the 26 April 2023 (night survey).

3.1 FAUNA HABITAT ASSESSMENT

Vegetation units, landforms and soils observed during the site reconnaissance survey have been used to define broad fauna habitat types across the survey area.

The main objective of the assessment was to determine if it were likely that species of conservation significance would utilise the habitats identified as occurring within the survey area based on their documented habitat preference and current known distribution.

3.2 BLACK COCKATOO HABITAT ASSESSMENT

The following methods were employed to comply with the defined scope of works and are based on Commonwealth of Australia (2012 and 2022) guidelines which state that surveys for Carnaby's, Baudin's and forest red-tailed black cockatoo habitat should:

- be done by a suitably qualified person with experience in vegetation or cockatoo surveys, depending on the type of survey being undertaken;
- maximise the chance of detecting the species' habitat and/or signs of use;
- determine the context of the site within the broader landscape—for example, the amount and quality of habitat nearby and in the local region (for example, within 10 km);
- account for uncertainty and error (false presence and absences); and
- include collation of existing data on known locations of breeding and feeding birds and night roost locations.

The Commonwealth of Australia (2012) places habitats used by black cockatoos into the following three categories:

- Breeding Habitat;
- Foraging Habitat; and
- Night Roosting Habitat.

3.2.1 Breeding Habitat Assessment

The black cockatoo breeding habitat assessment identified all suitable breeding tree species within the survey area that have a diameter at breast height (DBH) equal to or greater than 50cm. The DBH of each tree was estimated using a pre-made "caliper".

Target tree species included marri, jarrah, tuart and flooded gum and any other *Corymbia/Eucalyptus* species of a suitable size that was present. Peppermints, *Banksia*, sheoak and *Melaleuca* tree species (for example) were not assessed as they typically do not develop hollows used by black cockatoos.

The location of each tree identified as being over the threshold DBH will be recorded with a GPS and details on tree species, number and size of hollows (if any) noted. Trees observed to contain hollows (of any size/type) will be marked with "H" using spray paint.

Hollow/potential hollows were placed into one of four categories, based on the size of the apparent hollow entrance, these being:

- Small = ~<5cm diameter (i.e. entrance too small for a black cockatoo);
- Medium = ~5cm-10cm diameter (i.e. entrance too small for a black cockatoo);

- Large = ~>10cm diameter (entrance large enough for a black cockatoo but hollow appears unsuitable for nesting i.e. wrong orientation, appears too small, too low or too shallow); or

- Large (cockatoo) = ~>10cm diameter (entrance and apparent hollow appears big enough and suitably sized/orientated for a black cockatoo to use for nesting).

Based on this assessment, trees present within the survey area were placed into one of four categories:

- Tree <50cm DBH or an unsuitable species (these were not assessed/recorded);

- Tree ≥50cm DBH, no hollows seen;

- Tree ≥50cm DBH, one or more hollows seen, none of which were considered suitable for black cockatoos to use for nesting; or

- Tree ≥50cm DBH, one or more hollows seen, with at least one considered suitable for black cockatoos to use for nesting.

For the purposes of this assessment, a tree containing a potential black cockatoo nest hollow was defined as:

Generally, any tree which is alive or dead that contains one or more visible hollows (cavities within the trunk or branches) or possible hollows potentially suitable for occupation by black cockatoo for the purpose of nesting/breeding. Hollows or possible hollows that had an entrance greater than about 10cm in diameter and would allow the entry of a black cockatoo into a suitably orientated and sized branch/trunk, were recorded as a "potential nest hollow".

Identified hollows were examined using binoculars for evidence of actual use by black cockatoos (e.g. chewing around hollow entrance, scarring and scratch marks on trunks and branches). Details recorded included hollow size, height, type, orientation, comments on suitability and any evidence of use.

Trees with possible nest hollows were also scratched and raked with a large stick in attempt to flush any sitting birds from hollows and calls of chicks were listened for. Where the assessment was inconclusive, and if possible, trees identified as having potential nest hollows were subsequently examined and photographed using a drone (DJI Mavic Air).

3.2.2 Foraging Habitat Assessment

The location and nature of black cockatoo foraging evidence (e.g. chewed fruits around base of trees) observed during the field survey was recorded. The nature and extent of potential foraging habitat present was also documented irrespective of the presence of any actual foraging evidence. Foraging habitat is represented by plant species that are known to provide a food source for black cockatoos. This can be in the form of seeds, flowers and also boring grubs that are extracted from some plant species.

3.2.3 Night Roosting Habitat Assessment

Direct and indirect evidence of black cockatoos roosting within trees on site was noted where observed (e.g. branch clippings, droppings or moulted feathers).

3.3 WESTERN RINGTAIL POSSUM ASSESSMENT

3.3.1 Daytime Survey

A daytime survey to locate and record dreys, obvious tree hollows, scats and individual WRPs was carried out during the daytime field reconnaissance surveys and involved a series of traverses on foot across the survey area.

3.3.2 Night Time Survey

A single night-time survey to locate and record individual WRPs was carried out. The survey involved a series of transects across the survey area, on foot using a LED head torch.

3.3.3 Habitat Assessment

Description and comments on the amount and quality of WRP habitat within the survey area are provided based on observations made during the site surveys.

3.4 FAUNA OBSERVATIONS

Evidence of the presence or likely presence of fauna species of conservation significance (or suitable habitat) was searched for and recorded concurrent with other site surveys. Opportunistic observations of all fauna species were made during all field survey work and recorded where positive species identifications were made.

This aspect of the assessment included but was not limited to:

- Undertaking a series of transects across the survey area.
- Searching for evidence (i.e. individuals, tracks, scats, calls) of potential conservation significant species under logs, rocks and leaf litter.
- Observing bird species with binoculars.

4. SURVEY LIMITATIONS

No seasonal sampling was carried out as part of this fauna assessment. The conclusions presented are based upon field data and the environmental monitoring and/or testing carried out over a limited period of time and are therefore merely indicative of the environmental condition of the site at the time of the field assessments. It should be recognised that site conditions can change with time.

Lack of observational data on some species should also not necessarily be taken as an indication that a species is absent from the site or does not utilise it for some purpose at times.

During the survey, habitat trees with hollows were searched for. It should be noted that identifying hollows suitable for fauna species from ground level has limitations. Generally, the full characteristics of any hollow seen are not fully evident (e.g. internal dimensions). It is also difficult to locate all hollows within all trees as some are not observable from ground level.

The location of observations was recorded using a handheld GPS. The accuracy of the GPS cannot be guaranteed above a level of about 5 to 10 metres, though it should be noted that in some circumstance the accuracy can increase or decrease beyond this range.

5. RESULTS

5.1 FAUNA HABITAT ASSESSMENT

Most of the survey area has been cleared for livestock grazing and consists of pasture/bare ground with widely scattered trees including marri (*Corymbia calophylla*) jarrah (*Eucalyptus marginata*), peppermint (*Agonis flexuosa*) and dead identified species (Figure 1).

An approximate one hectare area of peppermint low woodland with very occasional emergent eucalypts is present in the north east section of the survey area. A small number of scattered flooded gum (*Eucalyptus rudis*) and paperbarks (*Melaleuca rhaphiophylla*) border the survey area along its lower lying western boundary. The only other variation to vegetation cover is a small grove of marri dominated open woodland location in the south west section of the survey area.

Other tree species present in small numbers include the WA Christmas tree (*Nuytsia floribunda*), Bull Banksia (*Banksia grandis*) and Woody Pear (*Xylomelum occidentale).*

The broad scale fauna habitats present are all totally degraded and therefore, with respect to fauna in general the survey area does not appear to represent habitat of significance and is only likely to support a very depauperate fauna assemblage dominated by a small range of mainly common bird species.

Example images of the various fauna habitats present are provided in Table 1.

Table 1: Example images of the fauna habitats within the survey area

Fauna Habitat Description	Example Image
Cleared pasture with widely scattered trees (jarrah, marri and dead unidentified species). Makes up most of the survey area.	
Peppermint low woodland with very occasional emergent eucalyptus (jarrah/marri/dead) over grassland/bare ground. Confined to the northeast corner of the survey area	
Scattered flooded gum and paperbarks. Confined to the western boundary of the survey area.	

Fauna Habitat Description	Example Image
Small grove of marri. Located in the southwest corner of the survey area.	

5.2 BLACK COCKATOO HABITAT ASSESSMENT

5.3 Breeding Habitat Assessment

Trees considered potentially suitable for black cockatoos to use as nesting habitat (subject to a suitable hollow being present and other factors) found within the survey area comprised the following species:

- Jarrah - *Eucalyptus marginata*
- Marri – *Corymbia calophylla;*
- Flooded Gum - *Eucalyptus rudis;* and
- Dead Unidentified Eucalypts – *Eucalyptus* spp.

A summary of the habitat trees observed is provided in Table 2. The locations of habitat trees are shown in Figure 4.

Table 2: Summary of potential habitat trees (DBH ≥50cm) within the survey area

Total Number of Habitat Trees (DBH > 50cm)	Number of Habitat Trees with No Hollows Observed	Number of Habitat Trees with Possible Hollows considered Unsuitable for Black Cockatoos	Number of Habitat Trees with Possible Hollows considered Potentially suitable for Black Cockatoos	Tree Species			
				Jarrah	Marri	Flooded Gum	Dead Unidentified Eucalypt
30	15	15	0	11	6	5	8

The assessment identified 30 trees within the survey area with a DBH of ≥50cm. Half of these trees (15) appeared not to contain hollows of any size. The remaining (15) trees contained apparent or obvious hollows, all of which were assessed as being unlikely to be suitable for black cockatoos to use for nesting purposes, due to the hollows apparent small size, unsuitable orientation and/or low height above ground level.

While some of the hollows present in these trees have large entrances none of the hollows were considered by the Author to be suitable for black cockatoos after close examination with a drone. No hollows showed any conclusive evidence of use by any fauna.

Additional details on each habitat tree observed can be found in Appendix A.

5.3.1 Foraging Habitat Assessment

The following flora species, known to be or potentially used as a direct food source (e.g. seeds, flowers, nectar, bark or grubs) by one or more species of black cockatoo were recorded within the survey area:

- Jarrah - *Eucalyptus marginata*
- Marri – *Corymbia calophylla;*
- Flooded Gum - *Eucalyptus rudis;*
- Bull Banksia – *Banksia grandis;* and
- Peppermint – *Agonis flexuosa*.

It should be noted that some of the plant species listed above are not favoured by black cockatoos as a foraging resource (i.e. flooded gum and peppermint) and would only make up a very small proportion of any one birds food intake. In addition, some species are represented by only a small number of specimens (e.g. Bull Banksia).

No foraging debris attributed to black cockatoos was located within the survey area during the survey period.

Quality foraging habitat within the survey area can mainly be defined as the areas containing marri, jarrah and banksia It is not possible to define the area of this resource as the relatively small number of trees are generally scattered in cleared paddocks, but the total area is likely to be very small (i.e. less than 0.1 ha based on canopy extent).

5.3.2 Night Roosting Habitat Assessment

No evidence of black cockatoos roosting within trees located within the survey area was observed during the survey period. It is difficult to determine if trees or groves of trees within the survey area represent potential roosting habitat as a range of factors, not all of which can be observed, determine suitability. Some of the larger trees (including non-endemics) may be suitable for roosting but as indicated no actual evidence of use was seen.

5.4 WESTERN RINGTAIL POSSUM ASSESSMENT

5.4.1 Daytime Survey

No evidence of western ringtail possums was observed during the day survey (i.e. no dreys, scats or individuals).

5.4.2 Night Time Survey

A single common brushtail possum was observed within the survey area during the single nocturnal survey carried out in April 2023 (Figure 3).

5.4.3 Habitat Assessment

Superficially the one hectare area of low woodland situated in the north east section of the survey area appears to represent potential WRP habitat given the presence of a semi continuous midstorey layer dominated by peppermint (*Agonis flexuosa*). The scattered peppermint and jarrah trees present in paddock areas also represent potential habitat of much lesser value.

While no WRPs were detected within the survey area they are known to occur in the general area and therefore may frequent the survey area at times, though the survey results suggest it is not being specifically favoured by the species.

5.5 FAUNA OBSERVATIONS

A relatively small number of fauna species were observed or heard during the survey period, most being common bird species often found in farmland environments.

One fauna species of conservation significance was recorded, this being Carnaby's cockatoo (Endangered), a small flock of which was observed flying overhead. Based on degraded nature of the vegetation present it is considered unlikely that the survey area represents habitat of significance to any species of fauna known to frequent the general area.

6. CONCLUSION

The fauna assessment within the survey area was primarily undertaken to document black cockatoo habitat and to determine the possible presence of western ringtail possums and other conservation significant fauna species and/or their habitat.

The broad scale fauna habitats present are all totally degraded and therefore, with respect to fauna in general the survey area does not appear to represent habitat of significance and is only likely to support a very depauperate fauna assemblage dominated by a small range of mainly common bird species.

Black cockatoo habitat with the survey area is represented by a relatively small number of “habitat trees” (DBH >50cm). No large hollows possibly suitable for black cockatoo to use for nesting were identified.

Quality black cockatoo foraging habitat within the survey area is limited to a small number of generally scattered marri, jarrah and banksia trees, which when combined have a very limited extent . No evidence of this vegetation (or any other plant species) being used as a foraging resource was observed. No evidence black cockatoos roosting within the survey area was noted.

No evidence of western ringtail possums was observed during the day or night survey despite the presence of a small area of what appears to be suitable habitat.

7. REFERENCES

Commonwealth of Australia (2012). *EPBC Act* Referral guidelines for three threatened Black Cockatoo species: Carnaby's cockatoo (endangered) *Calyptorhynchus latirostris*, Baudin's cockatoo (vulnerable) *Calyptorhynchus baudinii*, Forest Red-tailed Black Cockatoo (vulnerable) *Calyptorhynchus banksii naso*.

Commonwealth of Australia (2022). Referral guideline for 3 threatened WA threatened black cockatoo species: Carnaby's cockatoo (*Zanda latirostris*), Baudin's cockatoo (*Zanda baudinii*), Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*). Department of Agriculture, Water and the Environment, Canberra.

FIGURES



Legend

Survey Area

N

0 50 100

Metres

Fauna Survey

Drawn: G Harewood

Date: 01-May-23

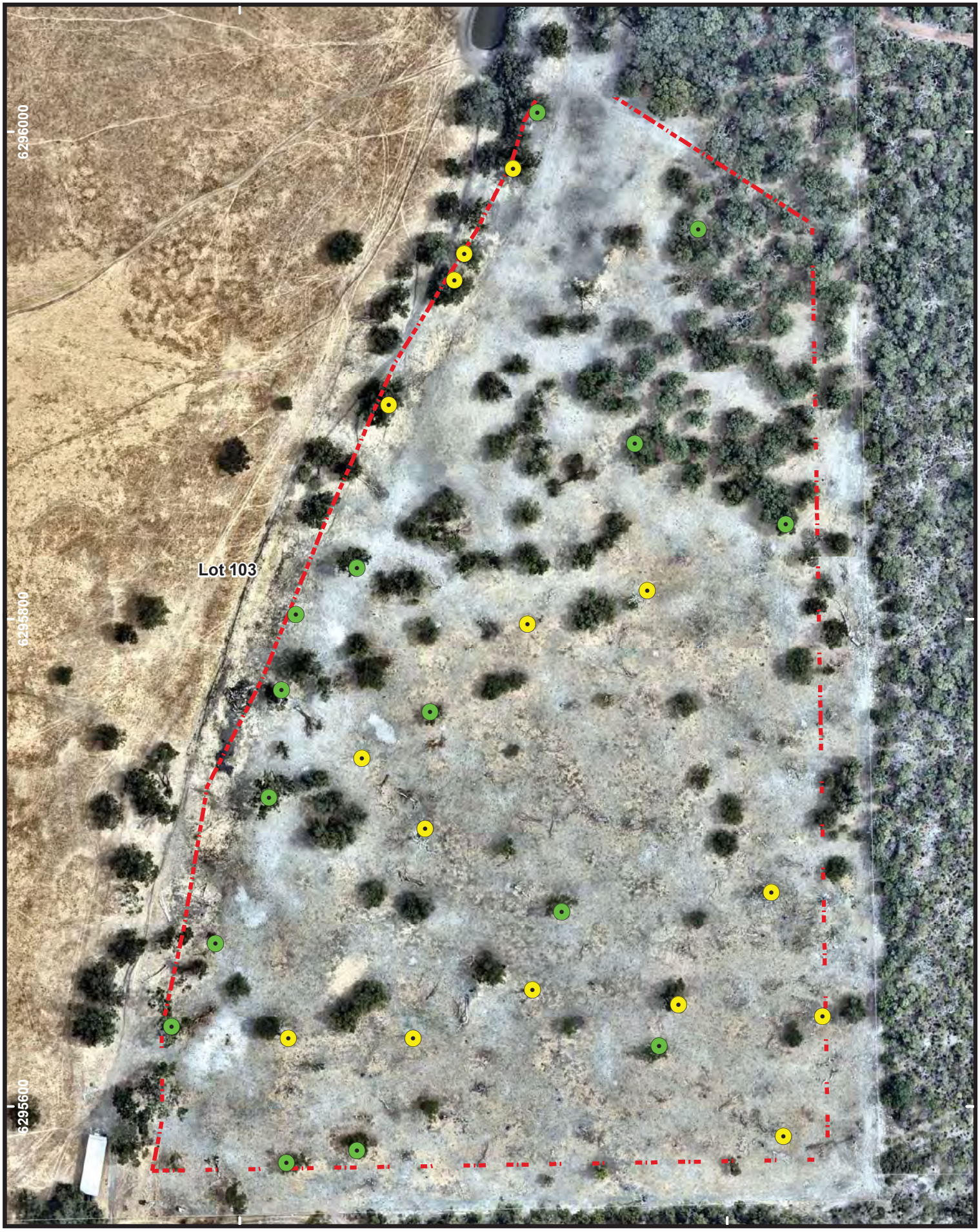
Scale: 1:2,000

Projection/Coordinate System: UTM/MGA Zone 50

Lot 103 Boyanup Road West
Stratham

Survey Area
Aerial Photograph

Figure: 1



Legend

- Survey Area
- Habitat Tree - No hollows seen
- Habitat Tree - One or more hollows, None considered suitable for black cockatoos

N

0 50 100

Metres

Fauna Survey

Lot 103 Boyanup Road West Stratham

Survey Area Habitat Trees (DBH >50cm)

Drawn: G Harewood	
Date: 01-May-23	
Scale: 1:2,000	
Projection/Coordinate System: UTM/MGA Zone 50	Figure: 2



Legend

- Survey Area
- Common Brushtail Possum

N

0 50 100

Metres

Fauna Survey

Drawn: G Harewood

Date: 01-May-23

Scale: 1:2,000

Projection/Coordinate System: UTM/MGA Zone 50

Lot 103 Boyanup Road West Stratham

Survey Area Possum Observations

Figure: 3

APPENDIX A

HABITAT TREE DETAILS

Habitat Trees (DBH >50cm)
Datum GDA 94
Estimated Hollow Entrance Size: Small+ <5cm, Medium = 5 to<10cm, Large = 10cm+

Waypoint Number	Zone	mE	mN	Tree Species	Tree Height (m)	DBH (cm)	Number of Hollows	Estimated Hollow Entrance Size	Occupancy	Chew Marks	Potential Cockatoo Nest Hollow	Comments
wpt002	50H	370419	6295577	Jarrah	10-15	>50	0					
wpt003	50H	370448	6295582	Jarrah	10-15	>50	0					
wpt005	50H	370623	6295588	Dead Unknown	15-20	>50	2+	Small, Medium & Large			No	Examined with drone
wpt007	50H	370639	6295637	Dead Unknown	20+	>50	2+	Large			No	Examined with drone
wpt009	50H	370618	6295688	Jarrah	15-20	>50	2+	Small & Medium			No	
wpt011	50H	370624	6295839	Marri	15-20	>50	0					
wpt013	50H	370588	6295960	Dead Jarrah	10-15	>50	0					
wpt014	50H	370562	6295872	Jarrah	10-15	>50	0					
wpt015	50H	370522	6296008	Flooded Gum	15-20	>50	0					
wpt019	50H	370512	6295985	Flooded Gum	15-20	>50	2+	Small			No	
wpt023	50H	370492	6295950	Flooded Gum	15-20	>50	2+	Small			No	
wpt024	50H	370488	6295939	Flooded Gum	15-20	>50	2+	Small			No	
wpt026	50H	370461	6295888	Flooded Gum	20+	>50	2+	Small			No	
wpt028	50H	370448	6295821	Marri	15-20	>50	0					
wpt029	50H	370423	6295802	Dead Unknown	15-20	>50	0					
wpt030	50H	370417	6295771	Dead Marri	15-20	>50	0					
wpt031	50H	370412	6295727	Marri	20+	>50	0					
wpt032	50H	370390	6295667	Marri	15-20	>50	0					
wpt035	50H	370372	6295633	Marri	20+	>50	0					
wpt042	50H	370420	6295628	Dead Jarrah	15-20	>50	2+	Small & Medium			No	
wpt043	50H	370471	6295628	Dead Unknown	15-20	>50	2+	Small			No	
wpt044	50H	370520	6295648	Dead Unknown	15-20	>50	2+	Medium & Large			No	Examined with drone
wpt045	50H	370532	6295680	Jarrah	15-20	>50	0					
wpt046	50H	370572	6295625	Jarrah	10-15	>50	0					
wpt047	50H	370580	6295642	Jarrah	15-20	>50	2+	Small, Medium & Large			No	Examined with drone
wpt048	50H	370567	6295812	Dead Unknown	15-20	>50	2+	Small & Medium			No	
wpt049	50H	370518	6295798	Dead Jarrah	5-10	>50	2+	Small & Medium			No	
wpt050	50H	370478	6295762	Jarrah	10-15	>50	0					
wpt051	50H	370450	6295743	Dead Unknown	15-20	>50	2+	Small & Medium			No	
wpt052	50H	370476	6295714	Dead Unknown	15-20	>50	2+	Medium & Large			No	Examined with drone

DISCLAIMER

This fauna assessment report ("the report") has been prepared in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Greg Harewood ("the Author"). In some circumstances the scope of services may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints. In accordance with the scope of services, the Author has relied upon the data and has conducted environmental field monitoring and/or testing in the preparation of the report. The nature and extent of monitoring and/or testing conducted is described in the report.

The conclusions are based upon field data and the environmental monitoring and/or testing carried out over a limited period of time and are therefore merely indicative of the environmental condition of the site at the time of preparing the report. Also it should be recognised that site conditions, can change with time.

Within the limitations imposed by the scope of services, the field assessment and preparation of this report have been undertaken and performed in a professional manner, in accordance with generally accepted practices and using a degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. No other warranty, expressed or implied, is made.

In preparing the report, the Author has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise stated in the report, the Author has not verified the accuracy of completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. The Author will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to the Author.

The report has been prepared for the benefit of the Client and no other party. The Author assumes no responsibility and will not be liable to any other person or organisation for or in relation to any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report (including without limitation matters arising from any negligent act or omission of the Author or for any loss or damage suffered by any other party relying upon the matters dealt with or conclusions expressed in the report). Other parties should not rely upon the report or the accuracy or completeness of any conclusions and should make their own enquiries and obtain independent advice in relation to such matters.

The Author will not be liable to update or revise the report to take into account any events or emergent circumstances or facts occurring or becoming apparent after the date of the report.

APPENDIX E – GROUNDWATER MONITORING DATA

SMB002A_G	13.98	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Date		14/1/2021	12/2/2021	26/3/2021	21/4/2021	13/5/2021	15/6/2021	12/7/2021	6/8/2021	21/9/2021	25/10/2021	15/11/2021	16/12/2021	25/1/2022	17/2/2022	31/3/2022	14/4/2022	24/5/2022	30/6/2022	28/7/2022	31/8/2022	28/9/2022	1/11/2022	23/11/2022	4/1/2023
Casing Height above topo		0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Depth of bo	m	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88
SWL (m)	m (from top of casing)	4.32	4.34	4.45	4.37	4.34	4.27	4.22	4.13	4.09	4.1	4.1	4.1	4.27	4.34	4.44	4.42	4.46	4.27	4.2	4.15	4.1	4.12	4.24	4.52
m AHD	survey of top steel	10.20	10.18	10.07	10.15	10.18	10.25	10.30	10.39	10.43	10.42	10.42	10.42	10.25	10.18	10.08	10.10	10.06	10.25	10.32	10.37	10.42	10.40	10.28	10.00

SMB008_GL	13.97	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Date		14/01/2021	12/02/2021	26/03/2021	20/04/2021	13/05/2021	15/06/2021	12/07/2021	6/08/2021	21/9/2021	25/10/2021	15/11/2021	16/12/2021	25/1/2022	17/2/2022	22/3/2022	14/4/2022	24/05/2022	30/6/2022	28/7/2022	31/8/2022	28/9/2022	1/11/2022	23/11/2022	4/01/2023
Casing Height above topo		0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Depth of bo	m	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56
SWL (m)	m (from top of casing)	3.86	3.89	4.05	3.93	3.95	3.78	3.58	3.46	3.52	3.57	3.61	3.66	3.75	3.82	3.9	3.92	3.96	3.89	3.67	3.56	3.44	3.65	3.82	3.96
m AHD	survey of top steel	10.60	10.57	10.41	10.53	10.51	10.68	10.88	11.00	10.94	10.89	10.85	10.80	10.71	10.64	10.56	10.54	10.50	10.57	10.79	10.90	11.02	10.81	10.64	10.50

Lot 103 Boyanup Road - Groundwater Level Monitoring 2022 and 2024

	3-Apr-24			16-Jun-24			22-Jul-27			30-Aug-24			27-Sep-24		
	Level from Top of Collar (mTOC)	Level (mBGL)	Approx level (m AHD)	Level from Top of Collar (mTOC)	Level (mBGL)	Approx level (m AHD)	Level from Top of Collar (mTOC)	Level (mBGL)	Approx level (m AHD)	Level from Top of Collar (mTOC)	Level (mBGL)	Approx level (m AHD)	Level from Top of Collar (mTOC)	Level (mBGL)	Approx level (m AHD)
MW1	4.6	4.05	9.95	4.33	3.78	10.22	4.22	3.67	10.33	3.34	2.79	11.21	3.68	3.13	10.87
MW2	2.88	2.21	8.79	2.56	1.89	9.11	2.5	1.83	9.17	2.31	1.64	9.36	2.45	1.78	9.22
MW3	12.44	11.74	11.26	12.44	11.74	11.26	12.44	11.74	11.26	11.04	10.34	12.66	11.04	10.34	12.66
SMB008							3.72	3.17	10.83	3.43	2.88	11.12	3.505	2.955	11.045

APPENDIX F - WATER MANAGEMENT PLAN

WATER MANAGEMENT PLAN

LOT 103 BOYANUP ROAD WEST, STRATHAM

January 2025

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The conclusions and recommendations in this report are based on assumptions made by Accendo described in this report where and as they are required. Accendo disclaims liability arising from any of the assumptions being incorrect.

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The preparation of this report has been undertaken and performed in a professional manner, in consideration of the scope of services and in accordance with environmental consulting practices. No other warranty is made.

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FIGURES

Figure 1. Regional Location of the Subject Site

Figure 2. Extent of the Subject Site

Figure 3. Water Features

Figure 4. Surface Water Management

1 INTRODUCTION

1.1 Background

Leeuwin Civil Pty Ltd (the applicant) is proposing to extract sand from a 5.4 ha area within Lot 103 Boyanup Road West, Stratham (herein referred to as the subject site) (refer to **Figure 1** and **Figure 2**).

The available volume of sand, *insitu* volume of approximately 200,000 m^3, is to be extracted. The subject site will be excavated to an approximate maximum depth of 15 metres Australian Height Datum (m AHD). The post extraction landform will be similar visually (minus the excavated material) and in form with the pre-excavation landform with batter slopes of 1:4 vertical to horizontal.

1.2 Purpose and Scope

The purpose of this Water Management Plan (WMP) is to review the risks and control measures to appropriately manage minimise the environmental impacts of the extractive industry on both groundwater and surface water in proximity to the subject site.

The scope of the WMP is to cover the following:

- Legislative and regulatory compliance;
- Existing environment;
- Risk assessment water quality impacts;
- Mitigation and measurement measures; and
- Roles and responsibilities in relation to water management.

2 EXISTING ENVIRONMENT

2.1 Location

The subject site is located within Lot 103 Boyanup Road West, Stratham. The subject site is located within the municipality of the Shire of Capel, approximately 10 km north of the Capel town centre and approximately 170 km south of Perth (refer to **Figure 1** and **Figure 2**).

2.2 Land Use

The subject site is zoned "Rural" under the Shire of Capel's *Local Planning Scheme No. 8*. The subject site is located within the "Special Control Area – Basic raw materials" under the *Local Planning Scheme No. 8.* The proposed extractive industry is a permitted land use within this zone subject to development approval from the Shire of Capel.

Land use abutting the boundaries of the subject site is Rural based to the north, east and south. Properties to the west of the subject site on the other side of Bussell Highway are zoned 'Special Rural'.

The subject site is currently used for the grazing of cattle.

2.3 Topography and Soils

The current topography of the subject site can be described as sloping with the elevation ranging from 15 m Australian Height Datum (AHD) in the west to 30 m AHD in the south eastern corner of the subject site (refer to **Appendix A**).

The subject site is located on the Perth Coastal Zone consisting of coastal sand dunes and calcarenite within the Spearwood system. The Spearwood systems consists of "*Sand dunes and plains with yellow deep sands, pale deep sands and yellow/brown shallow sands"* (Tille 2006).

The subject site is located within the Spearwood S1b phase consisting of 'dune ridges with deep siliceous yellow brown sands or pale sands with yellow-brown subsoil and slopes up to 15%' (Natural Resource Information (NRInfo) (DPIRD 2023).

2.4 Climate

The climate of the locality is classified as Mediterranean with warm to hot summers and cool wet winters.

The closest weather recording station is Bunbury (Station 9965). Temperatures are highest on average in February, at approximately 30°C. July has the lowest average temperature of the year of 7.3°C.

Rainfall for the area is approximately 730 mm per annum with approximately 90% of the rain falling during the winter months, April to October inclusive.

During the summer months the dominant wind in the mornings is from the south-east at 10-14 knots, swinging to the south-west at 20-25 knots in the afternoon. During winter, the winds are most commonly 10-14 knots with no dominant prevailing direction. During storms winds from the west and north-west can reach 40 knots (BoM 2020).

Rainfall intensity has been calculated using the Bureau of Meteorology (BoM) Intensity-Frequency-Duration (IFD) data system which yields the two hour 1 in 10 (10%) annual exceedance probability storm event for the subject site as 40.2 mm/hr.

2.5 Hydrology

2.5.1 Groundwater

The subject site is located within the Bunbury West subarea of the proclaimed Bunbury Groundwater Area.

Groundwater data from monitoring bores located within the extraction area and approximately 140 m to the north of the extraction area (refer to **Figure 3**) have been monitored monthly for groundwater levels from January 2021 to December 2022 (refer to **Appendix B**). Data from this monitoring indicates a maximum groundwater elevation of 10.4 m AHD in the northern bores and 11.0 m AHD in the bore within the extraction area in September 2022. Given a distance of approximately 300 m between these bores, and their location at approximately the same topographical elevation (14 m AHD), it can be assumed that the maximum groundwater at the south western corner of the excavation area will be approximately 11.6 m AHD.

Additional groundwater monitoring bores (refer to **Figure 3**) were installed prior to the 2024 winter period and were monitored monthly for groundwater levels in April and then from June to September (refer to **Appendix B**). The bore located at the centre of the extraction area (MW3) was damaged by cattle and therefore was only approximately 11 m BGL deep at peak groundwater time. No groundwater was observed in this bore at any stage. Due to this, the assumption was made that groundwater levels in the area remain less than 11 m BGL or approximately 13 m AHD. To ensure a separation to groundwater of at least 1 m, and to take into consideration long term historical variation, maximum excavation levels of 15 m AHD will be excavated at the centre of the site with a slope reflecting natural ground levels being constructed across the subject site to the west.

2.5.2 Surface water

The subject site is located in the Wonnerup subarea of the unproclaimed Capel surface water area, approximately 400 m to the north of the Rights in Water and Irrigation (RiWI) Act 1914 proclaimed Capel River System surface water area. The subject site is not proclaimed under the *Country Areas Water Supply Act 1947* as a public drinking water source area.

A dam is located to the north of the subject site. A buffer of at least 100 to this dam will be maintained at all times. Whilst not defined as a watercourse on public databases, a drainage depression named as the Gynudup Brook in DWER databases is located to the west of the subject site. No surface water flow was observed in this depression throughout the winter wet period (refer to **Plates 1** and **2**). However, it is proposed to provide a buffer of at least 50 m to this depression at all times.



Plate 3. View looking north along Gynudup Brook adjacent to the middle of the extraction area (taken after significant rainfall in September).



Plate 4. View looking north along Gynudup Brook adjacent to the southern corner of the extraction area (taken after significant rainfall in September).

2.5.3 Wetlands

Wetlands within Western Australia are classified on the basis of landform and water permanence pursuant to the Semeniuk (1995) classification system (refer to **Table 1**).

Table 1. Wetland classifications (Semeniuk 1995).

Water Longevity	Landform				
	Basin	Channel	Flat	Slope	Highland
Permanent Inundation	Lake	River	-	-	-
Seasonal Inundation	Sumpland	Creek	Floodplain	-	-
Intermittent Inundation	Playa	Wadi	Barlkarra	-	-
Seasonal Waterlogging	Dampland	Trough	Palusplain	Paluslope	Palusmont

Areas of wetlands in Western Australia have been mapped and this mapping has been converted into a digital dataset that is maintained by the Department of Biodiversity, Conservation and Attractions (DBCA) and is referred to as the '*Geomorphic Wetlands of the Swan Coastal Plain*' dataset. This dataset contains information on geomorphic wetland types and assigns management categories that guide the recommended management approach for each wetland area. The wetland management categories and management objectives are listed in **Table 2**.

Table 2. DBCA wetland management categories (Semeniuk 1995).

Category	Description	Management Objectives
Conservation	Wetlands support a high level of ecological attributes and functions.	Highest priority wetlands. Objective is to preserve and protect the existing conservation values of the wetlands through various mechanisms including: • Reservation in national parks, crown reserves and State owned land, • Protection under Environmental Protection Policies, and • Wetland covenanting by landowners. No development or clearing is considered appropriate. These are the most valuable wetlands and any activity that may lead to further loss or degradation is inappropriate.
Resource Enhancement	Wetlands which may have been partially modified but still support substantial ecological attributes and functions	Priority wetlands. Ultimate objective is to manage, restore and protect towards improving their conservation value. These wetlands have the potential to be restored to Conservation category. This can be achieved by restoring wetland function, structure and biodiversity.
Multiple Use	Wetlands with few remaining attributes and functions	Use, development and management should be considered in the context of ecologically sustainable development and best management practice catchment planning through landcare.

There is one Multiple Use (MU) wetland (UFI 13329) mapped to the west of the extraction site (refer to **Figure 3**).

MU wetlands are assessed as possessing few remaining ecological attributes and functions, which is characteristic of these mapped areas within the property. While such wetlands can still contribute to regional or landscape ecosystem management, including hydrological function, they are considered to

have low intrinsic ecological value. Typically, they have minimal or no native vegetation remaining (less than 10%). Accordingly, there is no legislative requirement to protect or retain them and as such MU wetlands do not preclude development.

The management objective for MU wetlands is to preserve the hydrological functions in the context of the proposed development (EPA 2008). The current water cycle within the subject site consists of inputs from rainwater being infiltrated on site or flowing through the drainage lines into the wider drainage system. The development is not proposing to alter this process, with all water being retained within the excavated areas to enable infiltration through stormwater pits to ensure water quality is maintained.

3 EXTRACTION ACTIVITIES

The sand quarry will cover an area of approximately 5.4 ha, with a current maximum elevation ranging from 15 m AHD to 30 m AHD. It will be excavated to a maximum depth of approximately 15 m AHD commencing in the north east and moving initially in a southerly direction in stages less than 2 ha in size (refer to **Figure 2**). The proposal does not include any crushing or screening of material.

It is estimated that the total maximum volume of sand to be removed will be approximately 200,000 m^3 with a maximum of approximately 200,000 m^3 excavated each year, depending on supply and demand.

The planned end use of the quarry is to restore a natural soil profile and return the area to pasture, ensuring that there is no net loss of agricultural land.

3.1 Operational Works

Using a loader, the topsoil (where available) will be stripped and placed in stockpiles. Overburden, if present, will be removed using a dump truck and stockpiled to the perimeter of the proposed pit area.

Typical operating hours for quarries will be adopted for the subject site which involves 7am to 6pm each Monday to Friday and 7am to 1pm Saturdays for rehabilitation works only; and at no time on Sundays or public holidays. The site will be worked by 2 - 3 persons, depending on market demand.

3.1.1 Sand Extraction

The sand will be excavated by a bulldozer to a stockpile or loaded directly to waiting trucks for transport. A summary of the proposed sand extraction activities is provided below:

- Prior to excavation commencing the site will be ground surveyed, the excavation footprint marked out and a 1 m contour plan developed.
- The topsoil and overburden (if present) will be stripped and stockpiled using a loader.
- An excavator or front-end loader will be used to dig the sand and transport it to a stockpile.
- The sand will then be picked up by a loader and loaded to trucks for transport.
- All static and other equipment, will be located on the floor of the quarry to provide visual and acoustic screening.
- Excavation will commence in the north of the quarry and then move in a southerly direction. The face and walls of the pit will act as noise barriers.
- Upon completion of each section of quarry, the section will be reformed and back filled, where subgrade material is available, to achieve the proposed final contours.
- At the end of excavation, the floor of the quarry will be deep ripped, covered by overburden and topsoil, and rehabilitated to a constructed soil.

3.1.2 Final Contours

The slope of the final contours of the quarry will reflect the current contours of the site and will slope from approximately 30 m Australian Height Datum (AHD) in the south western corner down to 15.0 m AHD in the centre of the extraction area sloping to join the current surface level of the adjoining land to the west at approximately 15 m AHD.

Slopes of the batters at the end of excavation will be retained at 1:4 vertical to horizontal.

3.1.3 Equipment

All operational equipment will work on the quarry floor to provide maximum sound and visual screening. All equipment and infrastructure will be fully portable to facilitate movement throughout the site required for staged quarrying operations. The site will be secured by locked gates when it is not being actively worked. The boundary fencing will be maintained to prevent inadvertent and unauthorised entry.

Equipment and facilities that may be used onsite are provided in the Table below.

Table 3. Equipment.

Equipment	Description
Site office and/or containers	May be required for the management and security of small items.
Toilet	A portable toilet may be required on site.
Water tanker	Used for dust suppression on the access roads and working floors when required.
Loader	Loaders will be used for the movement of sand and loading road trucks.
Excavator	An excavator may be used for the removal of sand material.
Anaconda Radial Stockpiler	Used for stockpiling of sand.
Fuel storage	No fuel will be stored onsite.
Light vehicles	Access to and around the site.
Tip truck	Removal of sand from site.

3.1.4 Water Usage

Water is only required for dust suppression within the quarry and the access road. Water will be sourced from an offsite standpipe located on Queen Elizabeth Avenue in Busselton and tankered to the site for dust suppression purposes, as required.

4 POTENTIAL IMPACTS AND MANAGEMENT

The Section provides and overview of the potential impacts to water resources associated with the proposed land use, and the proposed management measures to address the identified impacts.

4.1 Surface Water

The current water cycle within the subject site consists of inputs from rainwater flowing downhill in a westerly direction into the wider drainage system. The development will maintain this process, with all surface water being retained within the excavated areas to enable infiltration through the base of the pit to ensure water quality to the drains is maintained.

An MU wetland is located to the west of the subject site (refer to **Figure 3**). A buffer of at least 85 m from the excavation area to the mapped boundary of all wetlands will be maintained.

MU wetlands are assessed as possessing few remaining ecological attributes and functions, which is characteristic of these mapped areas adjacent to the subject site. While such wetlands can still contribute to regional or landscape ecosystem management, including hydrological function, they are considered to have low intrinsic ecological value. The mapped wetland adjacent to the subject site is not a moving water body and is located within an existing paddock fertilised and containing cow manure. Typically, they have minimal or no native vegetation remaining (less than 10%). Accordingly, there is no legislative requirement to protect or retain them and as such MU wetlands do not preclude development.

The management objective for MU wetlands is to preserve the hydrological functions in the context of the proposed development (EPA 2008). The proposed activities are not proposing to alter the natural surface flow process, with all water being retained within the excavated areas to enable infiltration through stormwater pits to ensure water quality is maintained.

The mobilisation and positioning of equipment is not associated with any impacts to surface water, including stormwater runoff.

4.2 Drainage

Potential impacts associated with sedimentation and erosion from stormwater runoff during the operation of the quarry will be minimised by the construction of diversion drains around the excavation areas to divert clean water away from the pit and contain any potentially sediment laden surface water within the pit.

The DWER recommendation is that surface water runoff produced within the excavation area from the two hour, 1 in 10 (10%) annual exceedance probability event should be contained within the pit (DoW 2019). Rainfall intensity has been calculated using the Bureau of Meteorology (BoM) Intensity-Frequency-Duration (IFD) data system (BoM 2021), which yields the two hour 1 in 10% (10%) annual exceedance probability event for the site at 42 mm. For every 1 ha area open for excavation at any time a holding volume of 420 m^3 is required.

For l works in Stages 1 and 2, the required holding volume can be readily achieved within the excavated pit given the very high topographical relief.

For works in Stages 3 and 4, for a maximum area of 2 ha, a holding volume of 840 m^3 is required. The dimensions of these Stages are as follows:

- Stage 3: length is 220 m and minimum width is 60 m;
- Stage 4: length is 140 m and minimum width is 125 m.

A total holding area of at least 13,200 m^3 for Stage 3 and 17,500 m^3 for Stage 4 is achieved when these stages are excavated to a depth of 1 m. Excavation depths within Stages 3 and 4 will range between approximately 1 – 5.5 m BGL, ensuring the required holding volume can be readily achieved within the excavated pit.

However, given the lower topographical elevation on the western boundary a small bund will be required to contain surface water within the pit when excavation is occurring adjacent to the western boundary (refer to **Figure 4**). This bund will be constructed from the topsoil stripped from the stage and will be maintained at a height of at least 1 m at all times. Monitoring of these bunds will occur on a daily basis and after substantial rainfall events to ensure the integrity of the bund is maintained and no erosion or sedimentation resulting in poor surface water quality outside of the extraction area occurs.

During excavation activities, the surface will be internally drained, with the gradients in the cells being constructed to ensure that no surface water runoff occurs.

A risk assessment relating to surface water and stormwater runoff in consideration of the proposed management measures is provided below. The residual risk associated with sedimentation and erosion from stormwater runoff during the operation of the extractive industry is considered low.

Table 4. Risk assessment associated with surface water and stormwater.

Hazard	Source of Hazard	Potential Impacts	Mitigation	Likelihood	Consequence	Residual Risk
Erosion and sedimentation	Uncontrolled and contaminated stormwater runoff	Erosion and sedimentation resulting in poor surface water quality in surrounding waterways.	Construction of diversion drains around the excavation areas to divert clean water away from the pit and contain any potentially sediment laden surface water within the pit. Excavation undertaken with a gradient to ensure that stormwater is contained within the excavation footprint.	1	2	Low

4.3 Groundwater

Groundwater will not be extracted or dewatered during the operation of the quarry and therefore, no impacts to groundwater levels are proposed.

Maximum excavation levels have been determined to ensure at least 1 m separation from the maximum groundwater level will be maintained at all times. The final contours of the quarry will provide an undulating surface at approximately 15 m AHD which is consistent with the adjoining land. This will provide a separation of at least 1.0 m between the final contours and the maximum groundwater elevation. This separation to groundwater is consistent with advice provided by the DWER and subsequently many previously approved extractive industry operations in the southwest. The specific 2 m separation distance was originally recommended for operations in highly sensitive environments such as Public Drinking Water Areas (PDWA) (refer to *Water Quality Protection Note 15*). Furthermore, it is noted that the *Government*

Sewage Policy 2019 recommends a 0.6 m to 1.5 m separation distance from the discharge point of an onsite sewage system to groundwater. As opposed to sewage systems, extractive industries are not associated with any environmental discharges (excluding accidental spills which can occur in any land use). The extraction and processing of sand is a chemically free operation with the liquids used being lubricants for machinery and fuel. There will be no storage of chemicals or fuel on the subject site. In addition, the subject site is not adjacent to any environmental sensitive areas (i.e. conservation category or Ramsar wetlands). Therefore, a 1 m separation to groundwater is deemed to be suitable in consideration of the low risk nature of the operation.

Table 5. Risk assessment associated with groundwater.

Hazard	Source of Hazard	Potential Impacts	Mitigation	Likelihood	Consequence	Residual Risk
Contamination of groundwater	Machinery	Contamination of groundwater	Maintenance of at least 1.0 m separation from groundwater at all times.	1	2	Low

4.4 Hydrocarbons and Dangerous Goods Management

Hydrocarbons are the only dangerous goods that will be utilised within the proposed subject site for the operation of machinery. However, storage of hydrocarbons on the subject site will not occur.

Servicing of machinery and equipment will not occur onsite further reducing the possibility of contamination.

There is the minor possibility for soil and water contamination as a result of incidental hydrocarbon leakages or spills during the operation of machinery. In such instances the management measures specified below will be implemented.

Table 6. Hydrocarbon and dangerous goods management measures.

Timing	Management Measure
During quarry operations	Mobile refuelling of equipment and vehicles will be undertaken on site by a mobile fuelling truck on a hard stand area outside of the pit area.
	Spill kits containing appropriate equipment for control, containment and cleanup of hydrocarbon and chemical spills will be available in appropriate locations onsite and maintained.
	No vehicles or machinery are to be serviced or cleaned within the subject site.

A risk assessment to determine the residual risk associated with the uncontrolled discharge of contaminants is provided below. The risk assessment indicates that with the application of suitable management measures the potential risk associated with uncontrolled discharges is 'Low'.

Table 7. Risk assessment associated with the uncontrolled discharge of contaminants.

Hazard	Source of Hazard	Potential Impacts	Mitigation	Likelihood	Consequence	Residual Risk

Uncontrolled discharge of contaminants to land	Machinery	Contamination of soils and/or water	Refer to Management Measures provided in **Table 6**.	1	2	Low

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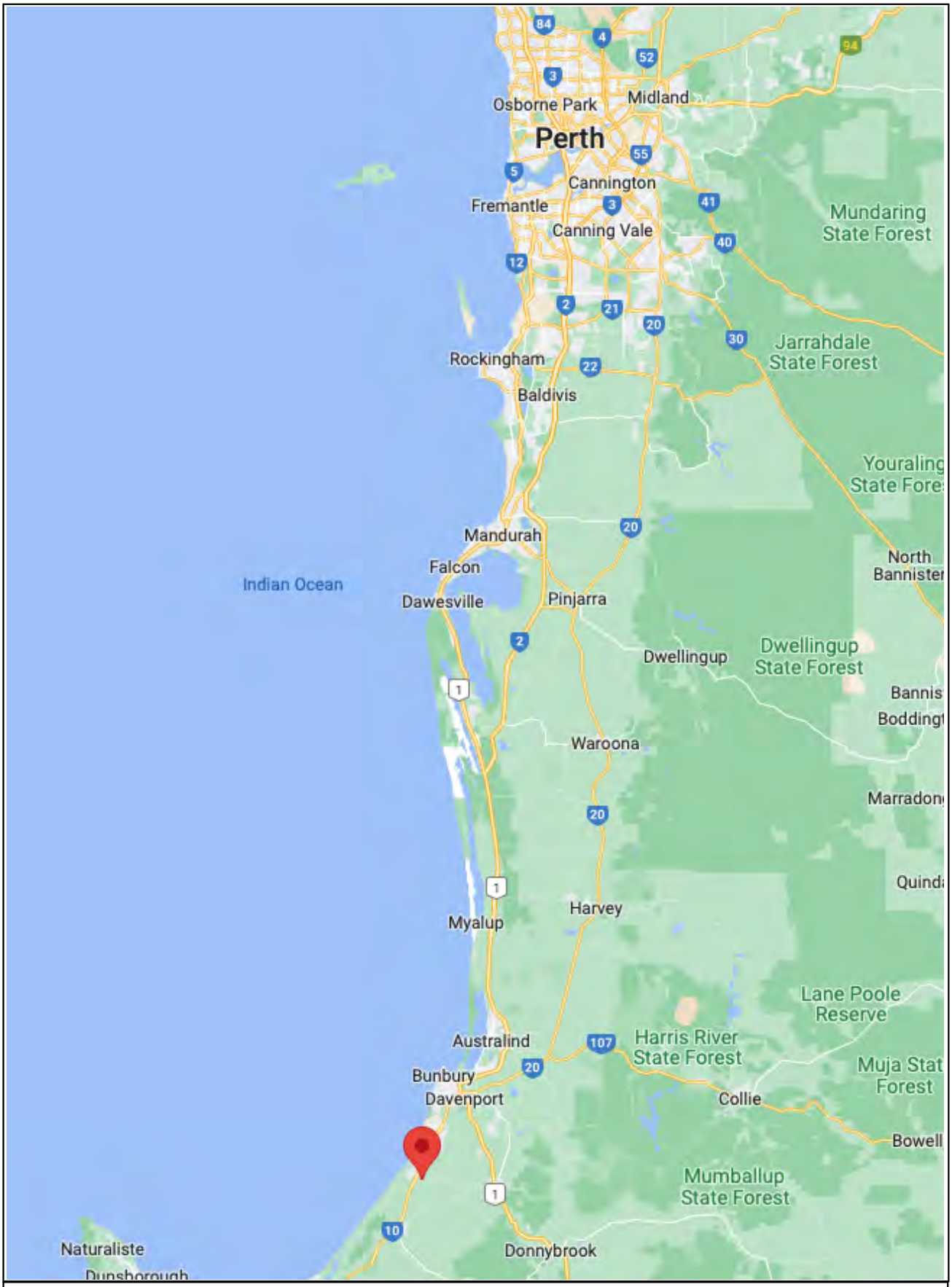
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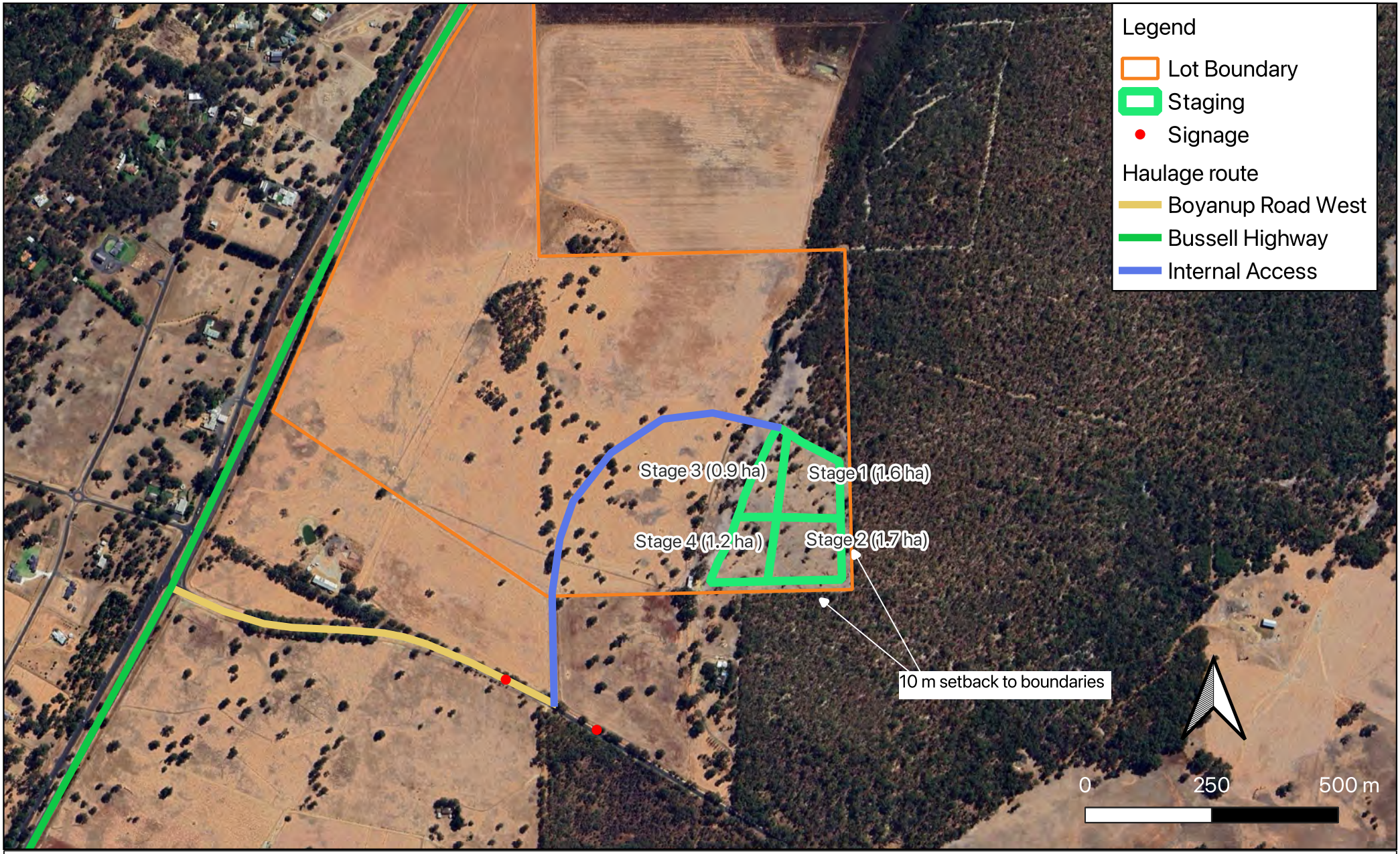
FIGURES



PROJECT	Lot 103 Boyanup Rd W, Stratham	Project Number	Drawing Number	Revision
		2311	Figure 1	A
DRAWING TITLE	Figure 1 – Site Locality	Designed PN	Checked	
		Drawn PN	Approved	
CLIENT	Leeuwin Civil Pty Ltd	Date	26/09/2023	
		Local Authority	Shire of Capel	
		Sheet 1 of 1		

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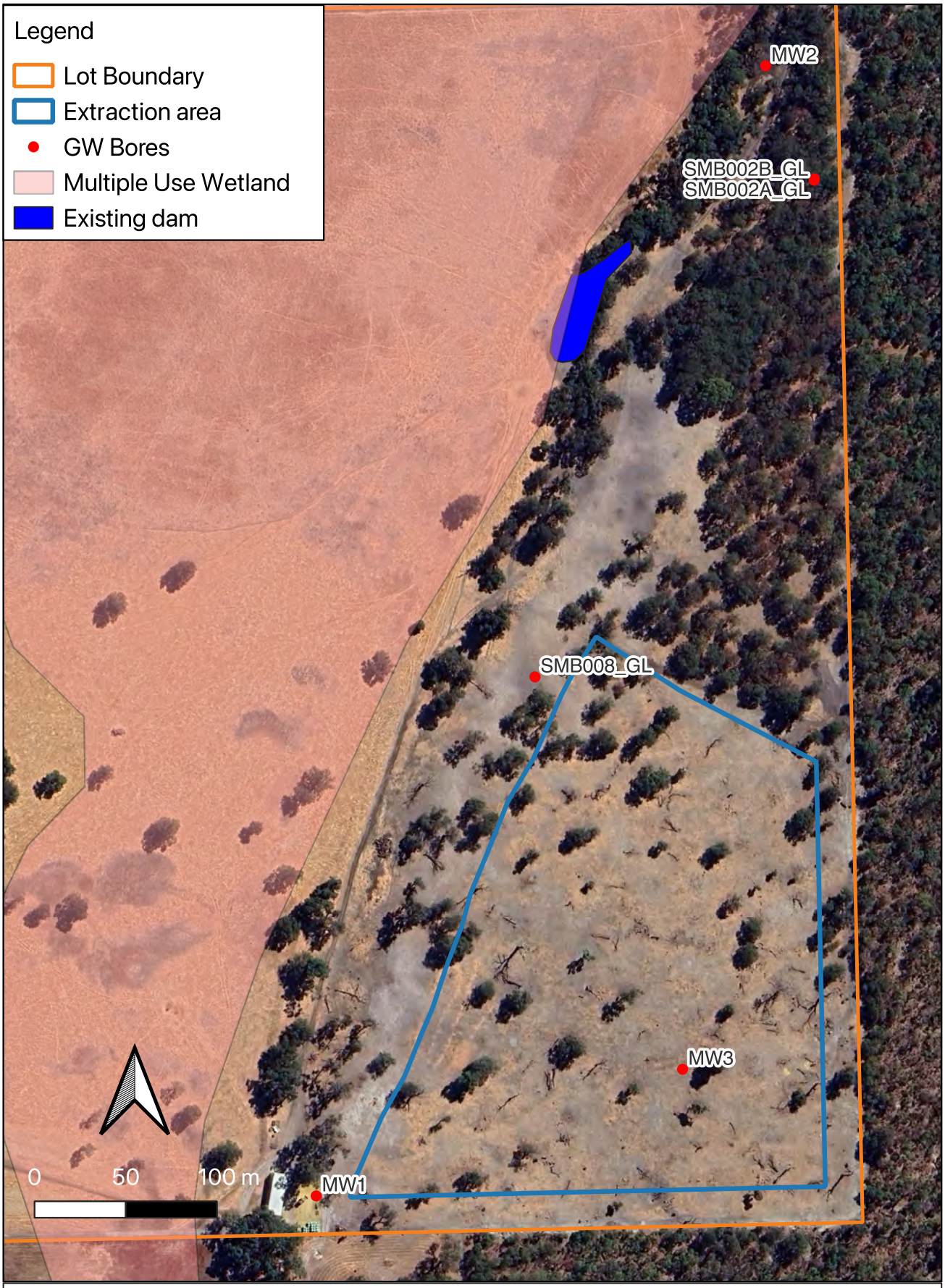


PROJECT	103 Boyanup Road West,Stratham
DRAWING TITLE	Figure 2 - Site Extent
CLIENT	Leeuwin Civil Pty Ltd

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Project Number	2311	Designed	PN
Drawing Number	Figure 2	Drawn	PN
Revision	B	Checked	
Date	21/01/2025	Approved	
Sheet 1 of 1		Local Authority	Shire of Capel



PROJECT	Lot 103 (Harris Pit),Stratham
DRAWING TITLE	Figure 3 - Water Features
CLIENT	Leeuwin Civil Pty Ltd

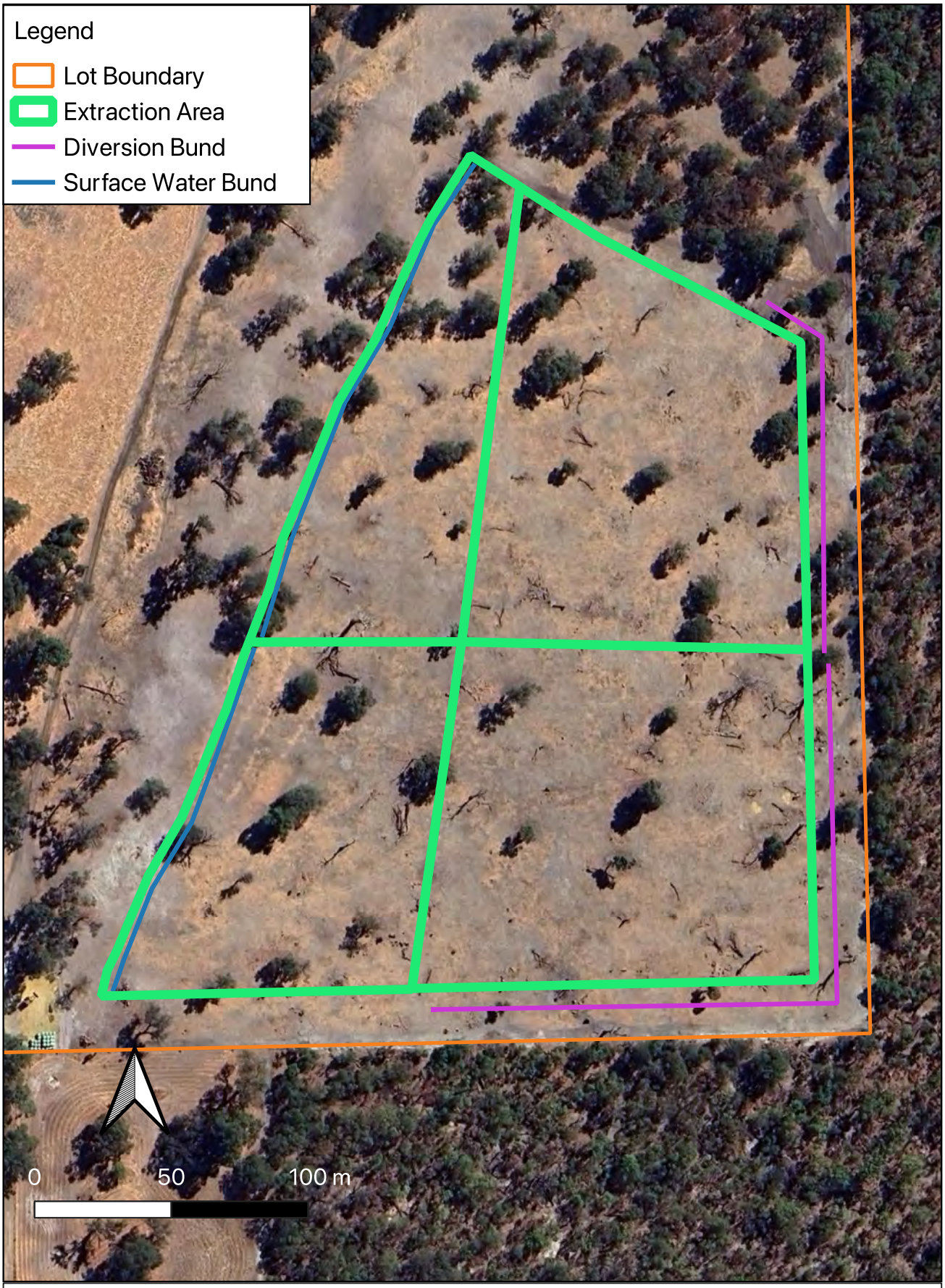
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Project Number	Drawing Number	Revision
2311	Figure 3	C

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PROJECT	Lot 103 (Harris Pit),Stratham
DRAWING TITLE	Figure 4 - Surface Water Management
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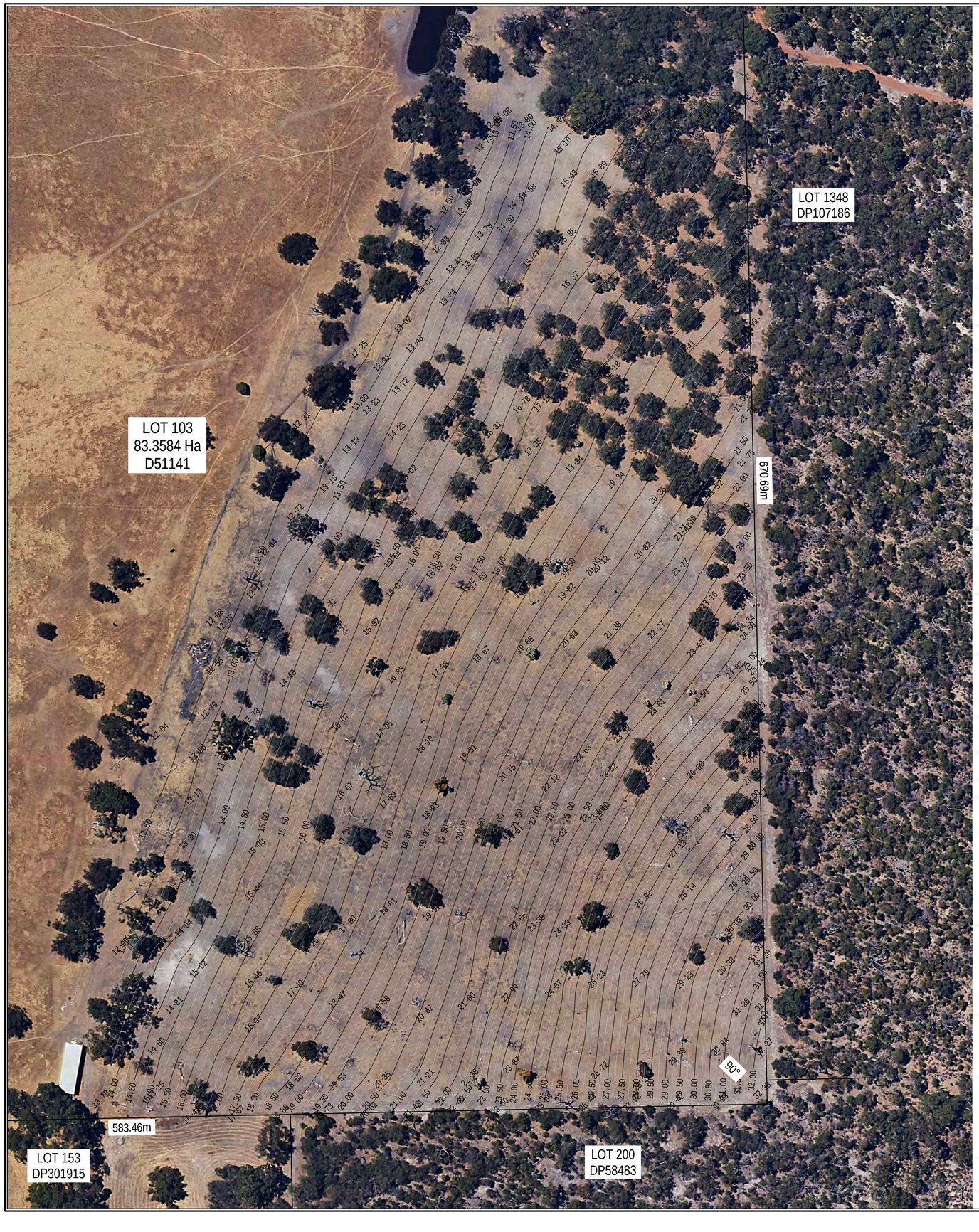
Project Number	Drawing Number	Revision
2311	Figure 4	B

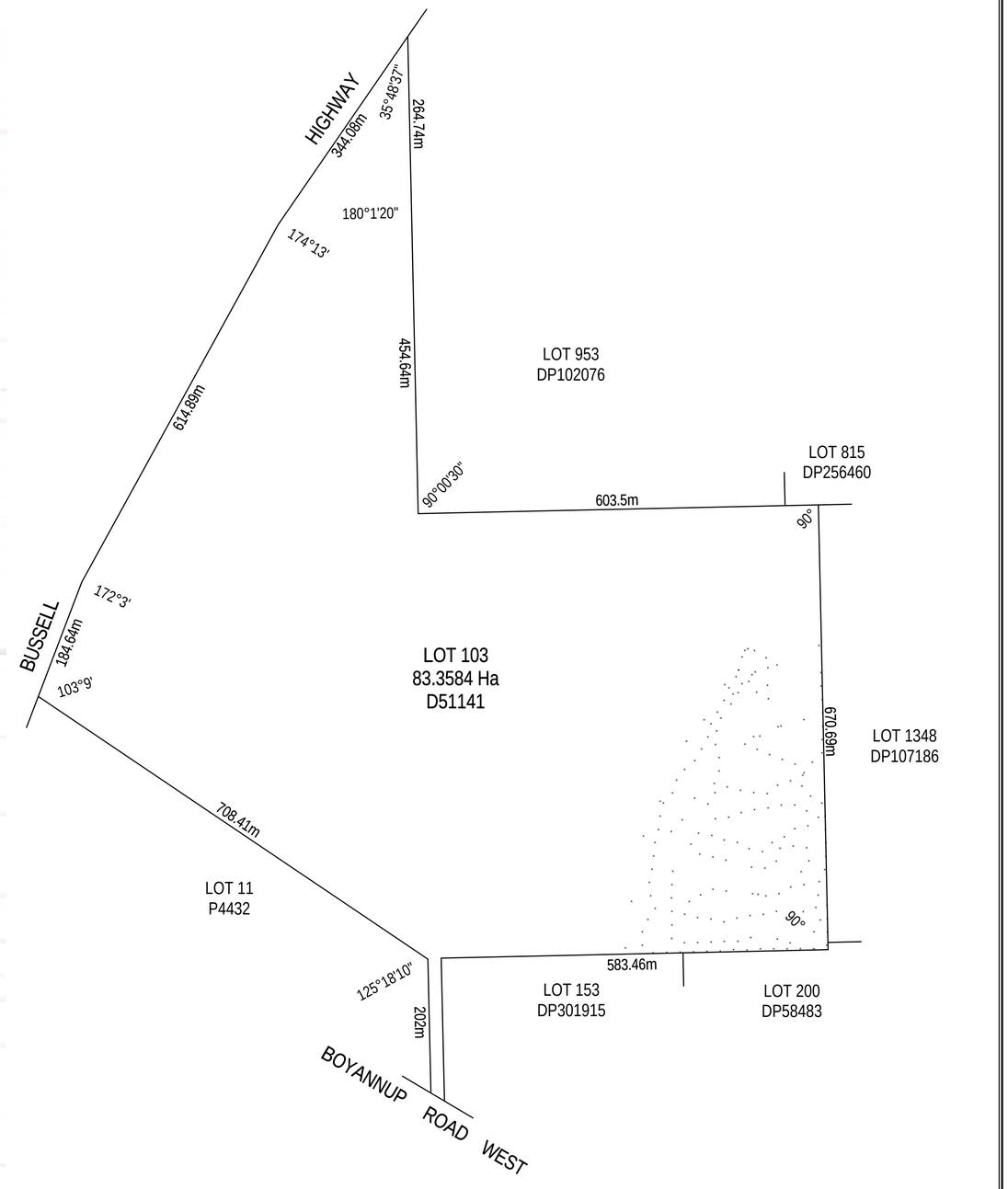
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Drawn PN
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Sheet 1 of 1

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APPENDIX A – SITE CONTOUR SURVEY





LOCALITY DIAGRAM (NOT TO SCALE)

LEGEND

27.13 EXISTING SURFACE HEIGHT

BOUNDARY

NOTES:
1. Limited boundary marks found. Boundary resurvey recommended if building on or close to boundary.
2. Datum is AHD established from VRS / GPS.
3. Above ground services located by survey. Underground services plotted from plans supplied by the relevant authorities. No liability is accepted for errors in underground service locations. All services to be located on site prior to any work being done.
4. No boundary marks found unless otherwise noted.
5. Contour interval is 0.25m.
6. PDF to be used in conjunction with DWG file supplied. Some point heights may have been omitted for clarity; see DWG file.

Rev.	Description	Drawn	Date	Checked
A	INITIAL ISSUE	TJ	30/8/23	MR

The contents of this plan are date stated within the revision panel. All consultants and persons wishing to utilise this data should satisfy themselves of this plan's currency by contacting Survcon.

The boundaries depicted on this plan were not re-established as part of this survey, therefore this plan does not guarantee their accuracy. Re-establishment of the cadastral boundaries is recommended for any proposed works on or near existing boundaries.

Scale: 1:1000 A1 ORIG ALL DISTANCES IN METRES 0 10 20 30 40 50

Surveyor: MR
Survey date: 18/7/2023
Precal/Cad: N/A

N

FEATURE AND CONTOUR SURVEY
LOT 103 ON DIAGRAM 51141,
BOYANUP ROAD, STRATHAM

Client: **LEEUWIN CIVIL**

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PROJ MNGR.	Michael Riddle	DATUM	MGA50 AHD

JOB NUMBER 9238_SS_A TYPE REVISION

APPENDIX B - GROUNDWATER MONITORING DATA

SMB002A_G	13.98	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Date		14/1/2021	12/2/2021	26/3/2021	21/4/2021	13/5/2021	15/6/2021	12/7/2021	6/8/2021	21/9/2021	25/10/2021	15/11/2021	16/12/2021	25/1/2022	17/2/2022	31/3/2022	14/4/2022	24/5/2022	30/6/2022	28/7/2022	31/8/2022	28/9/2022	1/11/2022	23/11/2022	4/1/2023
Casing Height above topo		0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Depth of bo	m	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88	21.88
SWL (m)	m (from top of casing)	4.32	4.34	4.45	4.37	4.34	4.27	4.22	4.13	4.09	4.1	4.1	4.1	4.27	4.34	4.44	4.42	4.46	4.27	4.2	4.15	4.1	4.12	4.24	4.52
m AHD	survey of top steel	10.20	10.18	10.07	10.15	10.18	10.25	10.30	10.39	10.43	10.42	10.42	10.42	10.25	10.18	10.08	10.10	10.06	10.25	10.32	10.37	10.42	10.40	10.28	10.00

SMB008_GL	13.97	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Date		14/01/2021	12/02/2021	26/03/2021	20/04/2021	13/05/2021	15/06/2021	12/07/2021	6/08/2021	21/9/2021	25/10/2021	15/11/2021	16/12/2021	25/1/2022	17/2/2022	22/3/2022	14/4/2022	24/05/2022	30/6/2022	28/7/2022	31/8/2022	28/9/2022	1/11/2022	23/11/2022	4/01/2023
Casing Height above topo		0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Depth of bo	m	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56
SWL (m)	m (from top of casing)	3.86	3.89	4.05	3.93	3.95	3.78	3.58	3.46	3.52	3.57	3.61	3.66	3.75	3.82	3.9	3.92	3.96	3.89	3.67	3.56	3.44	3.65	3.82	3.96
m AHD	survey of top steel	10.60	10.57	10.41	10.53	10.51	10.68	10.88	11.00	10.94	10.89	10.85	10.80	10.71	10.64	10.56	10.54	10.50	10.57	10.79	10.90	11.02	10.81	10.64	10.50

Lot 103 Boyanup Road - Groundwater Level Monitoring 2022 and 2024

	3-Apr-24			16-Jun-24			22-Jul-27			30-Aug-24			27-Sep-24		
	Level from Top of Collar (mTOC)	Level (mBGL)	Approx level (m AHD)	Level from Top of Collar (mTOC)	Level (mBGL)	Approx level (m AHD)	Level from Top of Collar (mTOC)	Level (mBGL)	Approx level (m AHD)	Level from Top of Collar (mTOC)	Level (mBGL)	Approx level (m AHD)	Level from Top of Collar (mTOC)	Level (mBGL)	Approx level (m AHD)
MW1	4.6	4.05	9.95	4.33	3.78	10.22	4.22	3.67	10.33	3.34	2.79	11.21	3.68	3.13	10.87
MW2	2.88	2.21	8.79	2.56	1.89	9.11	2.5	1.83	9.17	2.31	1.64	9.36	2.45	1.78	9.22
MW3	12.44	11.74	11.26	12.44	11.74	11.26	12.44	11.74	11.26	11.04	10.34	12.66	11.04	10.34	12.66
SMB008							3.72	3.17	10.83	3.43	2.88	11.12	3.505	2.955	11.045

APPENDIX G – NOISE MANAGEMENT PLAN

NOISE MANAGEMENT PLAN

LOT 103 BOYANUP ROAD WEST, STRATHAM

January 2025

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Document Control

Version	Date	Author	Reviewer
V1	20/9/2023	PN	KMT//Shire/Public
V2	31/10/2024	PN	KMT/DWER/DBCA
V3	21/01/2025	PN	KMT
Filename	2311_Lot 103 Boyanup Rd W NMP_v3		

Limitations

This report has been prepared by Accendo Australia Pty Ltd in accordance with the scope limitations provided in this report, or as otherwise agreed, between the Client and Accendo.

This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

This report has been prepared based upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report, which Accendo has not independently verified or checked beyond the agreed scope of work. Accendo does not accept liability in connection with such unverified information.

The conclusions and recommendations in this report are based on assumptions made by Accendo described in this report where and as they are required. Accendo disclaims liability arising from any of the assumptions being incorrect.

The report is based on site specific conditions encountered and information received at the time of preparation of this report or the time that site investigations were undertaken. Accendo disclaims responsibility for any changes that may have occurred after this time.

The preparation of this report has been undertaken and performed in a professional manner, in consideration of the scope of services and in accordance with environmental consulting practices. No other warranty is made.

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1.2 PURPOSE AND SCOPE 4
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FIGURES

Figure 1. Regional Location of the Subject Site
Figure 2. Extent of the subject Site
Figure 3. Haulage Route
Figure 4. Sensitive Receptors

1 INTRODUCTION

1.1 Background

Leeuwin Civil Pty Ltd (the applicant) is proposing to extract sand from a 5.4 hectare (ha) area within Lot 103 Boyanup Road West, Stratham (herein referred to as the subject site) (refer to **Figure 1** and **Figure 2**).

The available volume of sand (*insitu* volume of approximately 200,000 m^3) is to be extracted, commencing to the north of the subject site and moving in a southerly direction.

The slope of the final contours of the quarry will reflect the current contours of the site and will slope from approximately 30 m Australian Height Datum (AHD) in the south western corner down to 15.0 m AHD in the centre of the extraction area sloping to join the current surface level of the adjoining land to the west at approximately 15 m AHD.

Slopes of the batters at the end of excavation will be retained at 1:4 vertical to horizontal.

1.2 Purpose and Scope

This Noise Management Plan (NMP) has been prepared to fulfil the relevant requirements provided within the Shire of Capel's *Local Planning Scheme No. 8* and the Shire of Capel's *Local Planning Policy No. 6.2 Extractive Industries*. It is intended to provide the Shire of Capel, the public and relevant government agencies with an understanding of the proposal and the environmental strategies and commitments proposed to address noise emissions associated with the proposed land use. This document has been prepared to support and should be read in conjunction with, the *Extractive Industry Operations Plan* prepared by Accendo Australia (2024) for sand extraction within the subject site.

The Plan will describe the proposed management measures necessary to ensure noise impacts on surrounding receptors will be managed in accordance with best practice and the *Environmental Protection (Noise) Regulations 1997*.

2 EXISTING ENVIRONMENT

2.1 Land Use

The subject site is zoned "Rural" under the Shire of Capel's *Local Planning Scheme No. 8*. The subject site is located within the "Special Control Area – Basic raw materials" under the *Local Planning Scheme No. 8.* The proposed extractive industry is a permitted land use within this zone subject to development approval from the Shire of Capel.

Land use abutting the boundaries of the subject site is Rural based to the north, east and south. Properties to the west of the subject site on the other side of Bussell Highway are zoned 'Special Rural'.

The subject site is currently used for the grazing of cattle.

2.2 Topography and Soils

The current topography of the subject site can be described as sloping with the elevation ranging from 15 m Australian Height Datum (AHD) in the west to 30 m AHD in the south eastern corner of the subject site (refer to **Appendix A**).

The subject site is located on the Perth Coastal Zone consisting of coastal sand dunes and calcarenite within the Spearwood system. The Spearwood systems consists of "*Sand dunes and plains with yellow deep sands, pale deep sands and yellow/brown shallow sands"* (Tille 2006).

The subject site is located within the Spearwood S1b phase consisting of 'dune ridges with deep siliceous yellow brown sands or pale sands with yellow-brown subsoil and slopes up to 15%' (Natural Resource Information (NRInfo) (DPIRD 2023).

2.3 Climate

The climate of the locality is classified as Mediterranean with warm to hot summers and cool wet winters.

The closest weather recording station is Bunbury (Station 9965). Temperatures are highest on average in February, at approximately 30°C. July has the lowest average temperature of the year of 7.3°C.

Rainfall for the area is approximately 730 mm per annum with approximately 90% of the rain falling during the winter months, April to October inclusive.

During the summer months the dominant wind in the mornings is from the south-east at 10-14 knots, swinging to the south-west at 20-25 knots in the afternoon. During winter, the winds are most commonly 10-14 knots with no dominant prevailing direction. During storms winds from the west and north-west can reach 40 knots (BoM 2020).

Rainfall intensity has been calculated using the Bureau of Meteorology (BoM) Intensity-Frequency-Duration (IFD) data system which yields the two hour 1 in 10 (10%) annual exceedance probability storm event for the subject site as 40.2 mm/hr.

3 EXTRACTION ACTIVITIES

The sand quarry will cover an area of approximately 5.4 ha, with a current maximum elevation ranging from 15 m AHD to 30 m AHD. It will be excavated to a maximum depth of approximately 15 m AHD commencing in the north east and moving initially in a southerly direction in stages less than 2 ha in size (refer to **Figure 2**). The proposal does not include any crushing or screening of material.

It is estimated that the total maximum volume of sand to be removed will be approximately 200,000 m^3 with up to approximately 200,000 m^3 excavated each year, depending on supply and demand.

The planned end use of the quarry is to restore a natural soil profile and return the area to pasture, ensuring that there is no net loss of agricultural land.

3.1 Operational Works

Using a loader, the topsoil (where available) will be stripped and placed in stockpiles. Overburden, if present, will be removed using a dump truck and stockpiled to the perimeter of the proposed pit area.

3.1.1 Truck Movements

Access from the property will be via Boyanup Road West (a RAV -4 classified road), travelling west to Bussell Highway (refer to **Figure 3**). The road intersection will be asphalt, with sealing up to the length of a vehicle followed by a gravel access track. Signage will be erected on both the West and East extents of the road access advising of trucks entering.

It is proposed to extract a maximum of approximately 200,000 m^3 or bank cubic metres (BCM) per year. The average daily extraction rate:

= 200,000 BCM / 52 weeks / 5 working days per week
= 769 BCM per day.

It is estimated that approximately 70% of the haulage is proposed to be undertaken from October to May (8 months). Therefore, the average daily extraction rate (main season):

= 200,000 BCM x 70% / 32 weeks / 5 working days
= 875 BCM per day.

The average daily extraction rate (LCM):

= 875 BCM x 1.15
= 1006 LCM

It is proposed to utilise 22 tonne semi-trailers with a capacity of approximately 39.6 LCM of gravel. Accordingly, the average daily truck movements during the main season are as follows:

= 1006 LCM/ 39.6 LCM truck capacity
= 25 truck movements per day x 2 (to and from)
= 50 trips per day x 2 (peak fluctuations)
= 100 trips per day maximum.

Given the highly variable nature of the campaigns, these calculations are estimates only, there may be periods in which these daily truck numbers are exceeded.

3.1.2 Sand Extraction

The sand will be excavated by a bulldozer to a stockpile or loaded directly to waiting trucks for transport. A summary of the proposed sand extraction activities is provided below:

- Prior to excavation commencing the site will be ground surveyed, the excavation footprint marked out and a 1 m contour plan developed.
- The topsoil and overburden (if present) will be stripped and stockpiled using a loader.
- An excavator or front-end loader will be used to dig the sand and transport it to a stockpile.
- The sand will then be picked up by a loader and loaded to trucks for transport.
- All static and other equipment, will be located on the floor of the quarry to provide visual and acoustic screening.
- Excavation will commence in the north of the quarry and then move in a southerly direction. The face and walls of the pit will act as noise barriers.
- Upon completion of each section of quarry, the section will be reformed and back filled, where subgrade material is available, to achieve the proposed final contours.
- At the end of excavation, the floor of the quarry will be deep ripped, covered by overburden and topsoil, and rehabilitated to a constructed soil.

3.1.3 Final Contours

The slope of the final contours of the quarry will reflect the current contours of the site and will slope from approximately 30 m Australian Height Datum (AHD) in the south western corner down to 15.0 m AHD in the centre of the extraction area sloping to join the current surface level of the adjoining land to the west at approximately 15 m AHD.

Slopes of the batters at the end of excavation will be retained at 1:4 vertical to horizontal.

3.1.4 Rehabilitation

Progressive rehabilitation will be undertaken as far as practicable. Works will commence in the north east of the site with the excavation at higher elevations being undertaken first. This will then be rehabilitated while the works at lower elevation to the west are being completed. Rehabilitation will be completed upon the completion of the quarry.

Upon completion of quarrying, the following broad completion criteria will be achieved:

- A self-sustaining cover of pasture;
- Weed levels that are not likely to impact on the viability of the reconstructed soils; and
- A safe and stable landform suitable for the proposed future land use which will be productive, grazing pasturelands.

3.2 Proposed Operating Times

Typical operating hours for quarries will be adopted for the subject site which involves 7am to 6pm each Monday to Friday and Saturdays 7am to 1pm (for rehabilitation works only), excluding public holidays. The subject site will be worked by 2 - 3 persons, depending on market demand.

Boyanup Road West is a designated bus route. Correspondence with the bus company indicates there are school buses in the area which traverse Boyanup Road West at 7:50 to 8:15 in the morning and 3:35 to 4:10 (two services) in the afternoon. To ensure that trucks are not operating on designated school bus routes at the same time as the bus, trucks will not operate on Boyanup Road West between 7:40am –

8:25am and 3:25 pm – 4:20pm, Monday to Friday, during school periods. The pit operators will be careful to ensure compliance with these requirements.

3.3 Equipment

All operational equipment will work on the quarry floor to provide maximum sound and visual screening. All equipment and infrastructure will be fully portable to facilitate movement throughout the site required for staged quarrying operations. The site will be secured by locked gates when it is not being actively worked. The boundary fencing will be maintained to prevent inadvertent and unauthorised entry.

Equipment and facilities that may be used onsite are provided in the Table below.

Table 1. Equipment

Equipment	Description
Site office and/or containers	May be required for the management and security of small items.
Toilet	A portable toilet may be required on site.
Water tanker	Used for dust suppression on the access roads and working floors when required.
Loader (938/966)	Loaders will be used for the movement of sand and loading road trucks.
Excavator (325/330)	An excavator may be used for the removal of sand material.
Anaconda Radial Stockpiler	Used for stockpiling sand.
Fuel storage	No fuel will be stored onsite.
Light vehicles	Access to and around the site.
Tip truck	Removal of sand from site.

4 NOISE IMPACTS AND MANAGEMENT

4.1 Sensitive Receptors

The subject site has been designed to maximise setbacks to the closest sensitive receptors. This has involved extensive analysis of the local landform, environmental characteristics, land uses and location of sensitive receptors.

The Environmental Protection Authority's (EPA) *Guidance for the Assessment of Environmental Factors* (June 2005) provides generic separation distances to assist in the determination of suitable buffers where industry may have the potential to affect the amenity of a sensitive land use. In particular, for extractive industries, a buffer distance of 300 m to 500 m is recommended from sensitive land uses.

The closest residential dwellings to the subject site are provided below and shown in **Figure 4.**

Table 2. Residential dwellings within 1,000 m of the subject site.

Resident No.	Distance to subject site (m)
1	140 m
2	648 m
3	779 m
4	786 m
5	880 m
6	936 m
7	987 m

The closest residential dwelling to the subject site is located 140 m from the southern boundary. The applicant has attempted consultation with this neighbour however the neighbour has not been willing to engage. It should be noted that this residence is for sale and the applicant is willing to undertake consultation with any parties looking to purchase the property. Ongoing consultation will be undertaken for the life of the quarry.

4.2 Noise Generating Activities

The project works will involve the use of machinery and equipment that will generate noise during operation. Sources of noise from the subject site will included:

- Machinery noise from equipment use.
- Noise from safety equipment (beepers on machinery).
- Noise from trucks departing the site.

Reversing alarms can represent significant nuisance noise to sensitive receptors. There are a number of alternatives to alarms that maintain a safe work environment and also comply with occupational health and safety legislation. Reversing alarms alert pedestrians when a vehicle is moving, however, given that no pedestrians will be onsite (private property), the applicant has committed to using flashing lights or a broadband alarm system as an alternative. The sound of a broadband alarm is much less intrusive by nature than the sound of a tonal alarm and tends to be masked by the background noise at a lesser distance. This will eliminate/reduce noise emissions associated with reversing alarms.

The proposed extraction activities will be low impact in nature and the noise emanating from the subject site will be indistinct from typical rural noises. Furthermore, extraction activities will only be undertaken

during standard hours of operation (in accordance with the conditions of the Extractive Industry Licence). A summary of potential noise generating activities is presented in **Table 3**.

Table 3. Noise generating activities.

Activity	Duration	Equipment to be used	Sound pressure Level (dB(A))	Comments
Topsoil stripping	3 weeks per year	CAT 966 Front end Wheel Loader (FEL) or similar	109	Initial impact to closest resident which will reduce as stockpiles increase.
Excavation and stockpiling of sand	80% of works undertaken within 6 months of the year	CAT 330F Excavator	105	Noise will be muffled by stockpiles present at edge of excavation areas.
Loading of trucks from stockpiles	A maximum of 5 years with up to 80 loads per day, dependent on demand.	Single Semi-loader, semi – tipper or road train	102	Noise will be muffled by stockpiles, vehicles are new and well maintained.
Rehabilitation of completed stages	To be undertaken in conjunction with excavation works where applicable.	CAT 16M Grader	108	Limited period of moderate noise levels, indistinguishable from excavation noise when undertaken concurrently.

Noise levels have been obtained from a combination of manufacturers' specifications and from measurement of the plant undertaken at Nuttman Road, Walsall (Lloyd George Acoustics 2022).

A Noise Assessment was undertaken by Lloyd George Acoustics (Lloyd George 2024) (refer to **Appendix B**) which demonstrated that noise levels resulting from the extraction and crushing works, are predicted to exceed the assigned level of 45dB L_{A10} at Resident 1. The noise to all other noise sensitive premises is predicted to comply. To address the noise exceedance, it is recommended to construct a 4.0 m high earth bund on the southern boundary as detailed within **Figure 5-1** of **Appendix B**.

The predicted noise levels for three typical scenarios (operations in north, centre and south) assuming that a front end loader and excavator are working on the pit floor behind the earth bund, are below the assigned level of 45dB L_{A10} at Resident 1.

4.3 Noise Management Measures

The proponent will ensure that noise emissions comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* at all times. In addition, the management measures prescribed within **Table 4** will be implemented to reduce noise emissions as far as practicable.

Table 4. Management actions for noise.

Item	Action	Trigger/Timing	Responsibility
Inductions			
1	As part of site inductions, employees, contractors and visitors to the site are reminded of their responsibility to undertake work activities in an environmentally sensitive manner, including minimising noise while on site, or entering and leaving the site.	Ongoing	Site Manager
Planning Controls			
2	Daily Planning • The use of significant noise generating equipment or activities simultaneously is avoided. • The noisiest activities are scheduled to the least sensitive times of the day.	Where possible	Site Manager
3	Regular review of meteorological data, specifically wind speed and direction, to guide decisions on quarrying activities.	As required, with consideration to the intensity of activities onsite and the prevailing weather conditions	Site Manager
Operational Controls			
4	Equipment and Machinery • Use machinery and equipment with minimal noise output levels. • Ensure all machinery is regularly serviced as per the equipment's maintenance schedule to minimise noise generation. • Where appropriate, all machinery and equipment will be shut off when not in use. • Use flashing lights/broadband alarms instead of tonal reversing alarms on excavators/loaders. • Apply speed restrictions (10 km/hr within site) and a ban on exhaust braking.	Continuous	All employees & contractors
5	Earth bunds • Overburden and topsoil will be used to form perimeter bunds to assist with noise screening. • Earth bunding on the southern boundary, as specified in **Figure 5-1** of **Appendix B** will be constructed to reduce noise impacts to Resident 1.	Prior to quarrying	Site Manager

Item	Action	Trigger/Timing	Responsibility
Inductions			
Complaints Management			
6	Erect on-site signage directing public to make complaints to the relevant person.	Prior to quarrying	Site Manager
7	Maintain a complaints register (refer to **Appendix C**). A Complaints Register will be established for the site to record the following information: • Date, time, location and nature of the exceedance. • Identify the cause (or likely cause) of the exceedance and responsible parties. • Identify the activities that were occurring at the time of the non-compliance. • Determine the activities that were most likely contributing to the non-compliance. • Describe what action has been taken to date. • Describe the proposed measures to address the exceedance. If the complaint is verified as being due to a site source, remedial action will be undertaken within 2 hours. The Shire of Capel will be advised of all complaints as soon as they are received. If a compliant cannot be resolved within the 2 hour response period, it may be necessary to cease operations.	Upon receiving complaint	Site Manager

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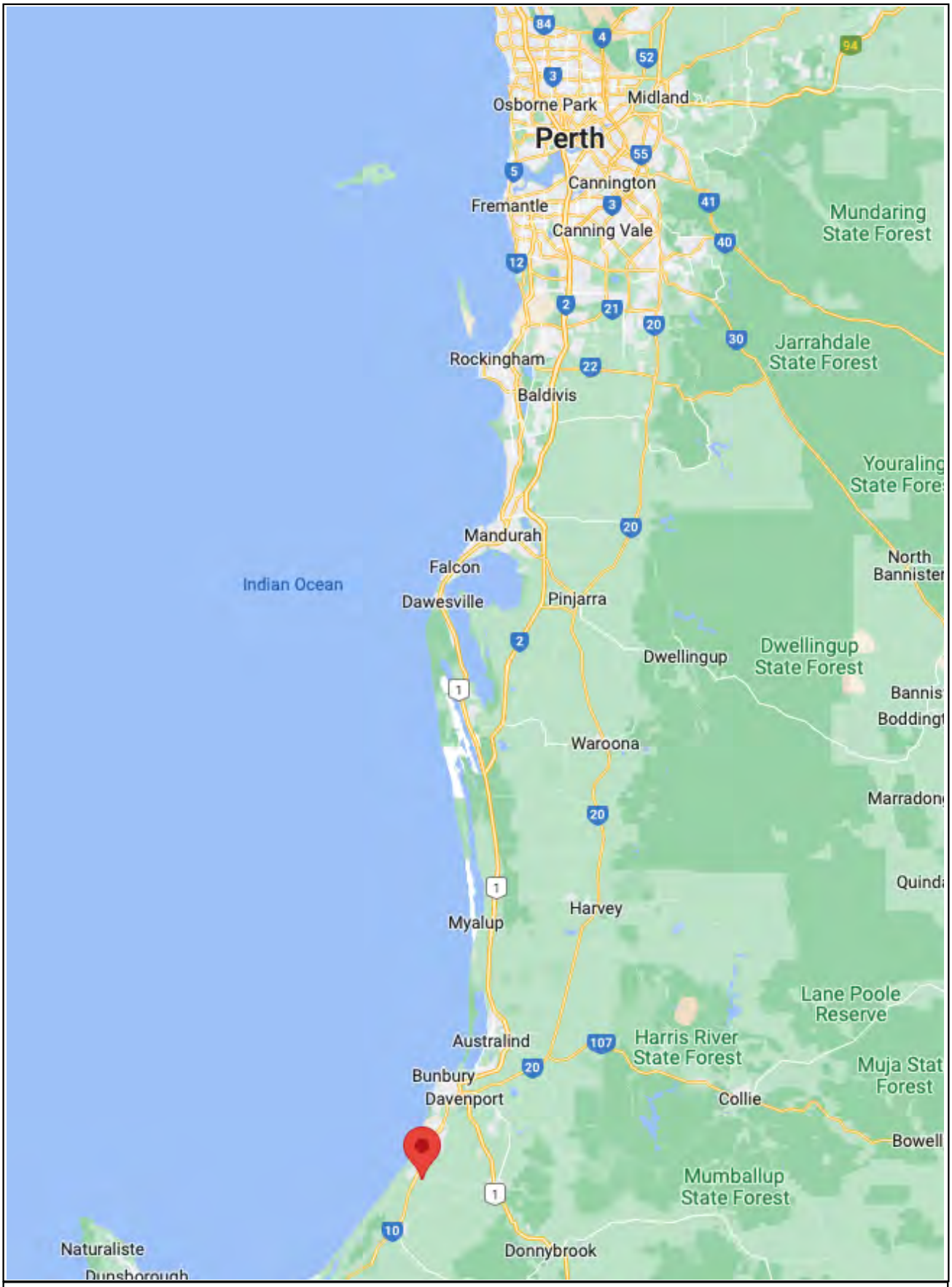
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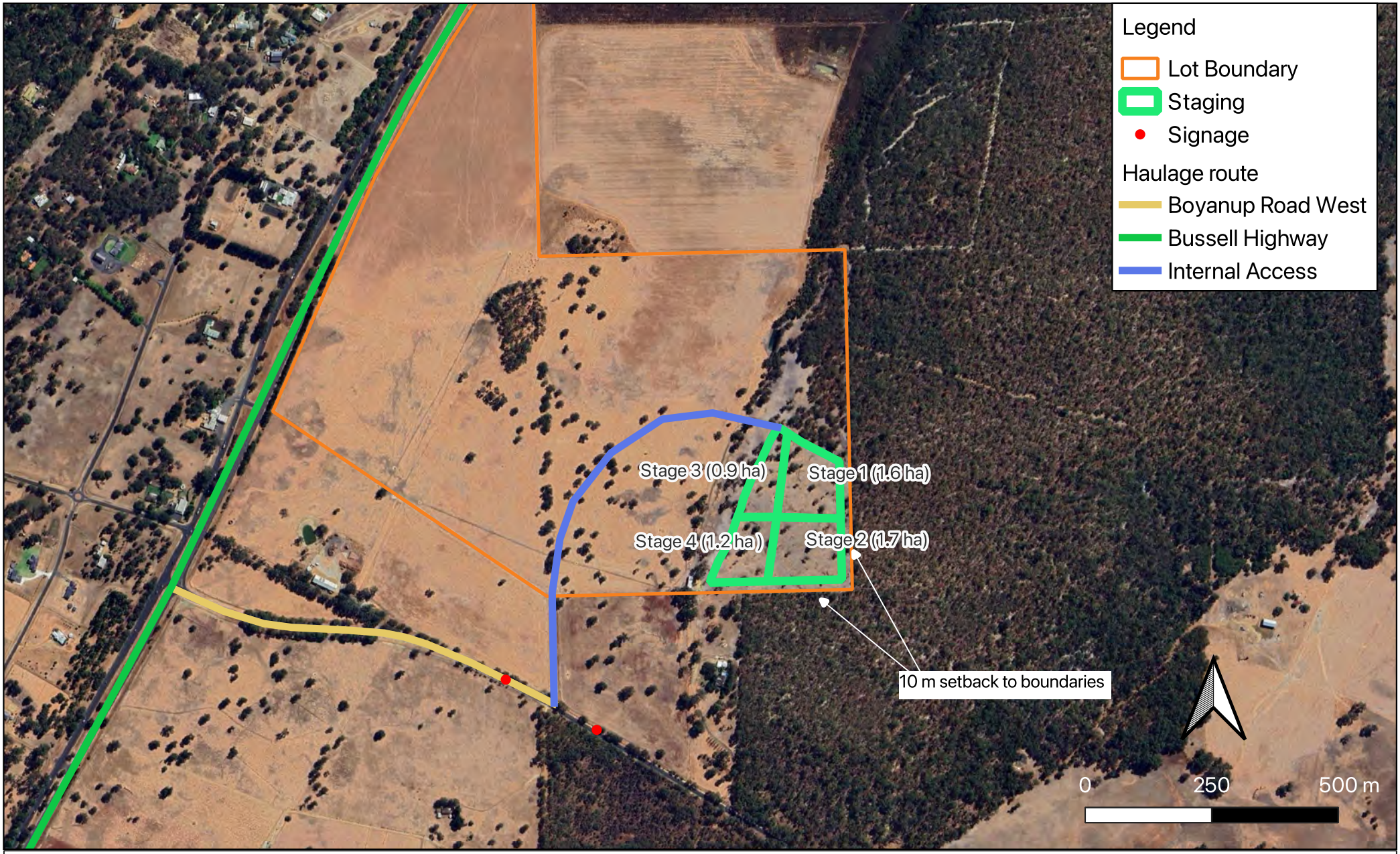
FIGURES



PROJECT	Lot 103 Boyanup Rd W, Stratham	Project Number	Drawing Number	Revision
		2311	Figure 1	A
DRAWING TITLE	Figure 1 – Site Locality	Designed PN	Checked	
		Drawn PN	Approved	
CLIENT	Leeuwin Civil Pty Ltd	Date	26/09/2023	
		Local Authority	Shire of Capel	
		Sheet 1 of 1		

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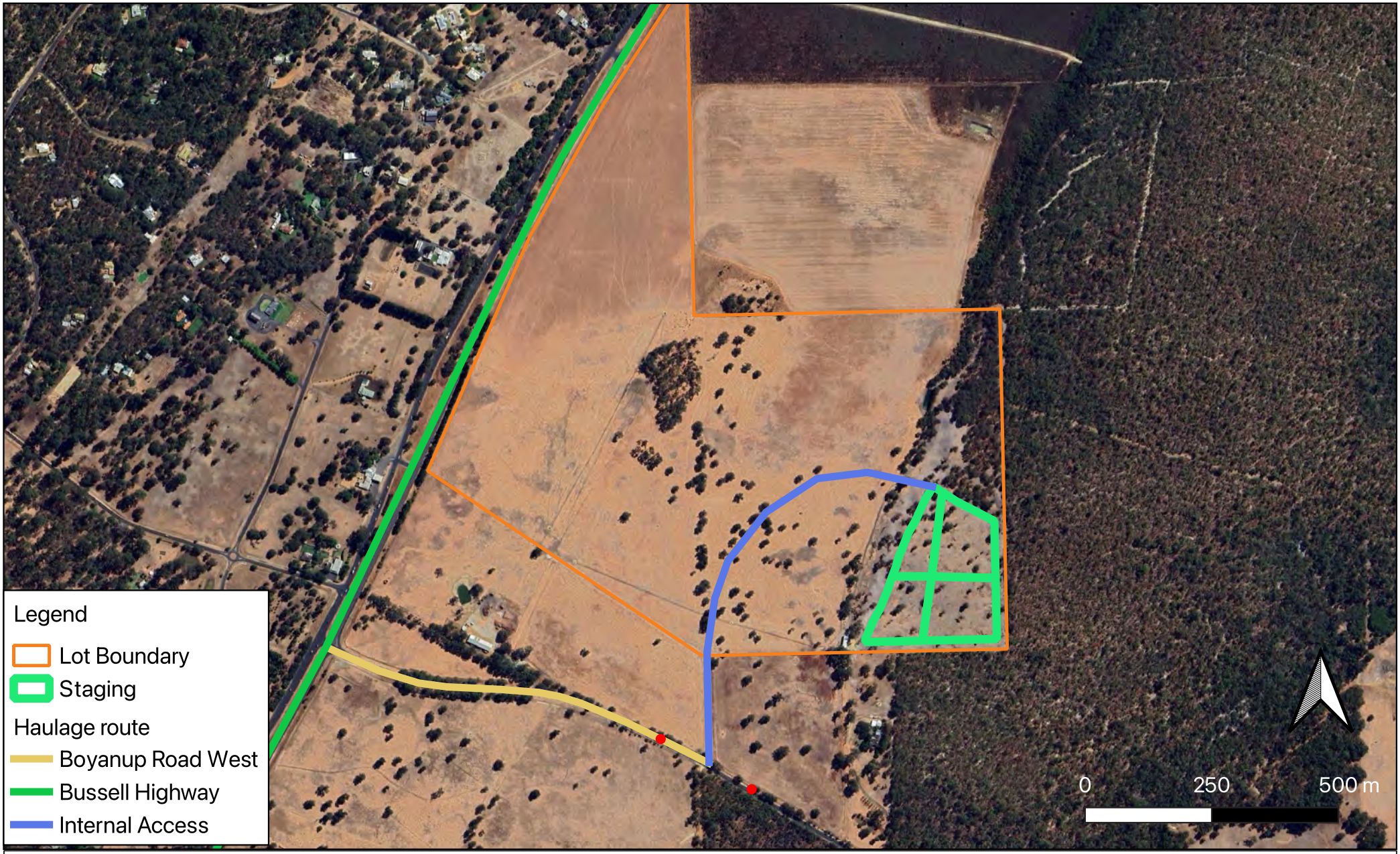


PROJECT	103 Boyanup Road West,Stratham
DRAWING TITLE	Figure 2 - Site Extent
CLIENT	Leeuwin Civil Pty Ltd

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Project Number	2311	Designed	PN
Drawing Number	Figure 2	Drawn	PN
Revision	B	Checked	
Date	21/01/2025	Approved	
Sheet 1 of 1		Local Authority	Shire of Capel

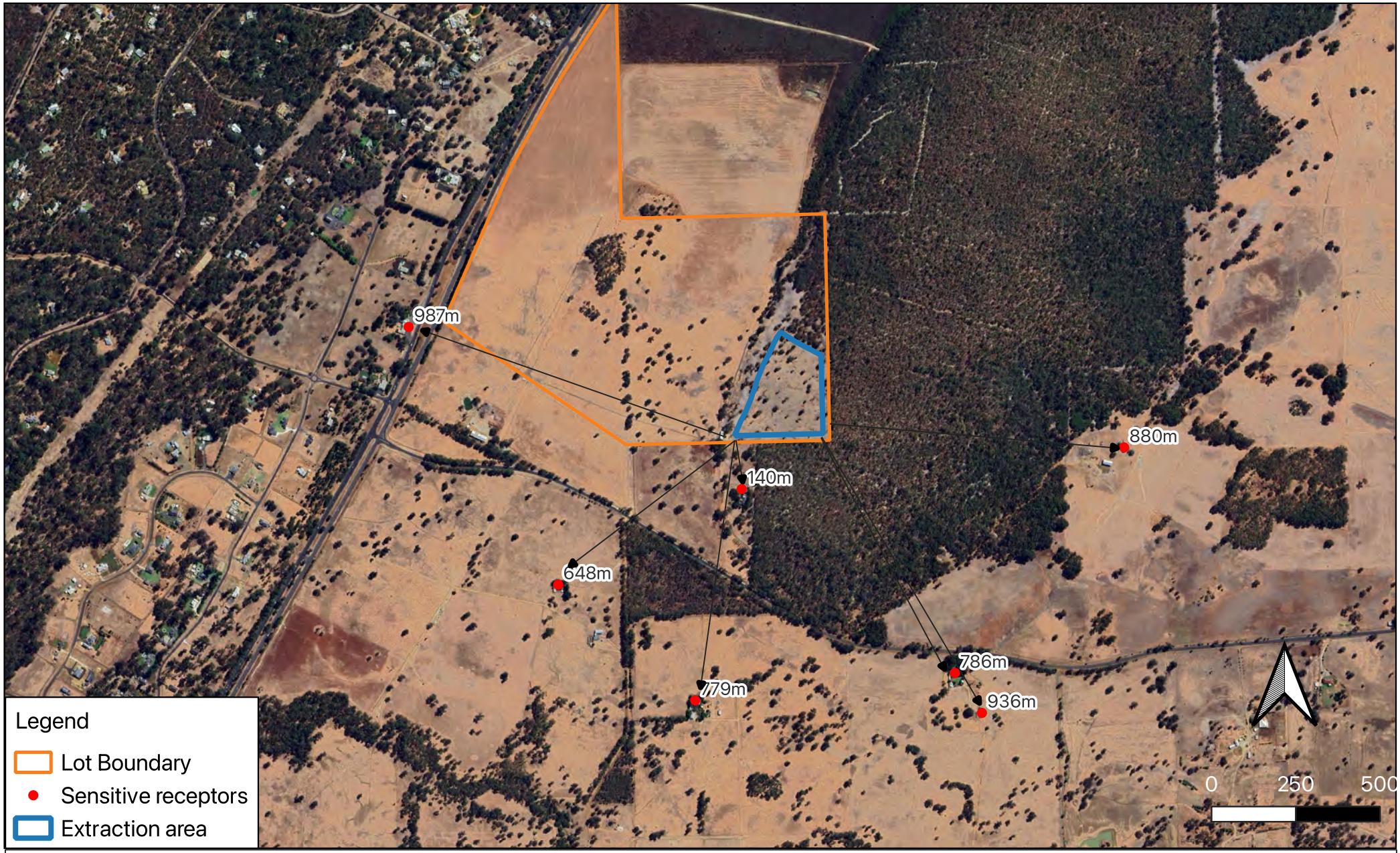


PROJECT	103 Boyanup Road West,Stratham
DRAWING TITLE	Figure 3 - Haulage Route
CLIENT	Leeuwin Civil

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Drawing Number	Figure 3	Drawn	PN
Revision	C	Checked	
Date	21/01/2025	Approved	
Sheet 1 of 1		Local Authority	Shire of Capel



PROJECT 103 Boyanup Road West,Stratham

DRAWING TITLE Figure 4 - Sensitive Receptors

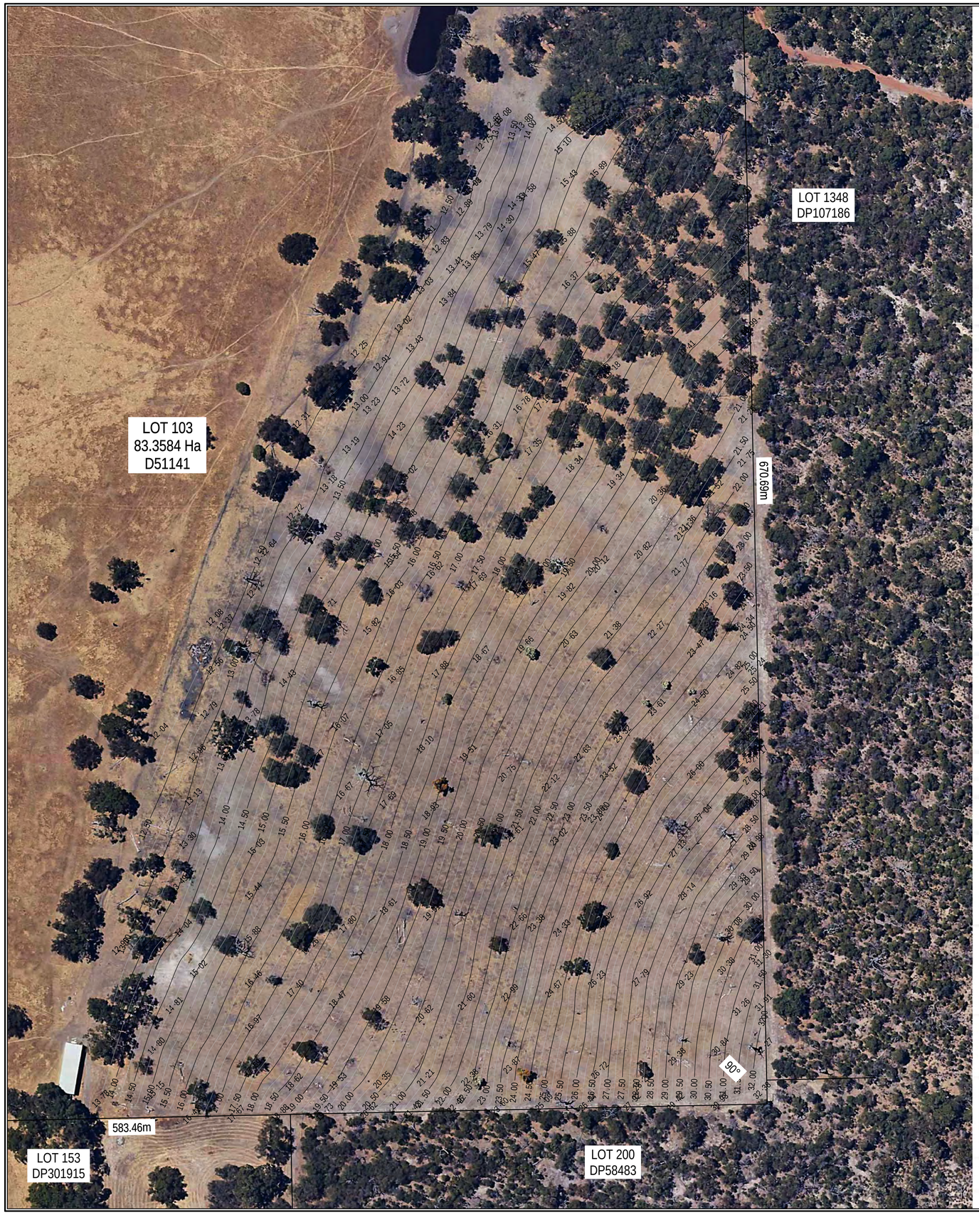
CLIENT Leeuwin Civil Pty Ltd

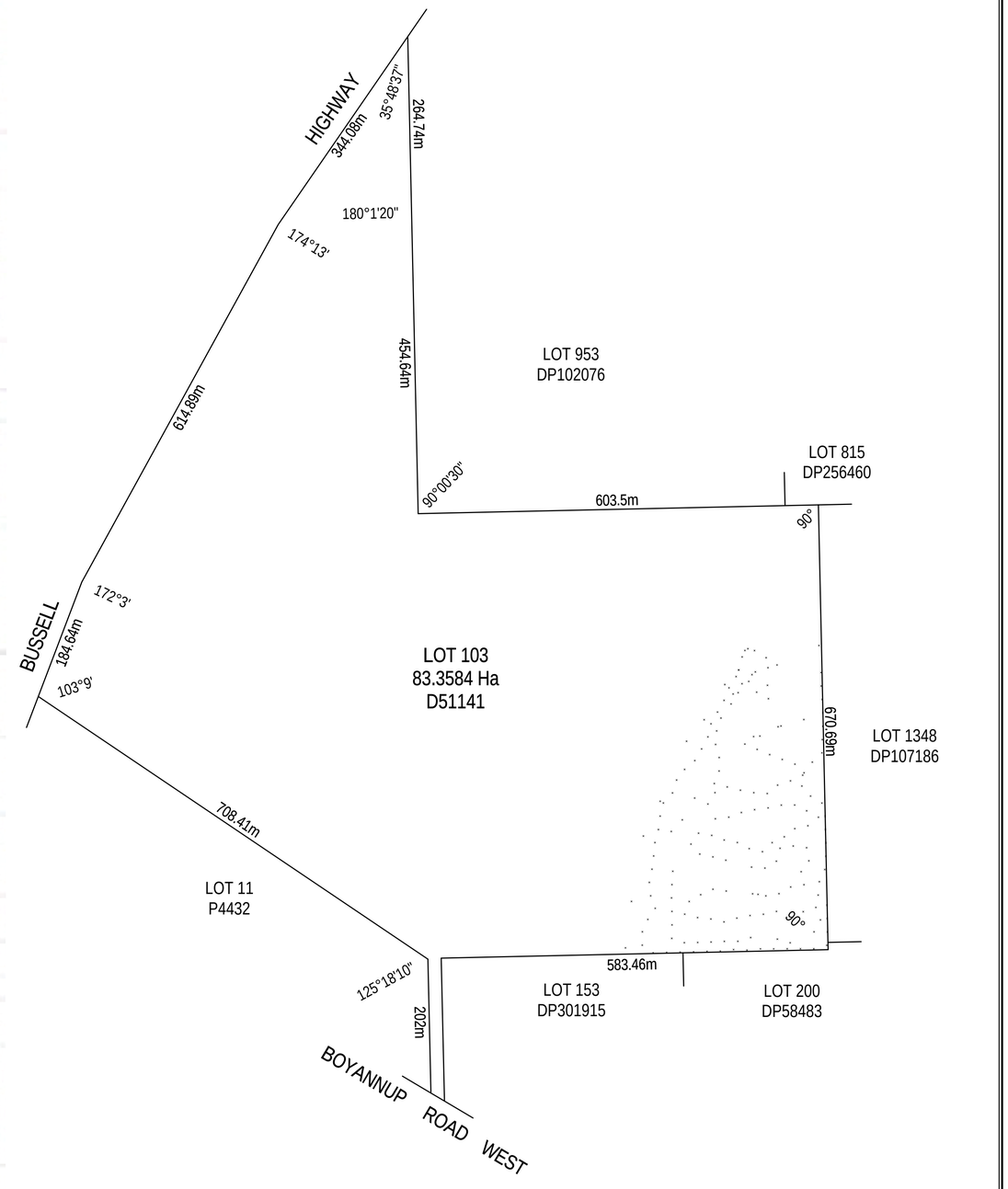
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Project Number	2311	Designed	PN
Drawing Number	Figure 4	Drawn	PN
Revision	C	Checked	
Date	21/01/2025	Approved	
Sheet 1 of 1		Local Authority	Shire of Capel

APPENDIX A – SITE CONTOUR SURVEY





LOCALITY DIAGRAM (NOT TO SCALE)

LEGEND

27.13 EXISTING SURFACE HEIGHT

BOUNDARY

NOTES:
1. Limited boundary marks found. Boundary resurvey recommended if building on or close to boundary.
2. Datum is AHD established from VRS / GPS.
3. Above ground services located by survey. Underground services plotted from plans supplied by the relevant authorities. No liability is accepted for errors in underground service locations. All services to be located on site prior to any work being done.
4. No boundary marks found unless otherwise noted.
5. Contour interval is 0.25m.
6. PDF to be used in conjunction with DWG file supplied. Some point heights may have been omitted for clarity; see DWG file.

Rev.	Description	Drawn	Date	Checked
A	INITIAL ISSUE	TJ	30/8/23	MR

The contents of this plan are date stated within the revision panel. All consultants and persons wishing to utilise this data should satisfy themselves of this plan's currency by contacting Survcon.

The boundaries depicted on this plan were not re-established as part of this survey, therefore this plan does not guarantee their accuracy. Re-establishment of the cadastral boundaries is recommended for any proposed works on or near existing boundaries.

Scale: 1:1000 A1 ORIG ALL DISTANCES IN METRES 0 10 20 30 40 50

Surveyor: MR
Survey date: 18/7/2023
Precal/Cad: N/A

N

FEATURE AND CONTOUR SURVEY
LOT 103 ON DIAGRAM 51141,
BOYANUP ROAD, STRATHAM

Client: **LEEUWIN CIVIL**

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PROJ MNGR.	Michael Riddle	DATUM	MGA50 AHD

JOB NUMBER 9238_SS_A TYPE REVISION

APPENDIX B - NOISE ASSESSMENT

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Environmental Noise Assessment - Sand Extraction Pit

Lot 103 Boyanup Rd West, Stratham

Reference: 23058082-01

Prepared for:
Accendo Australia

Reference: 23058082-01

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This report has been prepared in accordance with the scope of services described in the contract or agreement between Lloyd George Acoustics Pty Ltd and the Client. The report relies upon data, surveys, measurements and results taken at or under the particular times and conditions specified herein. Any findings, conclusions or recommendations only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the Client. Furthermore, the report has been prepared solely for use by the Client, and Lloyd George Acoustics Pty Ltd accepts no responsibility for its use by other parties.

Date	Rev	Description	Author	Verified
22-08-23	draft 1	Issued to Client for review	Daniel Lloyd	
06-09-23	draft 2	Removed sand screen	Daniel Lloyd	
24-10-24	0	Issued to client	Matt Moyle	

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1. INTRODUCTION

Lloyd George Acoustics has been commissioned to assess the noise from a proposed sand extraction pit at Lot 103 Boyanup Rd West, Stratham to provide recommendations on noise management in order to achieve compliance with the relevant criteria.

Figure 1-1, shows the location of the site together and *Figure 1-2* shows the closest noise sensitive receivers in relation to the site.



Figure 1-1: Subject Site Location (Source: Google Earth)

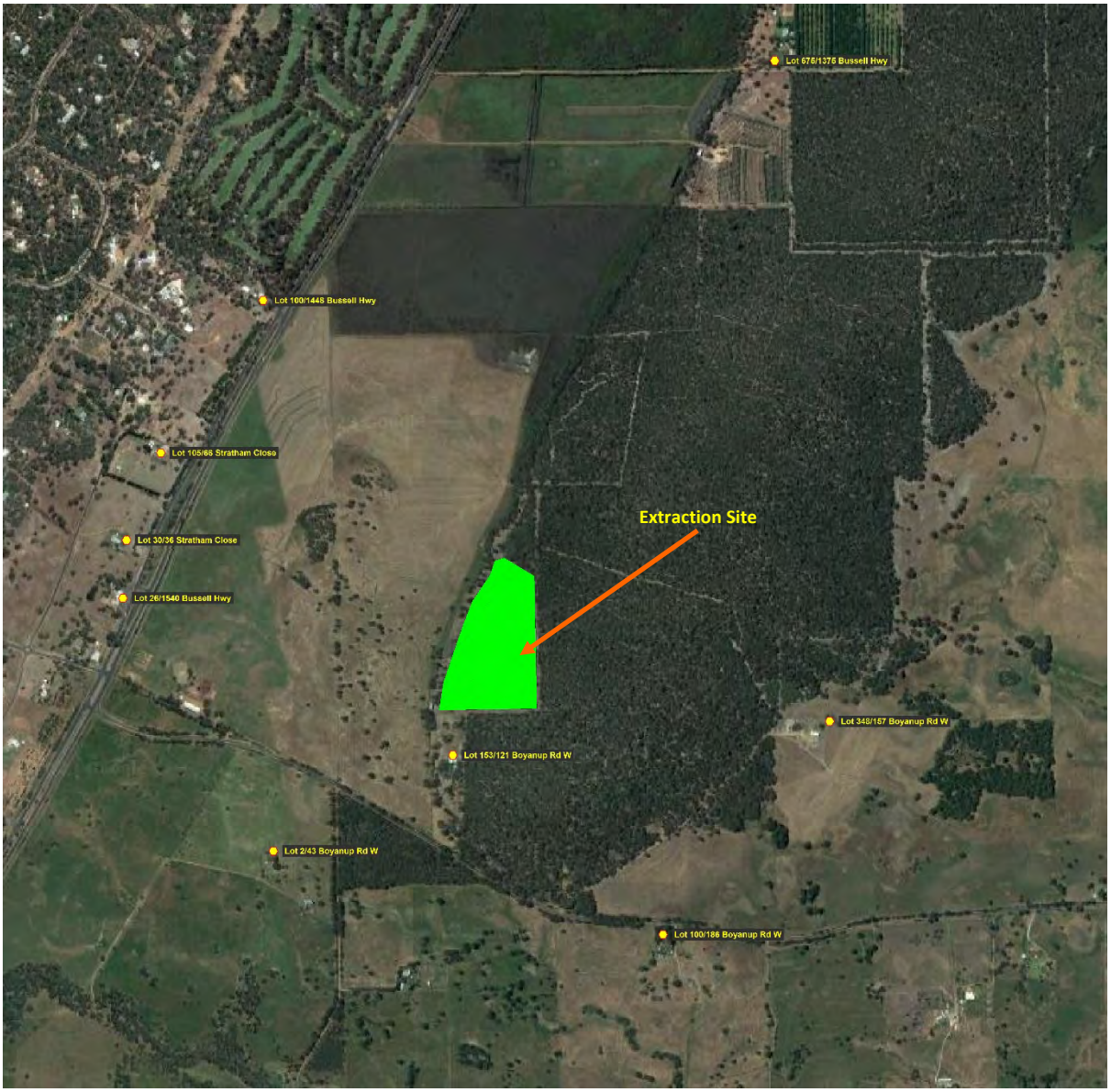


Figure 1-2 Site location and Sensitive Receivers

With regard to noise emissions, consideration is given to the noise from the extraction plant on the site as well as trucks entering the site to cart the material away. The noise is assessed at neighbouring properties and compared to the prescribed standards of the *Environmental Protection (Noise) Regulations 1997*.

Typical operating hours of the quarry will be from 7.00 a.m. to 6.00 p.m. Monday to Friday and 7.00 a.m. to 1.00 p.m. on Saturdays (rehabilitation works only). The site will be closed on Sundays and Public Holidays.

Appendix A contains a description of some of the terminology used throughout this report.

2. CRITERIA

2.1. Construction Works

Construction activities are covered under Regulation 13 of the *Environmental Protection (Noise) Regulations 1997, (the Regulations)* and provide the noise requirements that are to be satisfied. Regulation 13 is considered appropriate for the removal of topsoil, which means that the normally prescribed assigned noise levels under regulation 7 of the *Regulations* are not applicable to this phase of the operations as described below.

Regulation 7 does not apply to noise emitted from a construction site as a result of construction work carried out between 0700 hours and 1900 hours on any day which is not a Sunday or public holiday if the occupier of the premises … shows that –

a) The construction work was carried out in accordance with control of environmental noise practices set out in section 4 of AS 2436-2010 Guide to noise and vibration control on construction, maintenance and demolition sites; and

b) The equipment used on the premises was the quietest reasonably available; and

c) If the occupier was required to prepare a noise management plan … in respect of the construction site –

i. The noise management plan was prepared and given in accordance with the requirement, and approved by the Chief Executive Officer; and

ii. The construction work was carried out in accordance with the noise management plan, excluding any ancillary measure.

2.2. Extraction Works

Environmental noise in Western Australia is governed by the *Environmental Protection Act 1986*, through the *Environmental Protection (Noise) Regulations 1997* (the Regulations).

2.2.1. Regulations 7, 8 & 9

This group of regulations provide the prescribed standard for noise as follows:

"7. Prescribed standard for noise emissions

(1) Noise emitted from any premises or public place when received at other premises –

(a) must not cause, or significantly contribute to, a level of noise which exceeds the assigned level in respect of noise received at premises of that kind; and

(b) must be free of –

(i) tonality; and

(ii) impulsiveness; and

(iii) modulation,

when assessed under regulation 9.

(2) For the purposes of subregulation (1)(a), a noise emission is taken to significantly contribute to a level of noise if the noise emission … exceeds a value which is 5 dB below the assigned level at the point of reception."

Tonality, impulsiveness and modulation are defined in regulation 9 (refer *Appendix A*). Under regulation 9(3), *"Noise is taken to be free of the characteristics of tonality, impulsiveness and modulation if -*

(a) the characteristics cannot be reasonably and practicably removed by techniques other than attenuating the overall level of noise emission; and

(b) the noise emission complies with the standard prescribed under regulation 7(1)(a) after the adjustments in the table [Table 2-1] … are made to the noise emission as measured at the point of reception."

Table 2-1 Adjustments Where Characteristics Cannot Be Removed

Where Noise Emission is Not Music*			Where Noise Emission is Music	
Tonality	**Modulation**	**Impulsiveness**	**No Impulsiveness**	**Impulsiveness**
+ 5 dB	+ 5 dB	+ 10 dB	+ 10 dB	+ 15 dB

* These adjustments are cumulative to a maximum of 15 dB.

The assigned levels (prescribed standards) for all premises are specified in regulation 8(3) and are shown in *Table 2-2*. The L_{A10} assigned level is applicable to noise present for more than 10% of a representative assessment period, generally applicable to "steady-state" noise sources. The L_{A1} is for short-term noise sources present for less than 10% and more than 1% of the time. The L_{Amax} assigned level is applicable for incidental noise sources, present for less than 1% of the time.

Table 2-2 Baseline Assigned Levels

Premises Receiving Noise	Time Of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	L_{Amax}
Noise sensitive premises: highly sensitive area[1]	0700 to 1900 hours Monday to Saturday (Day)	45 + influencing factor	55 + influencing factor	65 + influencing factor
	0900 to 1900 hours Sunday and public holidays (Sunday)	40 + influencing factor	50 + influencing factor	65 + influencing factor
	1900 to 2200 hours all days (Evening)	40 + influencing factor	50 + influencing factor	55 + influencing factor
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays (Night)	35 + influencing factor	45 + influencing factor	55 + influencing factor
Noise sensitive premises: any area other than highly sensitive area	All hours	60	75	80
Commercial Premises	All hours	60	75	80
Industrial and Utility Premises	All hours	65	80	90

1. ***highly sensitive area*** means that area (if any) of noise sensitive premises comprising —
   (a) a building, or a part of a building, on the premises that is used for a noise sensitive purpose; and
   (b) any other part of the premises within 15 metres of that building or that part of the building.

As there are no commercial or industrial premises within 450m of the affected receivers, the influencing factor (IF), in relation to noise received at noise sensitive premises, has been calculated as 0 dB. However, some receivers are within 450m of Bussell Highway and will therefore have a transport factor added. The assigned levels (0700 to 1900 hours Monday to Saturday) are provided in *Table 2-3.*

Table 2-3 Calculated Assigned Levels

Receiver	Influencing Factor	Transportation Factor	Assigned Level dB L_{A10}	Comment
Lot 100/1448 Bussell Hwy	0	6	51	Within 100m of a major road
Lot 105/66 Stratham Close	0	6	51	Within 100m of a major road
Lot 30/36 Stratham Close	0	6	51	Within 100m of a major road
Lot 26/1540 Bussell Hwy	0	6	51	Within 100m of a major road
Lot 153/121 Boyanup Rd W	0	0	45	No adjustment
Lot 2/43 Boyanup Rd W	0	0	45	No adjustment
Lot 100/186 Boyanup Rd W	0	0	45	No adjustment
Lot 348/157 Boyanup Rd W	0	0	45	No adjustment
Lot 675/1375 Bussell Hwy	0	0	45	No adjustment

It must be noted the assigned levels above apply outside the receiving premises and at a point at least 3 metres away from any substantial reflecting surfaces.

The assigned levels are statistical levels and therefore the period over which they are determined is important. The Regulations define the Representative Assessment Period (RAP) as "*a period of time of not less than 15 minutes, and not exceeding 4 hours*, *determined by* an *inspector* or *authorised person to be appropriate for the assessment of a noise emission, having regard to the type and nature of the noise emission"*. An inspector or authorised person is a person appointed under Sections 87 & 88 of the *Environmental Protection Act 1986* and include Local Government Environmental Health Officers and Officers from the Department of Water Environmental Regulation. Acoustic consultants or other environmental consultants are not appointed as an inspector or authorised person. Therefore, whilst this assessment is based on a 4-hour RAP, which is assumed to be appropriate given the nature of the operations, this is to be used for guidance only.

2.2.2. Regulation 3

*"**3. Regulations do not apply to certain noise emissions***

(1) Nothing in these regulations applies to the following noise emissions –

(a) Noise emissions from the propulsion and braking systems of motor vehicles operating on a road;"

noise emissions from —

(b) a reversing alarm fitted to a motor vehicle, mobile plant, or mining or earthmoving equipment;

If -

it is a requirement under another written law that such an alarm be fitted; and

it is not practicable to fit an alarm that complies with the written law under which it is required to be fitted and emits noise that complies with these regulations;

> It is considered that any reversing alarms fitted to the mobile plant and transport trucks are not necessarily exempt under the Regulations, since they are not specifically required under another written law.

The commonly used fixed noise output tonal reversing alarms also known as 'reversing beeper' emit, by their very nature, tonal and modulating noise at high levels. As such, this type of reversing alarm generally cannot comply with the Regulations even at distant receivers. Alternative alarms such as broadband alarms are commonly used to minimise the impact.

3. METHODOLOGY

3.1. Site Measurements

Under the Regulations, there are certain requirements that must be satisfied when undertaking measurements and are defined in Regulations 19, 20, 22 and 23 and Schedule 4. In undertaking the measurements, these have been satisfied, specifically noting the following:

- The noise data logger used was an ARL Type Ngara (S/N: 8780F7).
- All equipment holds current laboratory certificates of calibration that are available upon request. The equipment was also field calibrated before and after and found to be within +/- 0.5 dB.
- The microphone was fitted with a standard wind screen.
- The microphone was at least 1.2 metres above ground level and at least 3.0 metres from reflecting facades (other than the ground plane).

Measurements were recorded from the 19th May to 1st June 2023 within the subject site bounds. The sample period was set to 15-minutes and various percentile data recorded.

3.2. Noise Modelling

Computer modelling has been used to predict the noise emissions from the development to all nearby receivers. The software used was *SoundPLAN 8.2* with the CONCAWE algorithms (ISO 171534-3 improved method) selected, as they include the influence of meteorological conditions. Input data required in the model are listed below and discussed in *Section 3.2.1* to *Section 3.2.4*:

- Meteorological Information;
- Topographical data;
- Ground Absorption; and
- Source sound power levels.

3.2.1. Ground Absorption

The ground absorption has been assumed to be 0.2 (20%) for the extraction area, assuming a mainly sand and 1.0 (100%) elsewhere assuming grass paddocks, noting that 0.0 represents hard reflective surfaces such as concrete and 1.0 represents absorptive surfaces such as grass.

3.2.2. Topographical Data

Topographical data for the quarry area natural ground surface was sourced from *GoogleEarth* in the form of spot heights. The quarry excavation depth is noted to be a maximum 14.

3.2.3. Meteorological Conditions

Meteorological information utilised is provided in *Table 3-1* and is considered to represent worst-case conditions for noise propagation. At wind speeds greater than those shown, sound propagation may be further enhanced, however background noise from the wind itself and from local vegetation is likely to be elevated and dominate the ambient noise levels.

Table 3-1: Modelling Meteorological Conditions

Parameter	Day (7.00am to 7.00pm)[2]
Temperature (°C)	20
Humidity (%)	50
Wind Speed (m/s)	4
Wind Direction[1]	All
Pasquil Stability Factor	E

Notes:

1. The modelling package allows for all wind directions to be modelled simultaneously.
2. The conditions above are as defined in *Guideline: Assessment of Environmental Noise Emissions*; May 2021

Alternatives to the above default conditions can be used where one year of weather data is available and the analysis considers the worst 2% of the day and night for the month of the year in which the worst-case weather conditions prevail (source: *Draft Guideline on Environmental Noise for Prescribed Premises*, May 2016). In most cases, the default conditions occur for more than 2% of the time and therefore must be satisfied.

3.2.4. Topographical Data

Topographical data for the quarry area natural ground surface was sourced from *GoogleEarth* in the form of spot heights.

3.2.5. Source Sound Levels

The source sound power levels used in the modelling are provided in *Table 3-2*.

Table 3-2: Source Sound Power Levels, dB

Description	Octave Band Centre Frequency (Hz)								Overall dB(A)
	31.5	63	125	250	500	1k	2k	4k	
CAT 966 Front End Loader	59	84	86	87	103	106	103	97	**109**
CAT 330 Excavator	50	75	96	103	93	95	95	91	**105**
Anaconda Radial Stacker	106	106	104	105	101	104	102	90	**112**
Water Cart	90	90	97	97	94	92	93	90	**103**
Truck moving at low speed	90	90	97	97	94	92	93	90	**103**

The following is noted in relation to *Table 3-2*:

- Sources are assumed to be 2m above the ground;
- Data obtained from manufacturer's data and on-site measurements;
- Location of noise sources represent worse-case scenario and are indicated within the noise contour plots in *Section 4*.

4. RESULTS

4.1. Noise Measurements

The purpose of undertaking ambient noise measurements is to determine whether the subject noise, particularly annoying characteristics such as tonality, is likely to be audible above background levels. To achieve this, the noise level that is exceeded for 90% of the time (lowest 10%) over a 15 minute period (L_{A90} level) is calculated and then the 90th percentile of that level is used as the background level over the corresponding time period.

While the subject noise may not be audible at all times, due to short-term noise events such as traffic or farm machinery (L_{A10} level), the overall background level can be used to determine if the subject noise is likely to be audible during times when no other noise events are occurring.

The noise level in each 15-minute interval is shown *Figure 4-1.* The overall background noise level for the day period (when extraction works are proposed to be carried out) is calculated as 38.6 dB L_{A90}.

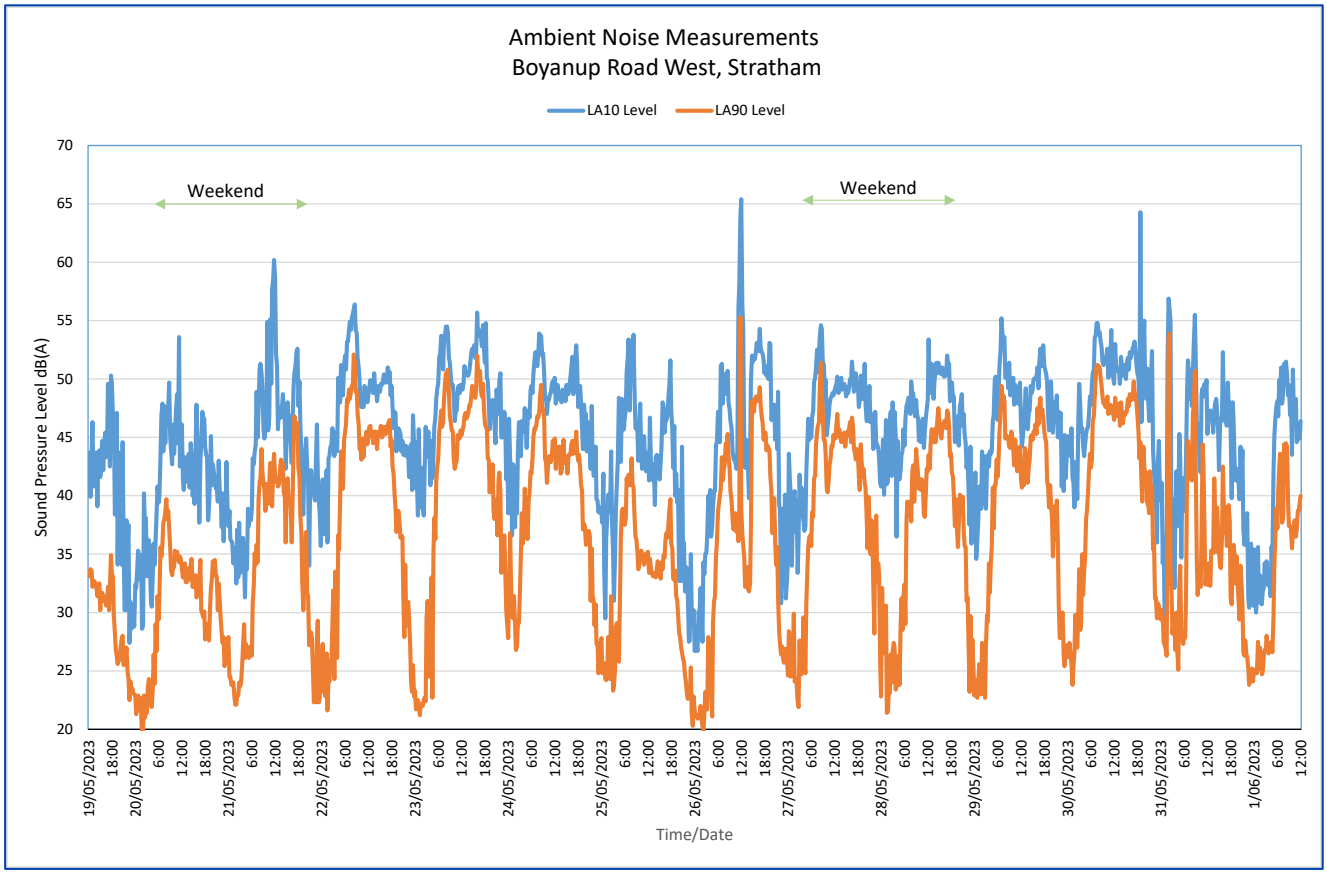


Figure 4-1 Results of Ambient Noise Measurements

Third octave analysis for the average of the day periods is presented in *Figure 4-2*.

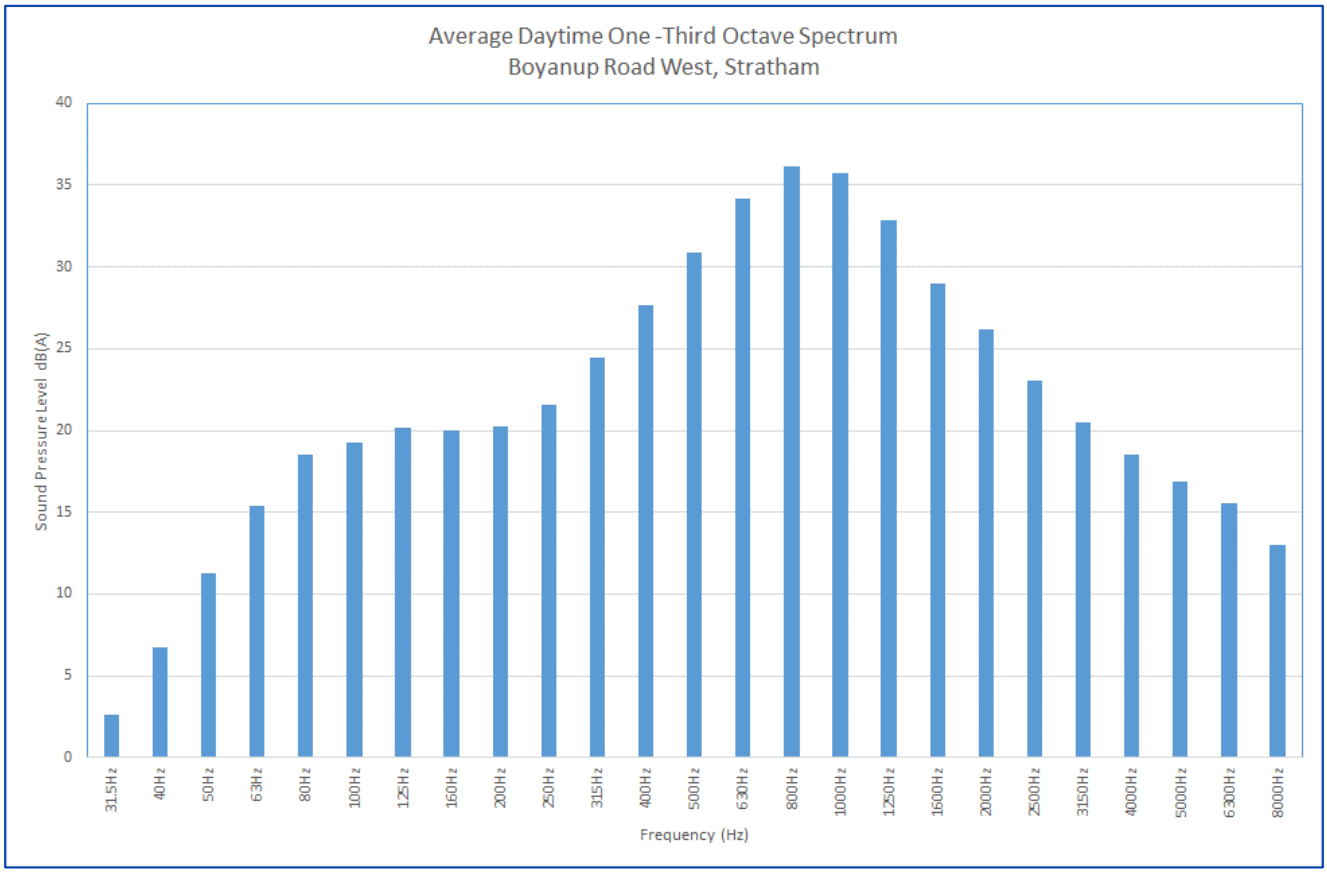


Figure 4-2 Results of Spectral Analysis

The results show that the overall noise levels are not particularly low during the day, most likely as a result of traffic on Bussell Highway. It could therefore be argued that the noise impact from the proposed extraction pit would not be intrusive.

The spectral analysis does show that the levels are quite low between 63Hz and 100Hz, which would be the typical tonal component of earth moving equipment. Therefore a penalty for tonality (see Table 2-1) would need to be included in the assessment.

4.2. Noise Modelling

4.2.1. Construction Phase

The predicted noise levels during the construction phase of removing the topsoil and building the noise bunds on the southern boundary are provided below in *Table 4-1*. To ensure noise levels are kept to a minimum, only the excavator will be used wherever possible.

Table 4-1: Predicted Levels during Construction Phase, dB(A)

Receiver	Predicted Noise Level dB L_{A10}	Assigned Level dB L_{A10}
Lot 100/1448 Bussell Hwy	34	51
Lot 105/66 Stratham Close	36	51
Lot 30/36 Stratham Close	36	51
Lot 26/1540 Bussell Hwy	37	51
Lot 153/121 Boyanup Rd W	57	45
Lot 2/43 Boyanup Rd W	42	45
Lot 100/186 Boyanup Rd W	22	45
Lot 348/157 Boyanup Rd W	24	45
Lot 675/1375 Bussell Hwy	27	45

4.2.2. Extraction Phase

The noise levels were predicted to the closest noise sensitive premises for typical scenarios using the proposed plant. It is assumed the operations will start in the north of the site and work towards the south. The pit floor will be at 14m AHD.

The results, provided in *Table 4-2,* show the noise levels as the operations are in the south, which is considered to be the worst-case in terms of noise impacts to the nearest premises, being Lot 153/121 Boyanup Road West.

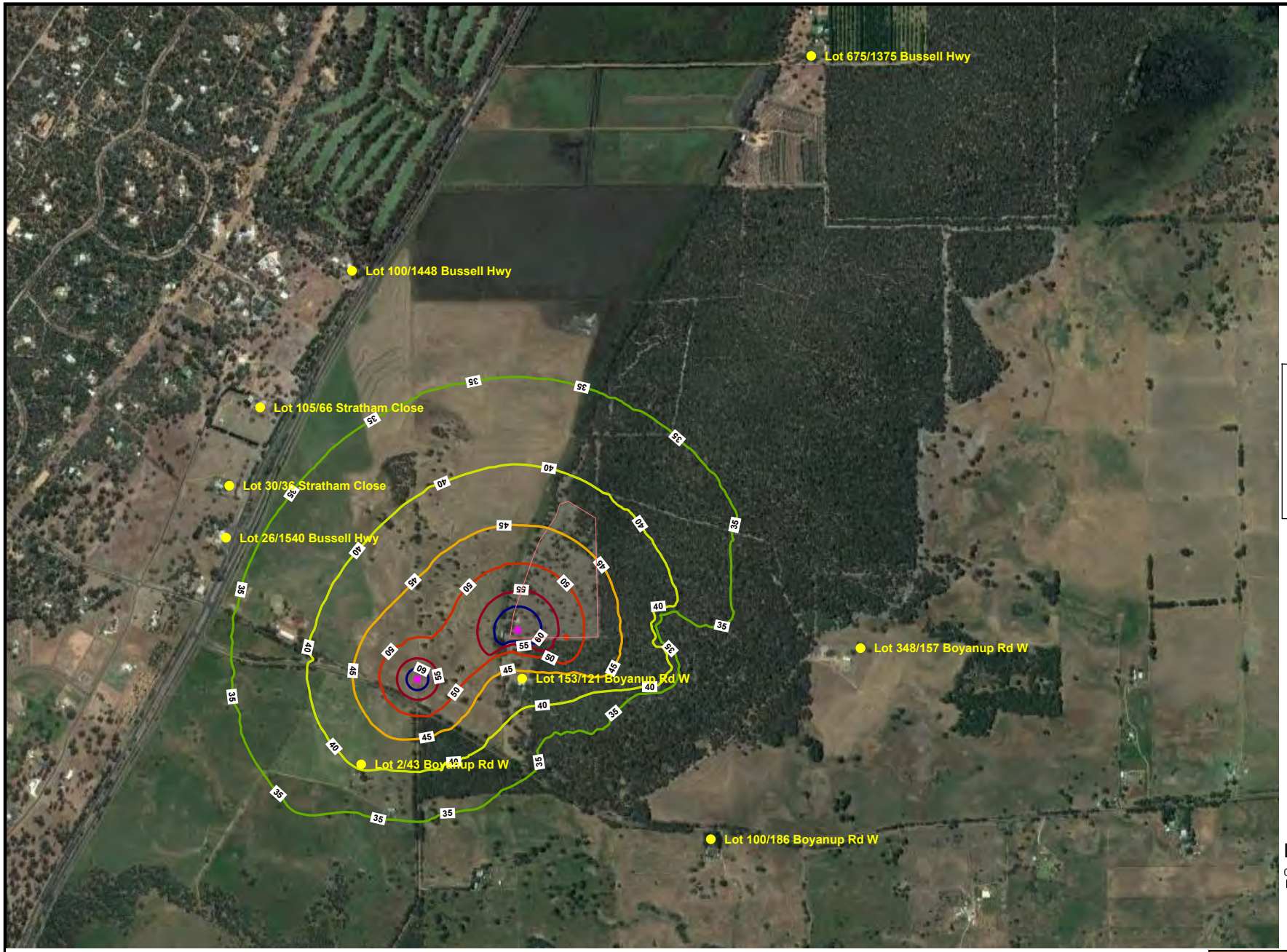
It can be seen that noise mitigation is required in order to achieve compliance with the assigned levels under the Regulations.

A noise contour plot is also provided in *Figure 4-3* showing noise levels at ground floor.

Table 4-2: Predicted Levels during Extraction Phase without Noise Mitigation, dB(A)

Receiver	Predicted Noise Level L_{A10} dB	Adjusted Noise Level L_{A10} dB	Criterion L_{A10} dB	Comment
Lot 100/1448 Bussell Hwy	30	35	51	Complies with Assigned Level
Lot 105/66 Stratham Close	32	37	51	Complies with Assigned Level
Lot 30/36 Stratham Close	33	38	51	Complies with Assigned Level
Lot 26/1540 Bussell Hwy	33	38	51	Complies with Assigned Level
Lot 153/121 Boyanup Rd W	44	49	45	Exceeds Assigned Level
Lot 2/43 Boyanup Rd W	37	42	45	Complies with Assigned Level
Lot 100/186 Boyanup Rd W	11	16	45	Complies with Assigned Level
Lot 348/157 Boyanup Rd W	18	23	45	Complies with Assigned Level
Lot 675/1375 Bussell Hwy	23	28	45	Complies with Assigned Level

Figure 4-3



Signs and symbols

- Bund
- Point receiver
- Point source

N

Length Scale

0 75 150 300 450 600 750 m

Sand Extraction Pit - Lot 103 Boyanup Rd West, Stratham
Predicted L_{A10} Noise Levels Assuming No Mitigation - Wind from All Directions

Lloyd George Acoustics
www.lgacoustics.com.au
(08) 9401 7770

4.3. Truck Noise

Trucks will access the site using the access road as indicated in *Figure 4-4*. It is assumed that the trucks will travel at a speed of 30km/h. Due to the number of trucks entering the site in any four-hour period, the L_{A10} criteria would the applicable.



Figure 4-4: Truck Access Route

The predicted noise levels from trucks accessing the access road is presented in *Table 4-3.* Truck noise is generally not tonal, so adjustments would not be required.

Table 4-3: Predicted Levels from Trucks Accessing the Site without Noise Mitigation, dB(A)

Receiver	Predicted Noise Level L_{A10} dB	Criterion L_{A10} dB	Comment
Lot 100/1448 Bussell Hwy	29	51	Complies with Assigned Level
Lot 105/66 Stratham Close	31	51	Complies with Assigned Level
Lot 30/36 Stratham Close	32	51	Complies with Assigned Level
Lot 26/1540 Bussell Hwy	33	51	Complies with Assigned Level
Lot 153/121 Boyanup Rd W	42	45	Complies with Assigned Level
Lot 2/43 Boyanup Rd W	39	45	Complies with Assigned Level
Lot 100/186 Boyanup Rd W	24	45	Complies with Assigned Level
Lot 348/157 Boyanup Rd W	20	45	Complies with Assigned Level
Lot 675/1375 Bussell Hwy	21	45	Complies with Assigned Level

The predicted noise levels from a truck pass-by to the nearest noise sensitive receiver, being Lot 153/121 Boyanup Road West, is shown in *Figure 4-5.*

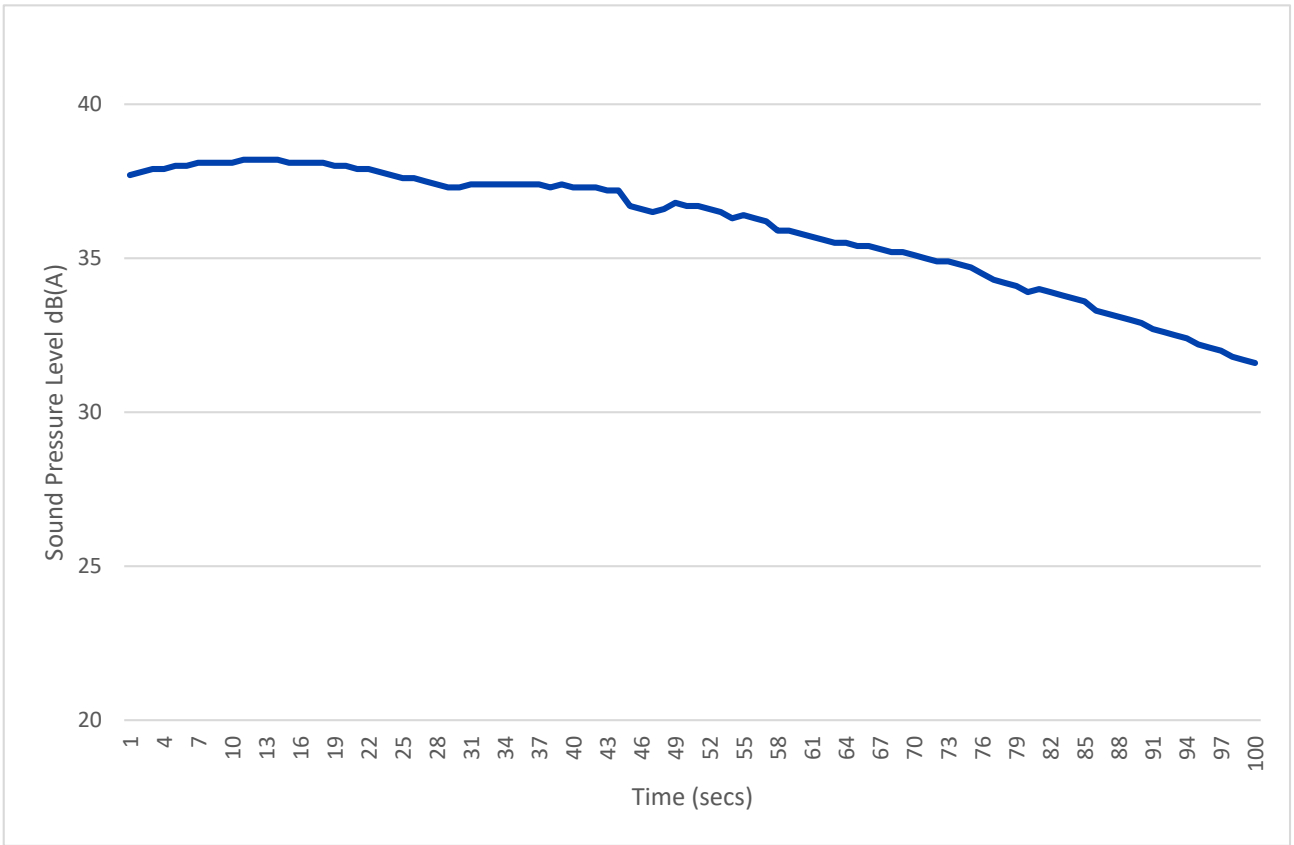


Figure 4-5: Predicted Noise Levels from Truck Pass-by at Lot 153/121 Boyanup Road West

5. ASSESSMENT & RECOMMENDATIONS

5.1. Construction Works

It is acknowledged that construction works are subject to noise exemptions provided certain conditions are met as detailed in Section 2.1. Noise levels from this activity are a worst case 57 dB L_{A10} at 121 Boyanup Road West. As such, during this phase of works a noise management plan should be established and maintained by the construction manager. This plan should outline the following items as minimum:

- A description of works and practices that are aimed at reducing noise impacts;
- Intent to establish noise bunds early in the construction process;
- Proposed hours of works;
- Scheduling of noisiest activities during the day; and
- An outline of equipment to be used and demonstration of procuring plant which is as quiet as reasonably practicable.

5.2. Extraction Works

Noise from mechanical plant, such as front-end loaders, generally exhibit tonal noise characteristics and therefore a penalty of +5 dB would apply to the predicted noise levels as detailed in *Table 2-1.*

From the background noise measurements presented in *Section 4.1*, it can be seen that the lowest background level is around 38 dB L_{A90}, so the highest predicted noise level of 39 dB L_{A10}, is not expected to be intrusive.

From the results (*Table 4-1*), it can be seen that with the addition of a +5 dB penalty, noise levels resulting from the extraction works, during the hours 7.00 a.m. to 7.00 p.m. Monday to Saturday, are predicted to exceed the assigned level of 45 dB L_{A10} at Lot 153/121 Boyanup Road West. The noise to all other noise sensitive premises is predicted to comply.

To address the noise, it is recommended to construct a 4.0m high earth bund on the southern boundary as detailed in *Figure 5-1*.

The noise from trucks entering the site is shown to comply with the assigned level of 45 dB L_{A10} provided the path to enter the pit follows that in *Figure 4-4*.

The predicted L_{A10} noise levels for three typical scenarios (operations in north, centre and south) are presented in *Table 5-1* and shown graphically in *Figures 5-2 to 5-4.* The predicted noise levels assume that a front end loader and excavator are working on the pit floor. The predicted noise from trucks entering and leaving the site is also incorporated into the overall results.

Table 5-1: Predicted & Adjusted (+5dB) Noise Levels with Proposed Mitigation, dB(A)

Receiver	Scenario 1 Predicted & Adjusted Noise Level L_{A10} dB	Scenario 2 Predicted & Adjusted Noise Level L_{A10} dB	Scenario 3 Predicted & Adjusted Noise Level L_{A10} dB	Comment
Lot 100/1448 Bussell Hwy	38	38	36	Complies with Assigned Level
Lot 105/66 Stratham Close	39	39	38	Complies with Assigned Level
Lot 30/36 Stratham Close	39	39	39	Complies with Assigned Level
Lot 26/1540 Bussell Hwy	39	40	39	Complies with Assigned Level
Lot 153/121 Boyanup Rd W	44	44	45	Complies with Assigned Level
Lot 2/43 Boyanup Rd W	40	41	34	Complies with Assigned Level
Lot 100/186 Boyanup Rd W	16	19	16	Complies with Assigned Level
Lot 348/157 Boyanup Rd W	24	24	24	Complies with Assigned Level
Lot 675/1375 Bussell Hwy	31	31	29	Complies with Assigned Level

Figure 5-1



Signs and symbols

Bund

N

Length Scale

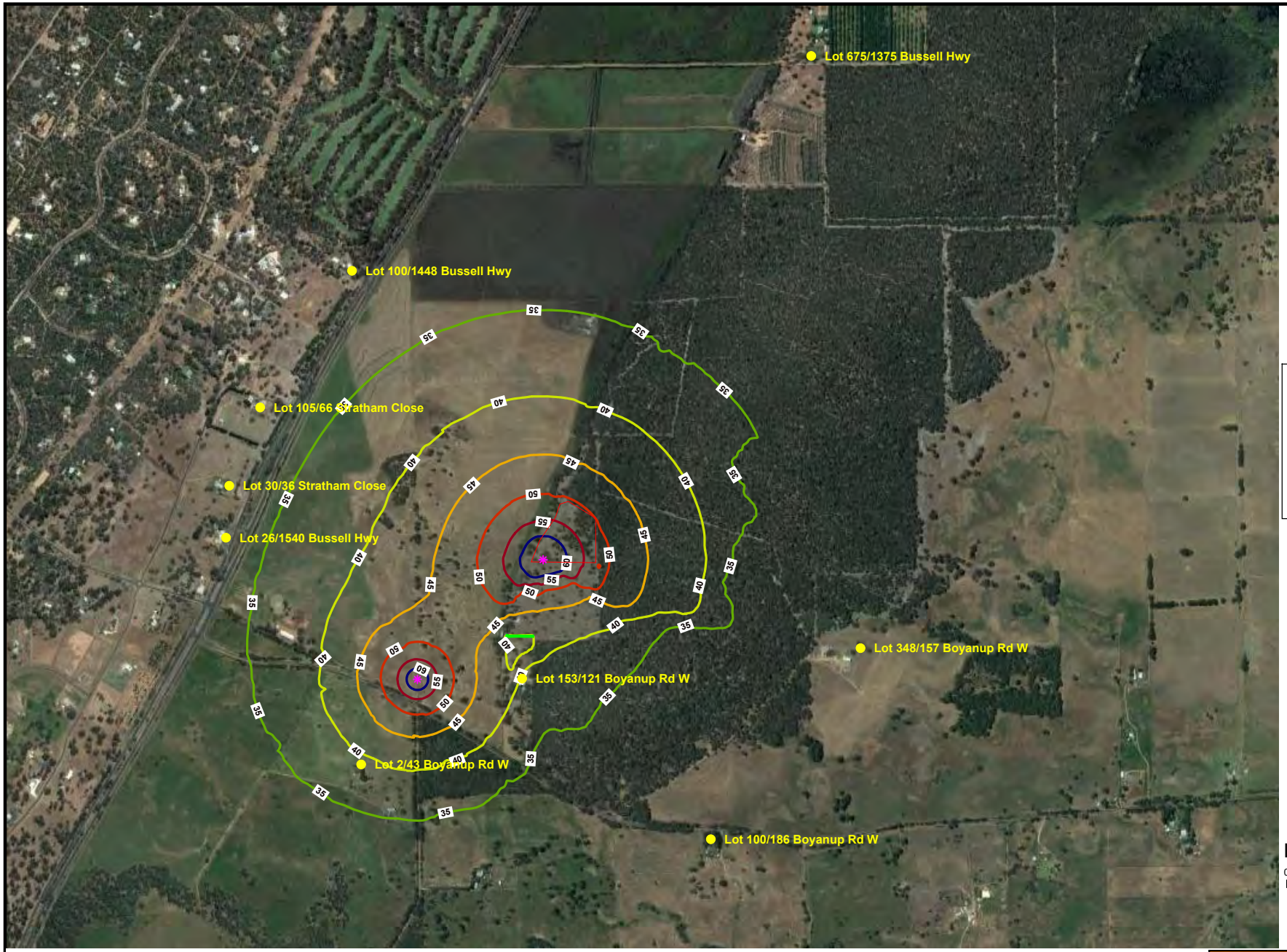
0 20 40 80 120 160 m

Sand Extraction Pit - Lot 103 Boyanup Rd West, Stratham
Proposed Noise Bund Location and Height

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Figure 5-2



Signs and symbols

- Bund
- Point receiver
- Point source

N

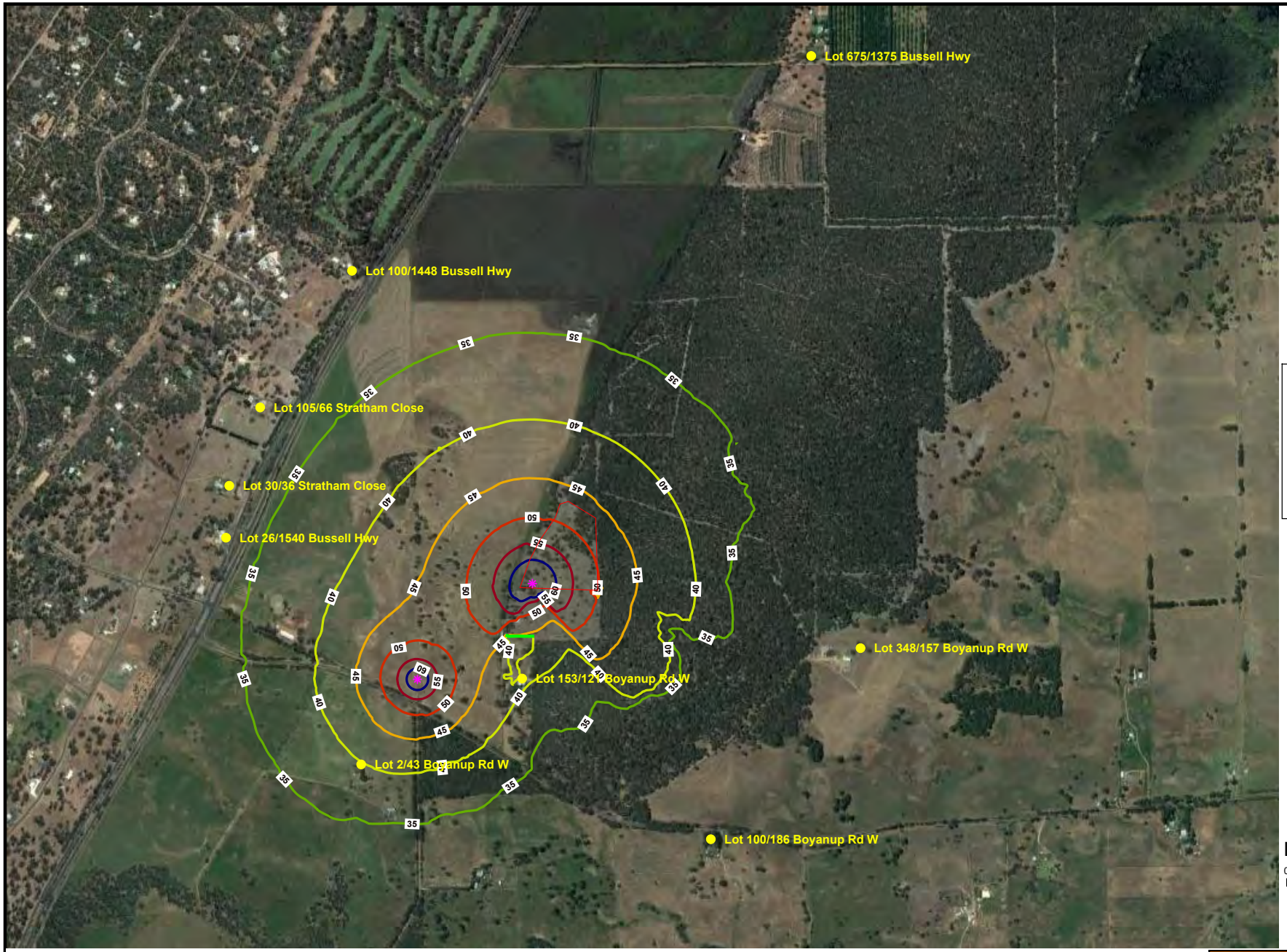
Length Scale

0 75 150 300 450 600 750 m

Sand Extraction Pit - Lot 103 Boyanup Rd West, Stratham
Predicted L_{A10} Noise Levels during Scenario 1 of Extraction Operations - Wind from All Directions

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Figure 5-3



Signs and symbols

- Bund
- Point receiver
- Point source

N

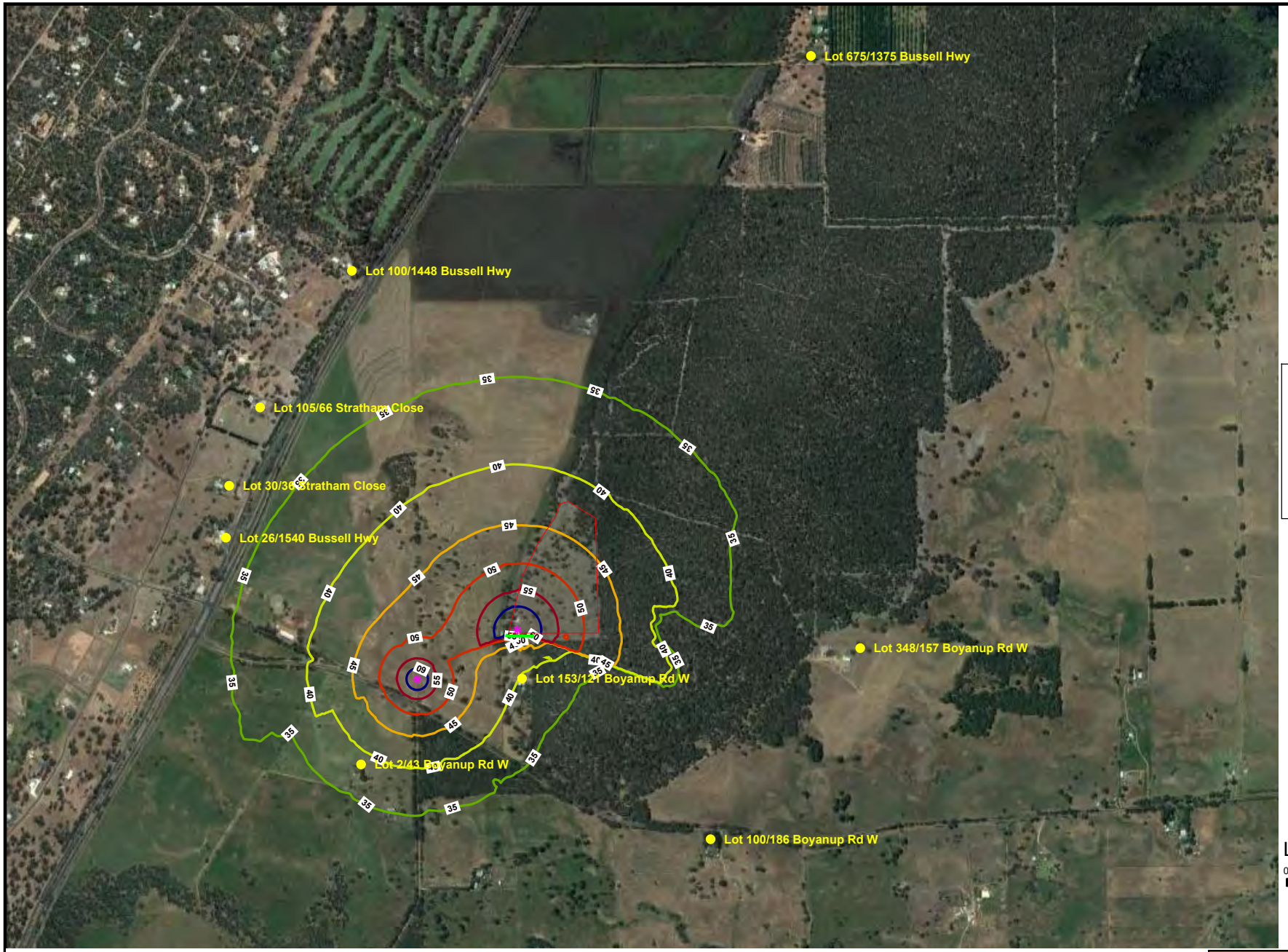
Length Scale

0 75 150 300 450 600 750 m

Sand Extraction Pit - Lot 103 Boyanup Rd West, Stratham
Predicted L_{A10} Noise Levels during Scenario 2 of Extraction Operations - Wind from All Directions

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Figure 5-4



Sand Extraction Pit - Lot 103 Boyanup Rd West, Stratham
Predicted L_{A10} Noise Levels during Scenario 3 of Extraction Operations - Wind from All Directions

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6. CONCLUSION

The noise emissions resulting from the proposed sand extraction operations at Lot 103 Boyanup Rd West, Stratham, Western Australia, have been assessed by means of predictive noise modelling and the results compared against the assigned levels within the *Environmental Protection (Noise) Regulations 1997*.

To address noise levels of construction works, a noise management plan should be prepared and maintained by the construction manager. This plan should outline the following items as minimum:

- A description of works and practices that are aimed at reducing noise impacts;
- Intent to establish noise bunds early in the construction process;
- Proposed hours of works;
- Scheduling of noisiest activities during the day; and
- An outline of equipment to be used and demonstration of procuring plant which is as quiet as reasonably practicable.

Based on the assumptions made, it is concluded that compliance with the applicable assigned noise level can be achieved at all noise sensitive receivers between 7.00 a.m. and 7.00 p.m. Monday to Saturday, providing the an earth bund is constructed on the southern boundary of the extraction area.

In addition, the following best practices should be implemented to further minimise noise impacts:

- Selection of the plant should be the quietest reasonably practicable;
- If reversing alarms are deemed necessary, all plant should to be fitted with broadband reversing alarms; and
- The road required for loading of trucks should be designed such that the trucks are not required to reverse, this ensures truck reversing alarms are minimised.

Appendix A – Terminology

The following is an explanation of the terminology used throughout this report:

- **Decibel (dB)**

The decibel is the unit that describes the sound pressure levels of a noise source. It is a logarithmic scale referenced to the threshold of hearing.

- **A-Weighting**

An A-weighted noise level has been filtered in such a way as to represent the way in which the human ear perceives sound. This weighting reflects the fact that the human ear is not as sensitive to lower frequencies as it is to higher frequencies. An A-weighted sound level is described as L_A, dB.

- **Sound Power Level (L_w)**

Under normal conditions, a given sound source will radiate the same amount of energy, irrespective of its surroundings, being the sound power level. This is similar to a 1kW electric heater always radiating 1kW of heat. The sound power level of a noise source cannot be directly measured using a sound level meter but is calculated based on measured sound pressure level at known distances. Noise modelling incorporates source sound power levels as part of the input data.

- **Sound Pressure Level (L_p)**

The sound pressure level of a noise source is dependent upon its surroundings, being influenced by distance, ground absorption, topography, meteorological conditions etc. and is what the human ear actually hears. Using the electric heater analogy above, the heat will vary depending upon where the heater is located, just as the sound pressure level will vary depending on the surroundings. Noise modelling predicts the sound pressure level from the sound power levels taking into account ground absorption, barrier effects, distance etc.

- **L_{ASlow}**

This is the noise level in decibels, obtained using the A-frequency weighting and the S (slow) time weighting. Unless assessing modulation, all measurements use the slow time weighting characteristic.

- **L_{AFast}**

This is the noise level in decibels, obtained using the A-frequency weighting and the F (fast) time weighting. This is used when assessing the presence of modulation.

- **L_{APeak}**

This is the greatest absolute instantaneous sound pressure level in decibels using the A-frequency weighting.

- **L_{Amax}**

An L_{Amax} level is the maximum A-weighted noise level during a particular measurement.

- **L_{A1}**

The L_{A1} level is the A-weighted noise level exceeded for 1 percent of the measurement period and is considered to represent the average of the maximum noise levels measured.

- **L_{A10}**

The L_{A10} level is the A-weighted noise level exceeded for 10 percent of the measurement period and is considered to represent the "intrusive" noise level.

- **L_{A90}**

The L_{A90} level is the A-weighted noise level exceeded for 90 percent of the measurement period and is considered to represent the "background" noise level.

- **L_{Aeq}**

The equivalent steady state A-weighted sound level ("equal energy") in decibels which, in a specified time period, contains the same acoustic energy as the time-varying level during the same period. It is considered to represent the "average" noise level.

- **One-Third-Octave Band**

Means a band of frequencies spanning one-third of an octave and having a centre frequency between 25 Hz and 20000 Hz inclusive.

- **Representative Assessment Period**

Means a period of time not less than 15 minutes, and not exceeding four hours, determined by an inspector or authorised person to be appropriate for the assessment of a noise emission, having regard to the type and nature of the noise emission.

- **L_{Amax} assigned level**

Means an assigned level, which, measured as a L_{ASlow} value, is not to be exceeded at any time.

- **L_{A1} assigned level**

Means an assigned level, which, measured as a L_{ASlow} value, is not to be exceeded for more than 1 percent of the representative assessment period.

- **L_{A10} assigned level**

Means an assigned level, which, measured as a L_{ASlow} value, is not to be exceeded for more than 10 percent of the representative assessment period.

- **Tonal Noise**

A tonal noise source can be described as a source that has a distinctive noise emission in one or more frequencies. An example would be whining or droning. The quantitative definition of tonality is:

– the presence in the noise emission of tonal characteristics where the difference between -

(a) the A-weighted sound pressure level in any one-third octave band; and

(b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as $L_{A\ Slow}$ levels.

This is relatively common in most noise sources.

- **Modulating Noise**

A modulating source is regular, cyclic and audible and is present for at least 10% of the measurement period. The quantitative definition of modulation is:

– a variation in the emission of noise that —

(a) is more than 3 dB $L_{A\ Fast}$ or is more than 3 dB $L_{A\ Fast}$ in any one-third octave band; and

(b) is present for at least 10% of the representative assessment period; and

(c) is regular, cyclic and audible.

- **Impulsive Noise**

An impulsive noise source has a short-term banging, clunking or explosive sound. The quantitative definition of impulsiveness means:

– a variation in the emission of a noise where the difference between L_{Apeak} and L_{Amax} is more than 15 dB when determined for a single representative event.

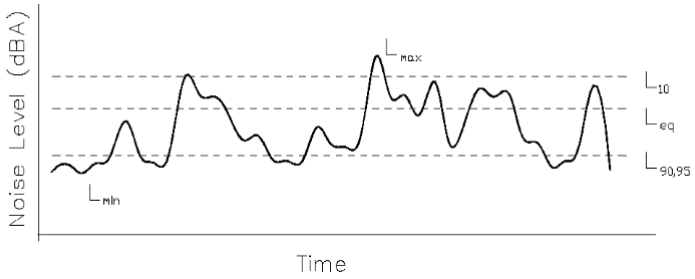
- **Major Road**

Is a road with an estimated average daily traffic count of more than 15,000 vehicles.

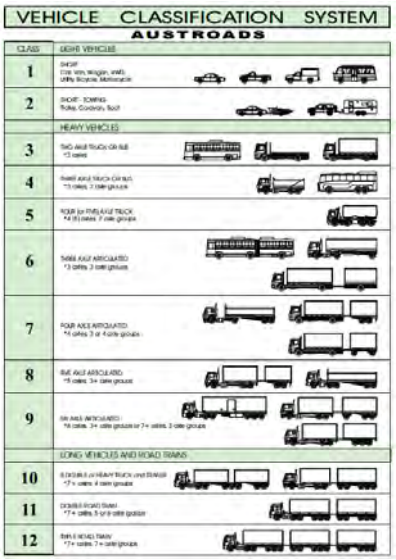
- **Secondary / Minor Road**

Is a road with an estimated average daily traffic count of between 6,000 and 15,000 vehicles.

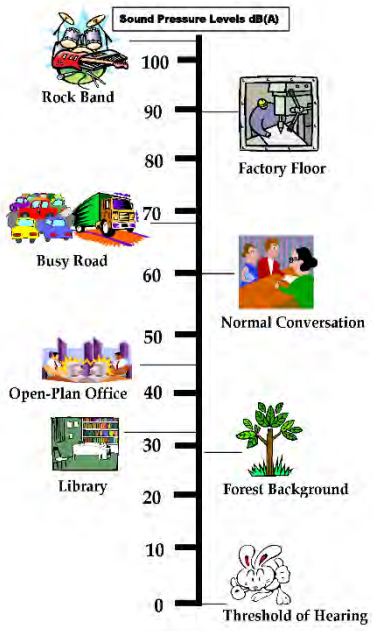
- **Chart of Noise Level Descriptors**



- **Austroads Vehicle Class**



- **Typical Noise Levels**



APPENDIX C - COMPLAINTS REGISTER

Complaints Register

Ref. No.	Date	Name & Address of Complainant	Time/Date of Complaint	Detail of Complaint	Summary of Actions Taken	Shire Notified	Person Responsible

APPENDIX H – DUST MANAGMENT PLAN

DUST MANAGEMENT PLAN

LOT 103 BOYANUP ROAD WEST, STRATHAM

January 2025

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Document Control

Version	Date	Author	Reviewer
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V3	21/01/2025	PN	KMT
Filename	2311_Lot 103 Boyanup Rd W DMP_V3		

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This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

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FIGURES

Figure 1. Regional Location of the Subject Site

Figure 2. Extent of the Subject Site

Figure 3. Sensitive Receptors

Figure 4. Transport route

1 INTRODUCTION

1.1 Background

Leeuwin Civil Pty Ltd (the applicant) is proposing to extract sand from a 5.4 ha area within Lot 103 Boyanup Road West, Stratham (herein referred to as the subject site) (refer to **Figure 1** and **Figure 2**).

This application is made for a five-year period however, the exact life of the project is difficult to estimate as it will be dependent on supply and demand trends.

The available volume of sand (*insitu* volume of approximately 200,000 m^3) is to be extracted, commencing to the north of the subject site and moving in a southerly direction (refer to **Figure 2**).

The slope of the final contours of the quarry will reflect the current contours of the site and will slope from approximately 30 m Australian Height Datum (AHD) in the south western corner down to 15.0 m AHD in the centre of the extraction area sloping to join the current surface level of the adjoining land to the west at approximately 1 m AHD.

Slopes of the batters at the end of excavation will be retained at 1:4 vertical to horizontal.

1.2 Purpose and Scope

This Dust Management Plan (DMP) has been prepared to fulfil the relevant requirements provided within the Shire of Capel's *Local Planning Scheme No. 8* and *Local Planning Policy No. 6.2 Extractive Industries*. It is intended to provide the Shire of Capel, the public and relevant government agencies with an understanding of the proposal and the environmental strategies and commitments proposed to address dust emissions associated with the proposed land use. This document has been prepared to support and should be read in conjunction with, the *Extractive Industry Operations Plan* prepared by Accendo Australia (2024) for sand extraction within the subject site.

Recognised industry standard practices for dust control are well-established within Western Australia. The utilisation of these standard practices is proposed at the subject site to suppress dust and reduce potential impacts associated with dust emissions.

Management of these activities are an effective means to prevent adverse effects of dust. The purpose of this DMP is to review the risks and control measures to appropriately manage dust and mitigate its impact.

The scope of the DMP is to cover the following:

- Legislative and regulatory compliance;
- Existing environment;
- Risk assessment of potential dust sources and air quality impacts;
- Mitigation and measurement measures; and
- Roles and responsibilities in relation to dust management.

2 EXISTING ENVIRONMENT

2.1 Land Use

The subject site is zoned "Rural" under the Shire of Capel's *Local Planning Scheme No. 8*. The subject site is located within the "Special Control Area – Basic raw materials" under the *Local Planning Scheme No. 8.* The proposed extractive industry is a permitted land use within this zone subject to development approval from the Shire of Capel.

Land use abutting the boundaries of the subject site is Rural based to the north, east and south. Properties to the west of the subject site on the other side of Bussell Highway are zoned 'Special Rural'.

The subject site is currently used for the grazing of cattle.

2.2 Sensitive Receptors

The Environmental Protection Authority (EPA) *Guidance for the Assessment of Environmental Factors* (June 2005) provides generic separation distances to assist in the determination of suitable buffers where industry may have the potential to affect the amenity of a sensitive land use. In particular, for extractive industries, a buffer distance of 300 m to 500 m is recommended from sensitive land uses.

The closest residential dwellings to the subject site are provided below and shown in **Figure 3.**

Table 1. Residential dwellings within 1,000 m of the subject site.

Resident No.	Distance to subject site (m)
1	140 m
2	648 m
3	779 m
4	786 m
5	880 m
6	936 m
7	987 m

The closest residential dwelling to the subject site is located 140 m from the southern boundary. The applicant has attempted consultation with this neighbour however the neighbour has not been willing to engage. It should be noted that this residence is for sale and the applicant is willing to undertake consultation with any parties looking to purchase the property. Ongoing consultation will be undertaken for the life of the quarry.

All other residences do not have a direct line of sight to the extraction area and are buffered by existing vegetation.

2.3 Topography and Soils

The current topography of the subject site can be described as sloping with the elevation ranging from 15 m Australian Height Datum (AHD) in the west to 30 m AHD in the south eastern corner of the subject site (refer to **Appendix A**).

The subject site is located on the Perth Coastal Zone consisting of coastal sand dunes and calcarenite within the Spearwood system. The Spearwood systems consists of "*Sand dunes and plains with yellow deep sands, pale deep sands and yellow/brown shallow sands"* (Tille 2006).

The subject site is located within the Spearwood S1b phase consisting of 'dune ridges with deep siliceous yellow brown sands or pale sands with yellow-brown subsoil and slopes up to 15%' (Natural Resource Information (NRInfo) (DPIRD 2023).

2.4 Climate

The climate of the locality is classified as Mediterranean with warm to hot summers and cool wet winters.

The closest weather recording station is Bunbury (Station 9965). Temperatures are highest on average in February, at approximately 30°C. July has the lowest average temperature of the year of 7.3°C.

Rainfall for the area is approximately 730 mm per annum with approximately 90% of the rain falling during the winter months, April to October inclusive.

During the summer months the dominant wind in the mornings is from the south-east at 10-14 knots, swinging to the south-west at 20-25 knots in the afternoon. During winter, the winds are most commonly 10-14 knots with no dominant prevailing direction. During storms winds from the west and north-west can reach 40 knots (BoM 2020).

Rainfall intensity has been calculated using the Bureau of Meteorology (BoM) Intensity-Frequency-Duration (IFD) data system which yields the two hour 1 in 10 (10%) annual exceedance probability storm event for the subject site as 40.2 mm/hr.

3 EXTRACTION ACTIVITIES

The gravel quarry will cover an area of approximately 5.4 ha, with a current maximum elevation ranging from 15 m AHD to 30 m AHD. It will be excavated to a maximum depth of approximately 15 m AHD commencing in the north east and moving initially in a southerly direction in stages less than 2 ha in size (refer to **Figure 2**). The proposal does not include any crushing or screening of material.

It is estimated that the total volume of sand to be removed will be approximately 200,000 m^3 with a maximum of approximately 200,000 m^3 excavated each year, depending on supply and demand.

The planned end use of the quarry is to restore a natural soil profile and return the area to pasture, ensuring that there is no net loss of agricultural land.

3.1 Operational Works

Using a loader, the topsoil (where available) will be stripped and placed in stockpiles. Overburden, if present, will be removed using a dump truck and stockpiled to the perimeter of the proposed pit area.

Typical operating hours for quarries will be adopted for the subject site which involves 0700 am to 1800 pm each Monday to Friday and Saturdays 0700 am to 1300 pm, with no activities to occur on Sundays or public holidays. The site will be worked by 2 - 3 persons, depending on market demand.

3.1.1 Truck Movements

Access from the property will be via Boyanup Road West (a RAV -4 classified road), travelling west to Bussell Highway (refer to **Figure 4**). The road intersection will be asphalt, with sealing up to the length of a vehicle followed by a gravel access track. Signage will be erected on both the West and East extents of the road access advising of trucks entering.

It is proposed to extract a maximum of approximately 200,000 m^3 or bank cubic metres (BCM) per year. The average daily extraction rate:

= 200,000 BCM / 52 weeks / 5 working days per week
= 769 BCM per day.

It is estimated that approximately 70% of the haulage is proposed to be undertaken from October to May (8 months). Therefore, the average daily extraction rate (main season):

= 200,000 BCM x 70% / 32 weeks / 5 working days
= 875 BCM per day.

The average daily extraction rate (LCM):

= 875 BCM x 1.15
= 1006 LCM

It is proposed to utilise 22 tonne semi-trailers with a capacity of approximately 39.6 LCM of gravel. Accordingly, the average daily truck movements during the main season are as follows:

= 1006 LCM/ 39.6 LCM truck capacity
= 25 truck movements per day x 2 (to and from)
= 50 trips per day x 2 (peak fluctuations)
= 100 trips per day maximum.

Given the highly variable nature of the campaigns, these calculations are estimates only, there may be periods in which these daily truck numbers are exceeded.

3.1.2 Sand Extraction

The sand will be excavated by a bulldozer to a stockpile or loaded directly to waiting trucks for transport. A summary of the proposed sand extraction activities is provided below:

- Prior to excavation commencing the site will be ground surveyed, the excavation footprint marked out and a 1 m contour plan developed.
- The topsoil and overburden (if present) will be stripped and stockpiled using a loader.
- An excavator or front-end loader will be used to dig the sand and transport it to a stockpile.
- The sand will then be picked up by a loader and loaded to trucks for transport.
- Excavation will commence in the north of the quarry and then move in a southerly direction. The face and walls of the pit will act as noise barriers.
- Upon completion of each section of quarry, the section will be reformed and back filled, where subgrade material is available, to achieve the proposed final contours.
- At the end of excavation, the floor of the quarry will be deep ripped, covered by overburden and topsoil, and rehabilitated to a constructed soil.

3.1.3 Final Contours

The slope of the final contours of the quarry will reflect the current contours of the site and will slope from approximately 30 m Australian Height Datum (AHD) in the south western corner down to 15.0 m AHD in the centre of the extraction area sloping to join the current surface level of the adjoining land to the west at approximately 15 m AHD.

Slopes of the batters at the end of excavation will be retained at 1:4 vertical to horizontal which will enable the landform to be integrated with the surrounding landscape. This batter can be readily traversed by livestock, vehicles and machinery and is considered appropriate for the site's topographical relief.

3.1.4 Equipment

All operational equipment will work on the quarry floor to provide maximum sound and visual screening. All equipment and infrastructure will be fully portable to facilitate movement throughout the site required for staged quarrying operations. The site will be secured by locked gates when it is not being actively worked. The boundary fencing will be maintained to prevent inadvertent and unauthorised entry.

Equipment and facilities that may be used onsite are provided in the Table below.

Table 2. Equipment.

Equipment	Description
Site office and/or containers	May be required for the management and security of small items.
Toilet	A portable toilet may be required on site.
Water tanker	Used for dust suppression on the access roads and working floors when required.
Loader (938/3966)	Loaders will be used for the movement of sand and loading road trucks.
Excavator (325/330)	An excavator may be used for the removal of sand material.

Equipment	Description
Anaconda Radial Stockpiler	Used for stockpiling sand.
Fuel storage	No fuel will be stored onsite.
Light vehicles	Access to and around the site.
Tip truck	Removal of sand from site.

3.1.5 Water Usage

Water is only required for dust suppression within the quarry and the access road. Water will be sourced from an offsite standpipe located on Queen Elizabeth Avenue in Busselton and tankered to the site for dust suppression purposes, as required.

4 POTENTIAL IMPACTS

4.1 Dust Sources

The proposed extraction activities will involve the disturbance of large quantities of soil and earthen material. Specifically, this may include the following activities:

- Earthworks during extraction activities;
- Topsoil stripping;
- Loading and transportation of material;
- Vehicle movement within the site; and
- Wind erosion of exposed surfaces.

These activities have the potential to generate dust that, if not adequately controlled, can cause nuisance and safety risks. In-pit operations tend to generate less dust than surrounding activities due to the reduced airflow within the pit. The removal and replacement of topsoil material has the highest risk associated with dust generation due to the large volumes of material involved and generally lower levels of soil moisture.

4.2 Risk Assessment

In accordance with the DWER's "*A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities*", a risk assessment for dust emissions has been prepared (DWER 2021).

For a site that is generating uncontaminated dust, such as extractive industry sites, the site classification chart in Appendix 1 of the DWER guideline can be used for assessing the site risk. Appendix 1 also details the provisions and contingency arrangements for dust management which apply to each site classification score.

The site classification assessment is provided below.

Part A. Nature of site

Item	**Score Options**				**Score**
1.Nuisance potential of soil when disturbed	Very low - 1	Low – 2 *Material is of coarse composition*	Medium - 4	High - 6	2
2. Topography and protection provided by undisturbed vegetation	Sheltered and screened - 1	Medium screening – 6	Little screening – 12 *Screening provided by stabilised bunds and roadside vegetation*	Exposed and wind prone - 18	12
3. Area of site disturbed by the works	Less than 1ha - 1	Between 1 and 5ha – 3	Between 5 and 10ha – 6	More than 10ha - 9	3

		Excavation will occur in stages less than 2 ha.			
4. Type of work being done	Roads and trenches - 1	Roads, drains and medium deep sewers - 3	Roads, drains, sewers and partial earthworks - 6	Bulk earthworks – 9 *Sand extraction*	9
Total score for Part A					26

Part B. Proximity of site to other land uses

Item	**Score Options**				**Score**
1.Distance of other land uses from site	More than 1km - 1	Between 1km and 500m – 6	Between 100m and 500m - 12	Less than 100m - 18	12
2. Affect of prevailing wind direction (easterly) on other land uses	Not affected - 1	Isolated land uses affected by one wind direction – 6	Dense land uses affected by one wind direction – 9	Dense/sensitive land uses highly affected by prevailing winds - 12	6
Total score for Part A					18

Site Classification Score (A x B) = 468

Classification 3 (score between 400 and 799, considered **Medium risk**). The provisions, contingency arrangements and monitoring requirements as specified by the DWER (2011) associated with a Classification 3 proposal are provided below. A score of 12 (Little Screening) has been included in this risk assessment in response to community feedback, however it should be noted that this is only relevant at the closest receptor and not for the remaining receptors. The site classification score for the remaining receptors identified is Classification 2 and is considered **Low Risk**.

Provisions:

Appropriate wind fencings of a length specific in the air quality management programme needs to be stored on site or available within one hour of being required by the engineer for the developer/local government/DEC.

All areas of disturbed land should be stabilised to ensure that the disturbed area exposed at any time is kept to a practical minimum to prevent exceedance of dust standards.

The engineer for the develop shall maintain close control of works with dust creating potential (for example allowable length of open trenching).

After all siteworks are completed, and before the contractor has vacated the site, the developer should ensure that the entire site is stable. The develop then retains responsibility for site stability until change of ownership/control takes place. After the change of ownership/control has taken place, the new owner or controlling party will inherit responsibility for site stabilisation.

Contingency arrangements:

Suitable water-carts in good working condition and of not less than 10,000 litres capacity per 7.5 ha of disturbed site, or other suitable alternatives shall be available to commence watering on the site within 18 hours of being required to do so by the engineer for the developr/local government/DEC.

Surface stabilisation equipment shall be available to commence operation on site within 48 hours of being required to do so by the engineer for the developer/local government/DEC and with sufficient capacity to cover the disturbed site area within a further 48 hours.

Wind fencing shall be erected within 18 hours of the contractor being required to do so by the engineer for the developer/local government/DEC. Dust generating works on the site shall cease in the interim.

If dust-related complaints are generated due to activities on the site, the developer may be required by the local government or an authorised DEC officer to distribute advisory notices to adjoining land occupiers within 48 hours. A notice form is provided in Sheet 5 of Appendix 1.

If dust-related complaints are generated due to material which has been excavated for trenching, the developer shall ensure this material is stabilised within 48 hours of being requested to do so by the engineer for the developer, local government or an authorised DEC officer.

Include an allowance for water-cart operation, wind fencing and surface stabilisation during the construction period for the purposes of dust and wind-borne material suppression.

Include an allowance for surface stabilisation for the purposes of dust and wind-borne material suppression to be maintained after the construction period and until change of ownership/control takes place.

Monitoring requirements:

Site dust management system in place.

On-site dust monitoring against short term criteria.

Off-site (compliance) dust monitoring at site boundary (if close to sensitive receptors) or at sensitive receptors.

Do Complaints management system in place (complaints recorded and acted on promptly).

Exceedances to be reported to the relevant authority – DEC, Local Government or DOH.

Notice to be erected at the site providing contact details of the person to be contacted.

4.3 Management Measures

While the potential impacts to amenity from dust emissions are considered low at all receptors except the closest, standard dust suppression measures will be implemented during operation activities, as provided within **Table 3**.

Table 3. Dust management measures.

Legislation and Key Standards		
Environmental Protection Act 1986 (EP Act) *A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities* (DEC 2011)		
Objectives		
• Minimise dust lift during all activities. • No adverse dust impacts to sensitive receptors from the quarry operations.		
Targets		
• No visible dust beyond the property boundary. • No dust complaints.		
Management Actions		
Description	**Responsibility**	**Timing**
Notice to be erected at the site, providing contact details of the person to be contacted regarding the works. This person will also be available outside of operational hours to address any complaints.	Site Manager	Prior to extraction
Induction for all employees will include information on: • Potential sources of dust • Dust Management Plan • Speed limits onsite and staying on designated roads • Reporting procedure for dust issues	Site Manager	Prior to extraction
Topsoil stripping shall not occur during the following conditions: • Winds in excess of 30 km/hr;	Site Manager	Topsoil stripping and bund construction

Areas of land cleared and the period of time they remain cleared are to be kept to a minimum.	Site Manager	At all times
Water trucks are to water down unsealed roads during operation to reduce dust lift.	Site Manager	As required
Stockpiles, where possible, will be limited to the anticipated cubic volume/vehicle movement for cartage on the following operating day.	Machine Operator	At all times
Temporary stockpiles and exposed areas will be watered and stabilised as required. Stabilisation techniques that will be considered depending on environmental conditions will include hydro-mulching.	Site Manager	As required
Transport of dust-prone material will be via covered trucks or dampened prior to transport to prevent dust lift during transport.	Drivers	During soil transport activities
Water trucks are to be available at all times during quarry activities to water the site on observation of dust lift.	Site Manager	As required
Vehicle speeds will be restricted to no more than 10km/hr on the site to minimize dust lift off.	Drivers	At all times
Wind fencing and soil stabilsation equipment will be available for commissioning if required.	Site Manager	As required
Maintain a complaints register (refer to **Appendix B**). A Complaints Register will be established for the site to record the following information: • Date, time, location and nature of the exceedance. • Identify the cause (or likely cause) of the exceedance and responsible parties. • Identify the activities that were occurring at the time of the non-compliance. • Determine the activities that were most likely contributing to the non-compliance. • Describe what action has been taken to date. • Describe the proposed measures to address the exceedance.	Site Manager	As required

Monitoring			
Description	**Parameter**	**Responsibility**	**Frequency**
Visual monitoring of dust will be ongoing throughout the day during operations. All monitoring is to be maintained on a logging sheet for reference and proof of compliance.	Dust lift and signs of dust deposition near property boundary. Evidence of no visible dust crossing the site boundary will be used as the monitoring criteria for compliance.	Site Manager	Continuous
Monitoring of dust will be ongoing throughout the day during operations in Stage 4, nearest to Resident 1 by the use of dust meter commissioned in compliance with ASNZS 3580.1.1-29016. All monitoring is to be maintained on a logging sheet for reference and proof of compliance.	Three consecutive 10 minute readings of > 90µg/m^3 at the dust monitor will trigger contingency and corrective actions.	Site Manager	Continuous
Contingency and Corrective Actions			
Incident or Consequence	**Corrective Action**	**Responsibility**	
Observation of excessive dust lift onsite	Report and investigate as incident.	Site Manager	
	Halt work within proximity of the area until cause of dust is addressed.	Site Manager	
	Increase dust mitigation measures (e.g. additional watering of exposed areas).	Site Manager	
Complaint received	Report and investigate as incident. To determine the validity of the complaint, the wind direction, wind speed and activities being undertaken on site at the time of the complaint will be established.	Site Manager	
	If required, halt work until cause of dust is addressed.	Site Manager	

	If the complaint is verified as being due to a site source, remedial action will be undertaken within 2 hours. The Shire of Capel will be advised of all complaints as soon as they are received. If a complaint cannot be resolved within the 2 hour response period, it may be necessary to cease operations.	Site Manger
	Review dust management procedures and adjust if deemed necessary.	Site Manager

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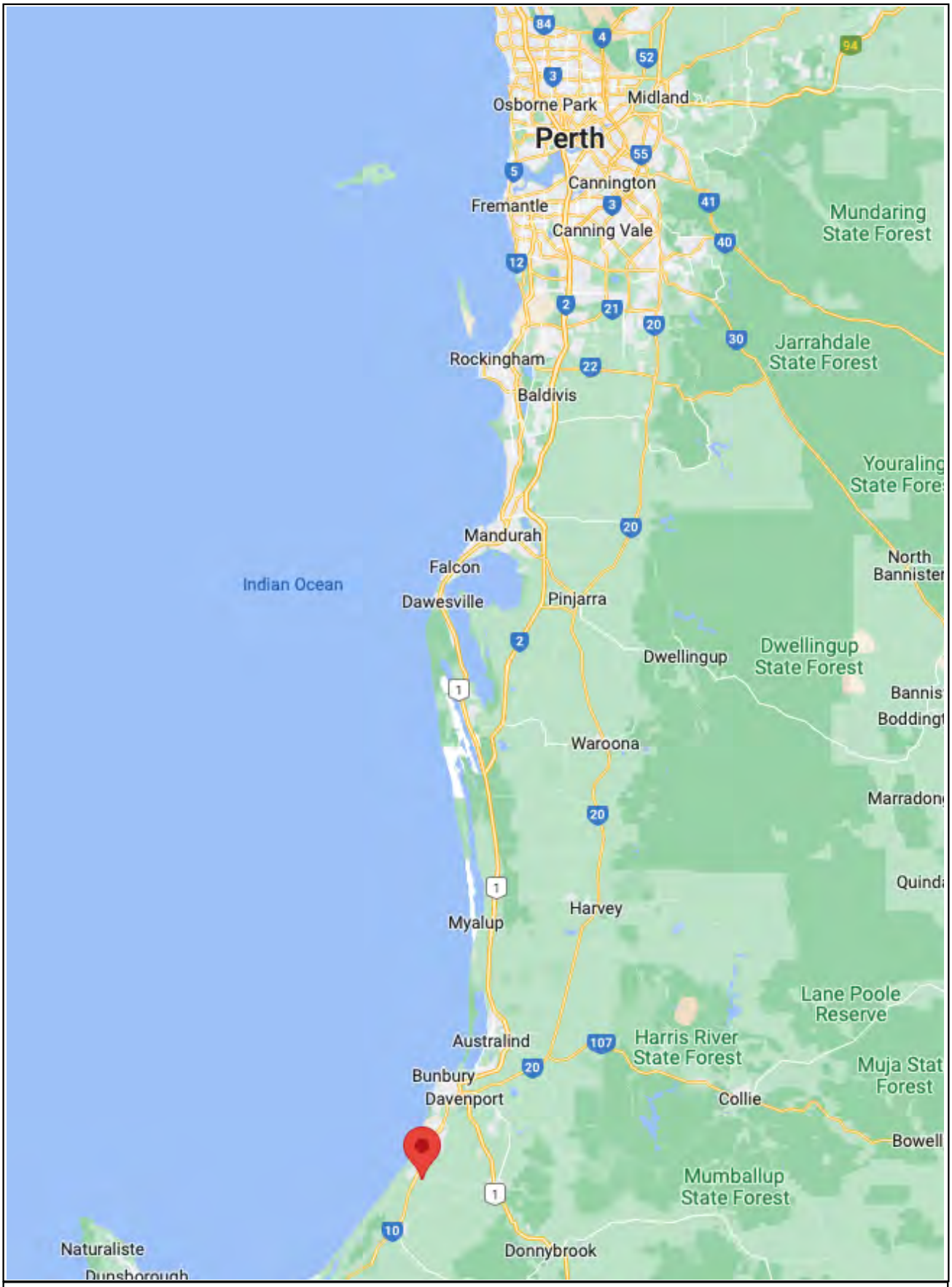
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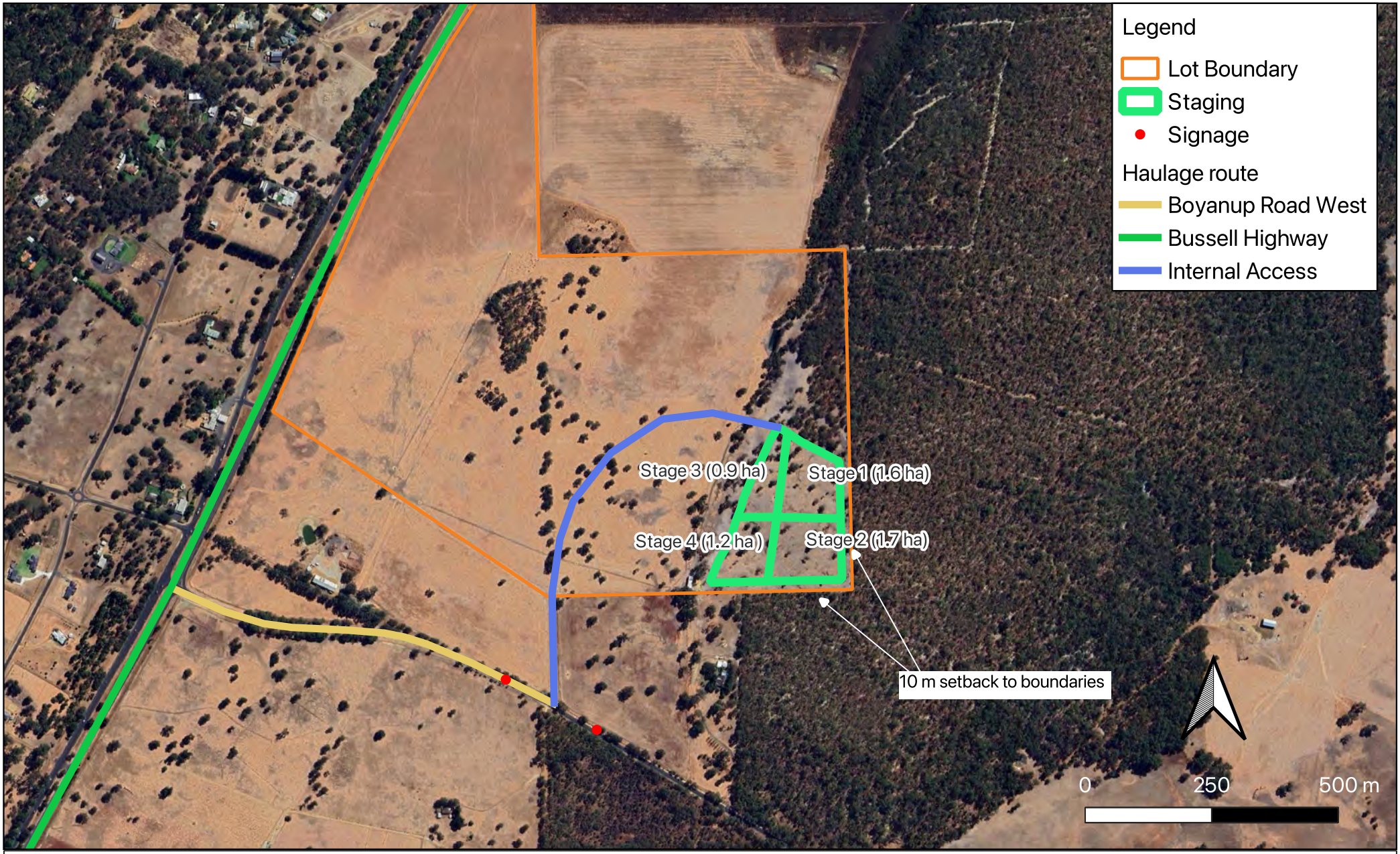
FIGURES



PROJECT	Lot 103 Boyanup Rd W, Stratham	Project Number	Drawing Number	Revision
		2311	Figure 1	A
DRAWING TITLE	Figure 1 – Site Locality	Designed PN	Checked	
		Drawn PN	Approved	
CLIENT	Leeuwin Civil Pty Ltd	Date	26/09/2023	
		Local Authority	Shire of Capel	
		Sheet 1 of 1		

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West Busselton
Western Australia 6280
Mobile 0418 950 852

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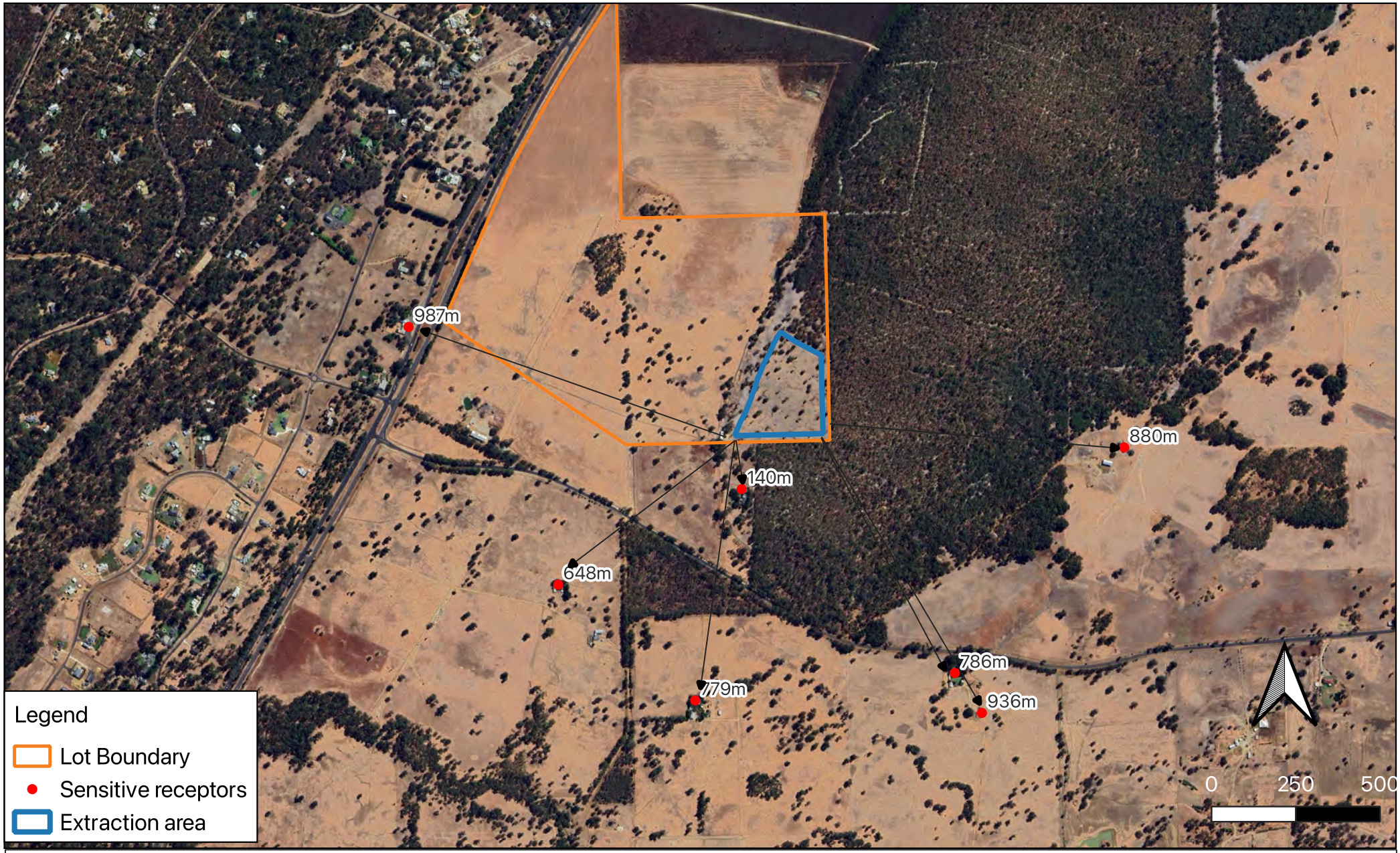


PROJECT	103 Boyanup Road West,Stratham
DRAWING TITLE	Figure 2 - Site Extent
CLIENT	Leeuwin Civil Pty Ltd

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Project Number	2311	Designed	PN
Drawing Number	Figure 2	Drawn	PN
Revision	B	Checked	
Date	21/01/2025	Approved	
Sheet 1 of 1		Local Authority	Shire of Capel



PROJECT 103 Boyanup Road West,Stratham

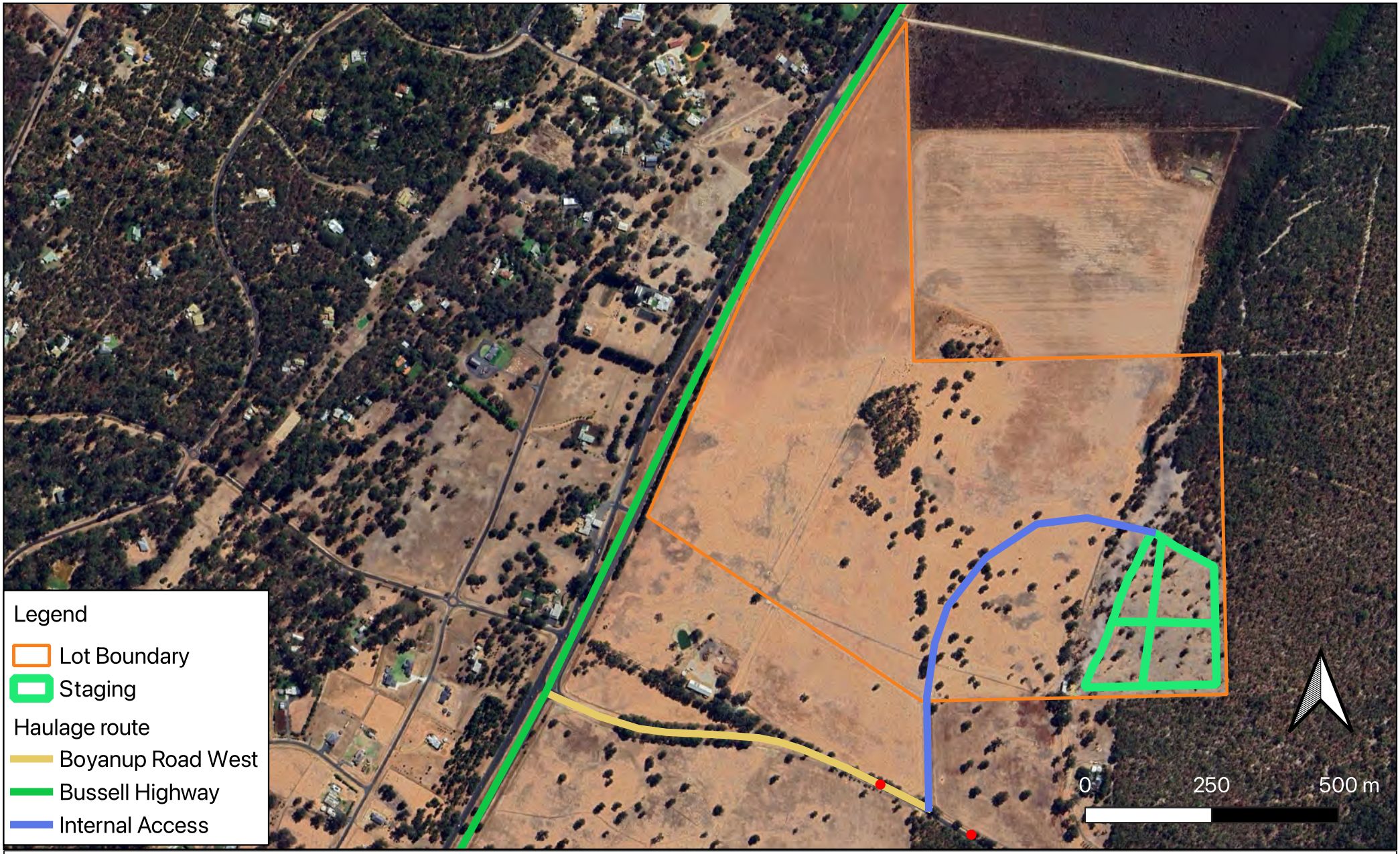
DRAWING TITLE Figure 3 - Sensitive Receptors

CLIENT Leeuwin Civil Pty Ltd

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Project Number	2311	Designed	PN
Drawing Number	Figure 3	Drawn	PN
Revision	C	Checked	
Date	21/01/2025	Approved	
Sheet 1 of 1		Local Authority	Shire of Capel



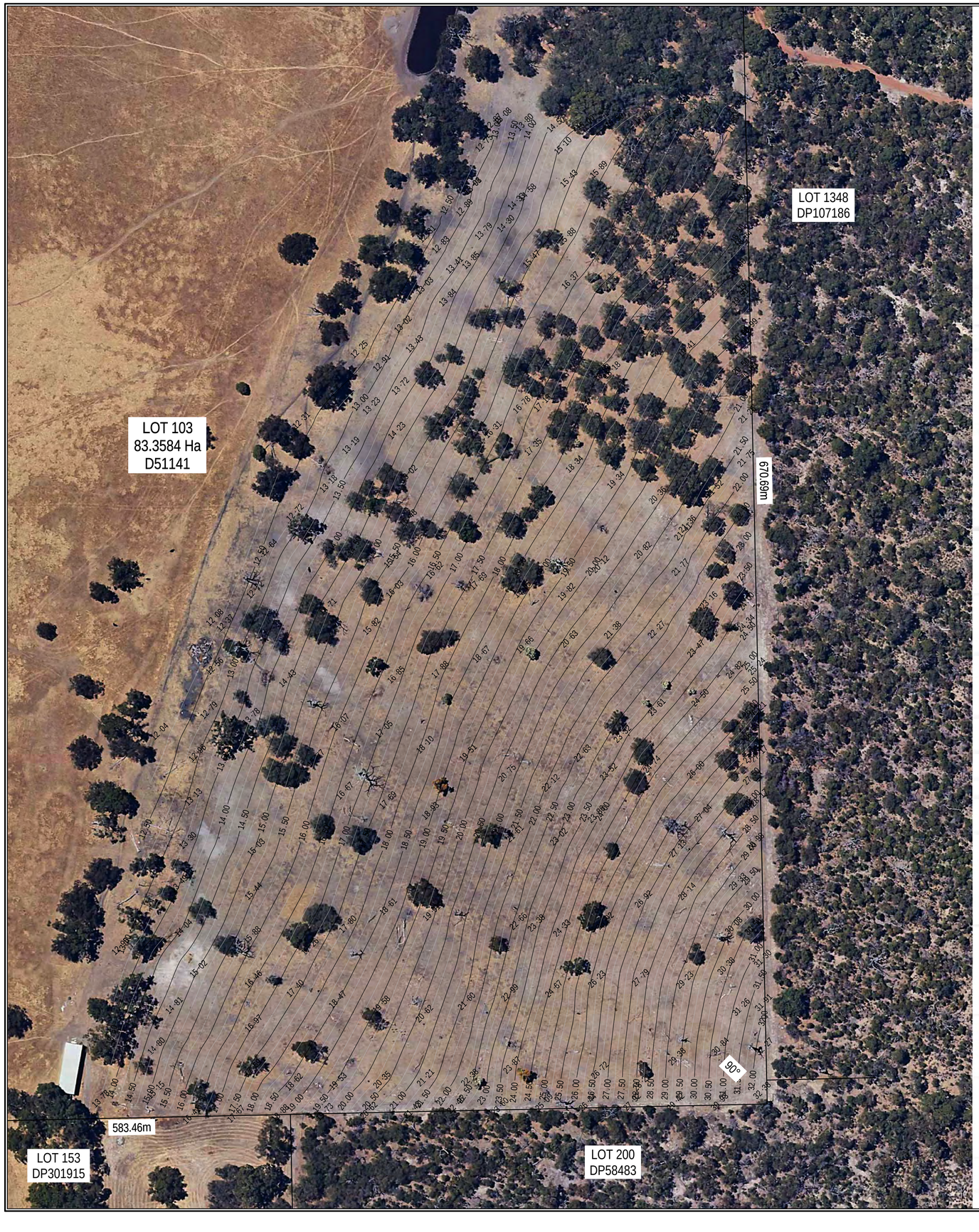
PROJECT	103 Boyanup Road West,Stratham
DRAWING TITLE	Figure 4 - Haulage Route
CLIENT	Leeuwin Civil

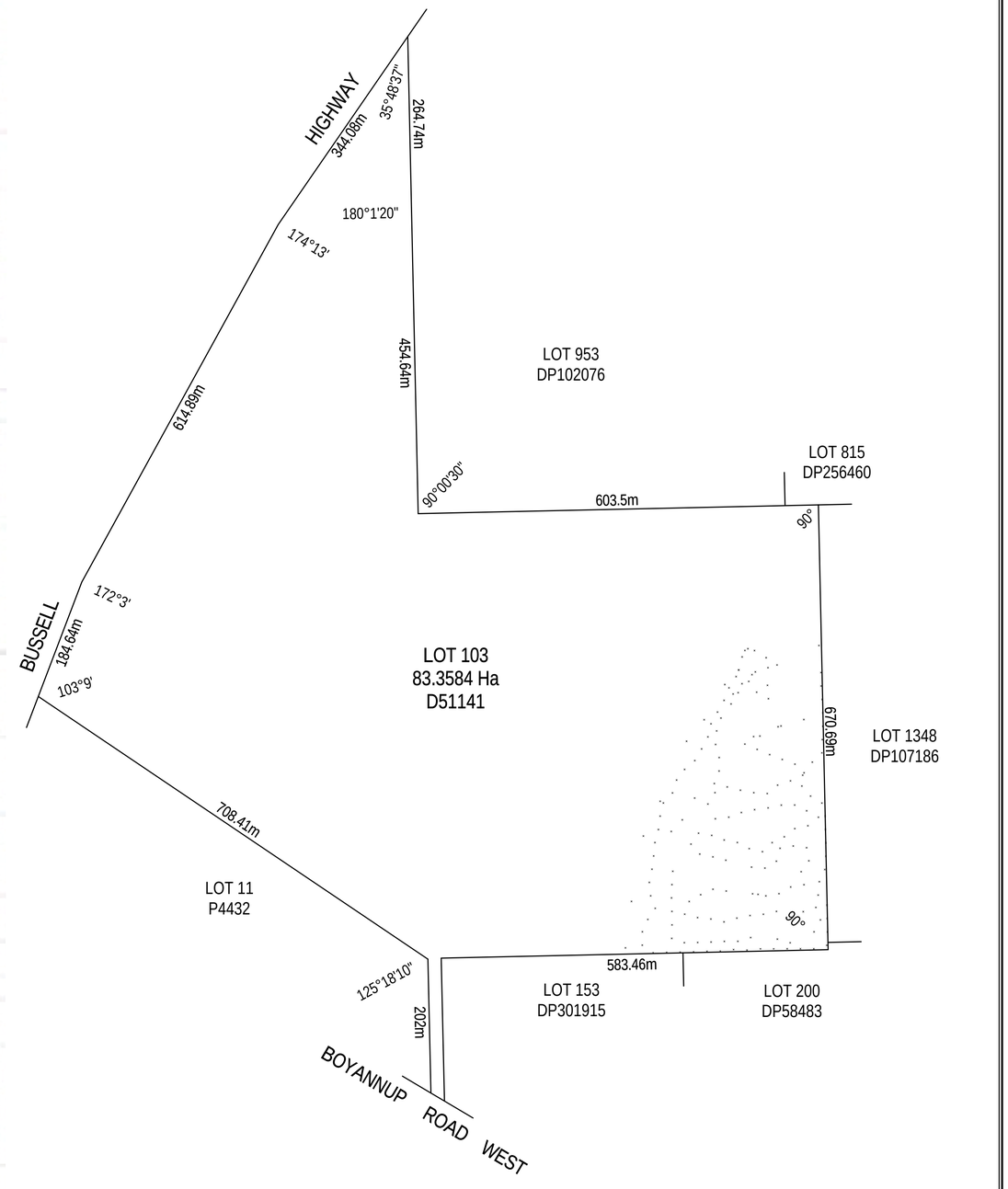
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Project Number	2311	Designed	PN
Drawing Number	Figure 4	Drawn	PN
Revision	C	Checked	
Date	21/01/2025	Approved	
Sheet 1 of 1		Local Authority	Shire of Capel

APPENDIX A – SITE CONTOUR SURVEY





LOCALITY DIAGRAM (NOT TO SCALE)

LEGEND

27.13 EXISTING SURFACE HEIGHT

BOUNDARY

NOTES:
1. Limited boundary marks found. Boundary resurvey recommended if building on or close to boundary.
2. Datum is AHD established from VRS / GPS.
3. Above ground services located by survey. Underground services plotted from plans supplied by the relevant authorities. No liability is accepted for errors in underground service locations. All services to be located on site prior to any work being done.
4. No boundary marks found unless otherwise noted.
5. Contour interval is 0.25m.
6. PDF to be used in conjunction with DWG file supplied. Some point heights may have been omitted for clarity; see DWG file.

Rev.	Description	Drawn	Date	Checked
A	INITIAL ISSUE	TJ	30/8/23	MR

The contents of this plan are date stated within the revision panel. All consultants and persons wishing to utilise this data should satisfy themselves of this plan's currency by contacting Survcon.

The boundaries depicted on this plan were not re-established as part of this survey, therefore this plan does not guarantee their accuracy. Re-establishment of the cadastral boundaries is recommended for any proposed works on or near existing boundaries.

Scale: 1:1000 A1 ORIG ALL DISTANCES IN METRES 0 10 20 30 40 50

Surveyor: MR
Survey date: 18/7/2023
Precal/Cad: N/A

N

FEATURE AND CONTOUR SURVEY
LOT 103 ON DIAGRAM 51141,
BOYANUP ROAD, STRATHAM

Client: **LEEUWIN CIVIL**

Survcon SURVEYING SERVICES
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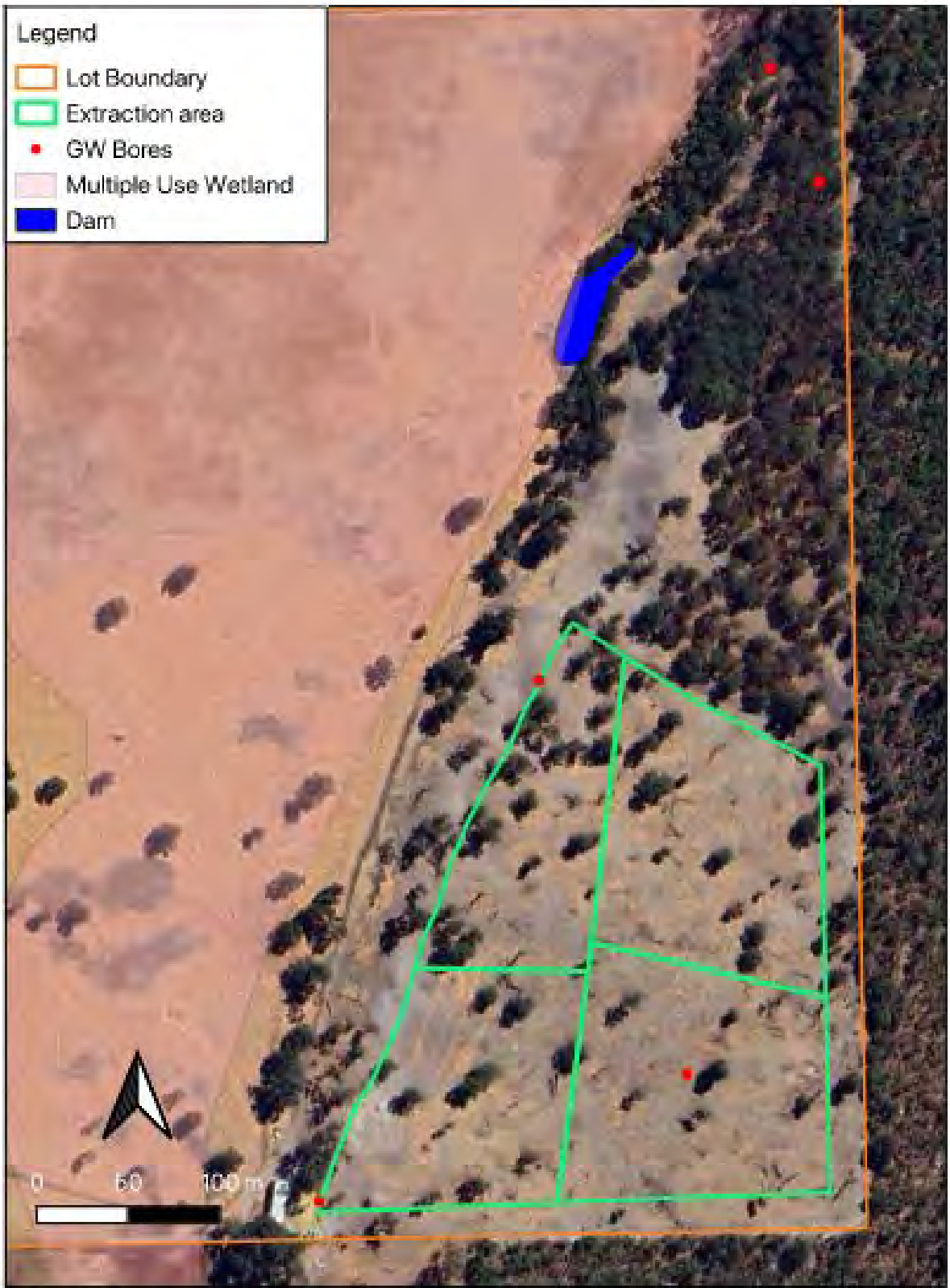
PROJ MNGR.	Michael Riddle	DATUM	MGA50 AHD

JOB NUMBER 9238_SS_A TYPE REVISION

APPENDIX B – COMPLAINTS REGISTER

Complaints Register

Ref. No.	Date	Name & Address of Complainant	Time/Date of Complaint	Detail of Complaint	Summary of Actions Taken	Shire Notified	Person Responsible



PROJECT	Lot 103 (Harris Pit),Strathalm	Project Number	Drawing Number	Revision
		2311	Figure 4	B
DRAWING TITLE	Figure 4 - Water Features	Designed PN	Checked	
		Drawn PN	Approved	
CLIENT	Leeuwin Civil Pty Ltd	Date	11/11/2024	
		Local Authority	Shire of Capel	
		Sheet 1 of 1		

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PROJECT	Lot 103 (Harris Rd) Waikerie	Project Number: 2311	Drawing Number: Figure 9
DRAWING TITLE	Figure 9 - Vegetation retention	Designed: PN; Drawn: PN	Checked; Approved
CLIENT	Loxwin Civil Pty Ltd	Date: 19/12/2024	Local Authority: Rural City of Renmark Paringa

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PROJECT	103 Boyanup Road West,Strathams
DRAWING TITLE	Figure 7 - Haulage Route
CLIENT	Leeuwin Civil

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Project Number	2311	Designed	PN
Drawing Number	Figure 7	Drawn	PN
Revision	B	Checked	
Date	11/11/2024	Approved	
Sheet 1 of 1		Local Authority	Shire of Capel



PROJECT	Lot 103 (Harris Pit),Stratham
DRAWING TITLE	Figure 8 - Final Contours
CLIENT	Leeuwin Civil Pty Ltd

Project Number	Drawing Number	Revision
2311	Figure 8	B

Designed	PN	Checked	
Drawn	PN	Approved	
Date		10/01/2025	
Local Authority		Shire of Capel	
Sheet 1 of 1			

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SUBMISSIONS FROM MARIE ANNE FISHER IN OPPOSITION TO DEVELOPMENT APPLICATION PA205/2023 PUBLISHED ON 20 NOVEMBER 2023

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Shire of Capel
Development Application PA205/2023 published on 20 November 2023
Applicant: Leeuwin Civil Pty Ltd
Planning and Development Act 2005 (WA)

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IN OPPOSITION TO DEVELOPMENT APPLICATION PA205/2023
PUBLISHED ON 20 NOVEMBER 2023

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DOCUMENT 1
SUBMISSIONS OF MARIE ANNE FISHER IN OPPOSITION TO DEVELOPMENT APPLICATION PA205/2023

Shire of Capel
Development Application PA205/2023 published 20 November 2023
Applicant: Leeuwin Civil Pty Ltd
Planning and Development Act 2005 (WA)

SUBMISSIONS FROM MARIE ANNE FISHER
IN OPPOSITION TO DEVELOPMENT APPLICATION PA205/2023
PUBLISHED ON 20 NOVEMBER 2023

Background

1. Leeuwin Civil Pty Ltd lodged Development Application numbered PA205/2023 seeking approval from the Shire of Capel (**Shire**) to use part of Lot 103 Boyanup Road West, Stratham (**103 Boyanup Road West**) for an "Extractive Industry (Sand)" (**Application**).

2. The Shire published on its website for public comment on 20 November 2023 the following parts of the Application:

   (a) an Extractive Industry (Sand) Operations Plan dated September 2023 by Accendo Australia (**Operations Plan**);

   (b) a Dust Management Plan dated September 2023 by Accendo Australia (**Dust Management Plan**);

   (c) a Water Management Plan dated October 2023 by Accendo Australia (**Water Management Plan**); and

   (d) a Noise Management Plan dated September 2023 by Accendo Australia (**Noise Management Plan**).

3. Marie Anne Fisher is the Registered Proprietor of Lot 153 on Deposited Plan 301915 being all of the land shown on Certificate of Title Volume 1026 Folio 912 more commonly known as 121 Boyanup Road West, Stratham (**121 Boyanup Road West**): paragraph 2 of the Statutory Declaration of Marie Anne Fisher declared on 14 December 2023 included with these submissions (**Statutory Declaration**).

4. Marie Anne Fisher opposes the Application for the reasons that follow and submits that the Application should be dismissed.

Shire of Capel Local Planning Scheme No. 8 gazetted on 17 July 2023

5. 103 Boyanup Road West is zoned "rural" under the Shire of Capel Local Planning Scheme No. 8 gazetted on 17 July 2023 (**LPS 8**): LPS 8 Map No. 2 of 12 – Capel Locality and Surrounds North.

6. The "Land Use Class" – Industry – Extractive is a class A use in relation land zoned "rural" under the LPS 8 and is not permitted under LPS 8 unless the Shire has exercised its discretion by granting development approval after advertising the application in accordance with clause 64 of Schedule 2 of the *Planning and Development (Local Planning Schemes) Regulations 2015* (WA) (**Regulations**): clause 18(2) of LPS 8.

7. Ms Fisher does not know whether the Shire has complied with the advertising requirements under the Regulations with respect to the Application. If not, the Shire cannot exercise its discretion to grant any approval of the Application.

***Planning and Development (Local Planning Schemes) Regulations 2015* (WA)**

8. The Shire must consider the matters listed in Schedule 2 Clause 67(2) of the *Planning and Development (Local Planning Schemes) Regulations 2015* (WA) (**Regulations**) which, in its opinion, are relevant to the Application.

9. Of the matters listed in Schedule 2 Clause 67(2) of the Regulations, Ms Fisher says the Shire must have regard to at least the following matters when determining the Application:

    (a) the aims and provisions of LPS 8: clause 67(2)(a) of the Regulations;

    (b) the requirements of orderly and proper planning: clause 67(2)(b) of the Regulations;

    (c) State Planning Policy 2.4: *Planning for Basic Raw Materials*: clause 67(2)(c) of the Regulations;

    (d) State Planning Policy 2.4: *Planning for Basic Raw Materials Guidelines*: clause 67(2)(c) of the Regulations;

    (e) State Planning Policy 2.5: *Rural Planning*: clause 67(2)(c) of the Regulations;

    (f) State Planning Policy 2.9: *Water Resources*: clause 67(2)(c) of the Regulations;

    (g) Environmental Protection Authority Guidance for the Assessment of Environmental Factors: *Separation Distances between Industrial and Sensitive Land Uses (2005)*: clause 67(2)(d) of the Regulations;

    (h) Statement of Planning Policy No. 2: *Environmental and Natural Resources Policy*: clause 67(2)(f) of the Regulations;

    (i) Shire of Capel Local Planning Policy LPP6.2: *Extractive Industries*: clause 67(2)(g) of the Regulations;

    (j) the compatibility of the development with its setting, including the relationship of the development to development on adjoining land or on other land in the locality: clause 67(2)(m)(ii) of the Regulations;

    (k) the amenity of the locality including the:

        (i) environmental impacts of the development;

        (ii) the character of the locality; and

        (iii) social impacts of the development;

        clause 67(2)(n) of the Regulations;

    (l) the likely effect of the development on the natural environment or water resources and any means that are proposed to protect or to mitigate impacts on the natural environment or the water resource: clause 67(2)(o) of the Regulations;

    (m) the suitability of the land for the development taking into account the possible risk to human health or safety: clause 67(2)(r) of the Regulations;

(n) the amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety: clause 67(2)(t) of the Regulations; and

(o) these and any other submissions received in response to the Application: clause 67(2)(y) of the Regulations.

State Planning Policy 2.5: *Rural Planning* and State Planning Policy 2.4: *Planning for Basic Raw Materials*

10. State Planning Policy 2.5: *Rural Planning* (**SPP 2.5**) applies to 103 Boyanup Road West because it is zoned for rural or agricultural purposes in LPS 8: clause 3.1(a) of SPP 2.5.

11. State Planning Policy 2.4: Planning for Basic Raw Materials (**SPP 2.4**) applies to the Application because: "approval is required for extractive industries under the *Planning and Development Act 2005* (WA)" pursuant to clause 18(2) of LPS 8.

12. One of the objectives of SPP 2.4 is to ensure the extraction of basic raw materials avoids, minimises or mitigates any adverse impacts on the community, water resources and biodiversity values: clause 5(e) of SPP 2.4.

13. Clause 5.9 of SPP 2.5 states:

> "*Identification of basic raw material sites does not presume that extraction would be environmentally acceptable or that subsequent approval for extraction would be guaranteed. Nor does it remove the requirement of local government authorities or proponents to meet their obligations to identify those environmental constraints which may determine the extent and/or manner in which a proposal may be implemented*".

14. Clause 5.12.1(b) of SPP 2.5 requires that:

> "*where a development is proposed for a land use that may generate off-site impacts, there should be application of the separation distances used in environmental policy and health guidance prescribed standards, accepted industry standards and/or Codes of Practice, followed by considering –*
>
> *(i) whether the site is capable of accommodating the land use; and/or*
>
> *(ii) whether surrounding rural land is suitable, and can be used to meet the separation distances between the nearest sensitive land use and/or zone, and would not limit future rural land uses; and*
>
> (iii) *whether if clauses (i) and/or (ii) are met, a statutory buffer is not required*".

15. If a development is proposed for a land use that may generate off-site impacts and does not meet the standard outlined in clause 5.12.1 (b) of SPP2.5 then more detailed consideration of off-site impacts will be required in accordance with clause 5.12.3 of SPP2.5: clause 5.12(c) of SPP 2.5.

16. If the Shire can under LPS 8 contemplate a proposed development in the zone (rural) and the Shire has assessed the proposed development under clause 5.12.3 of SPP 2.5 as having unacceptable off-site impacts that cannot be further mitigated or managed, it should refuse the proposal: clause 5.12(d) of SPP 2.5.

17. Single dwellings on rural land are a sensitive land use: clause 5.12.2(a) of SPP 2.5.

18. SPP 2.4 requires that development applications demonstrate that land uses are compatible by:

(a) avoiding sensitive land uses within extraction site separation distances as outlined in the *Environmental Protection Authority Guidance for the Assessment of Environmental Factors: Separation Distances between Industrial and Sensitive Land Uses (2005)* (**EPA Separation Guidelines**); and

(b) the application of vertical separation distances to groundwater and other management measures to protect water resources where an extractive industry is proposed.

19. Applications to establish an extractive industry require that development approval applications be supported by a management plan demonstrating: "that extractive industry operations are adhering to designated separation distances and will not impact or be impacted by sensitive land uses": clause 6.5(d) of SPP 2.4.

State Planning Policy 2.4: Planning for Basic Raw Materials Guidelines

20. State Planning Policy 2.4: *Planning for Basic Raw Materials Guidelines* (**SPP 2.4 Guidelines**) must be read in conjunction with SPP 2.4.

21. Clause 3.4 of the SPP 2.4 Guidelines provide that:

(a) sensitive land uses should not be considered within the separation distance: clause 3.2(a) of the SPP 2.4 Guidelines;

(b) separation between extractive industries and sensitive land uses in accordance with the EPA Separation Guidelines should guide the establishment of separation distances to protect community health, safety and amenity;

(c) separation distance must be measured from the shortest distance between the extraction area boundary and the sensitive land use; and

(d) extraction activities including screening basic raw materials could require a different separation distance.

22. Under clause 4 of the SPP 2.4 Guidelines, the Application must be assessed considering:

(a) "the avoidance or mitigation of conflicts and detrimental effects on existing and future sensitive land uses and agricultural land in the surrounding areas (that is, noise, dust, vibration, blasting and vehicular traffic)";

(b) "maintain[ing] appropriate horizontal separation between extraction, water supply infrastructure and any other engineering requirements";

(c) "avoid[ing] the exposure of groundwater and maintain the required vertical separation distances to groundwater for sequential land use";

(d) "the availability and suitability of road access";

(e) "the effect of the proposed extractive industry on any native flora and fauna and general landscape values";

(f) "how all water resources will be protected during BRM extraction including a separation distance to the defined groundwater level".

23. Under clause 4.7 of the SPP 2.4 Guidelines: "a vegetative screen of at least 50 meters width is recommended to assist with visual impacts and help mitigate dust impacts".

24. Clause 4.8 of the SPP 2.4 Guidelines state:

(a) "Noise, dust and blasting are the main risks that require management to avoid adverse health and amenity impacts to sensitive land uses and the community in general"; and

(b) "Extractive industry proposals that are likely to generate dust and could affect human health may be subject to the provisions of the Environmental Protection Act 1986 and subsidiary regulation and policies".

25. Individual development proposals that are likely to have a significant effect on the environment should be referred to the Environmental Protection Authority under section 38 of the *Environmental Protection Act 1986* (WA): Appendix 2 of the SPP 2.4 Guidelines.

EPA Separation Guidelines

26. The EPA Separation Guidelines state:

(a) "it is necessary for individual industrial developers to take all reasonable and practicable measures to prevent or minimise emissions from their premises";

(b) "if the impacts from a particular industry or industrial estate are considered to be unacceptable at the boundary of the site or estate, then there is usually a need for a buffer area to separate industrial land use and sensitive land use";

(c) "the determination of the buffer area is necessary in many situations to avoid or minimise the potential for land use conflict";

(d) "industrial land use" includes extractive industry;

(e) the separation distances in the EPA Separation Guidelines are based on the considerations of emissions that can affect nearby sensitive land uses including noise, dust and odour;

(f) the separation distances in the EPA Separation Guidelines are not intended to replace the need for local governments to take all reasonable and practicable measures to minimise emissions and off-site impacts;

(g) wherever practicable, it is expected that adverse environmental impacts should not extend beyond the boundary of a particular industrial site. If that is not possible, adverse environmental impacts should not extend beyond the boundaries of a buffer area, which should only contain compatible land uses;

(h) if the separation distance is less than the distance recommended in the EPA Separation Guidelines:

(i) "a scientific study based on site-and industry-specific information must be presented to demonstrate that a lesser distance will not result in unacceptable impacts"; and

(ii) "it cannot be demonstrated that unacceptable environmental impacts are likely to be avoided, then other options should generally be pursued";

(i) "it is recommended that a new project does not proceed in the absence of site-specific investigations and a report demonstrating that the separation distance will meet acceptability criteria and that enforceable management techniques will be applied to ensure an environmental outcome."

27. Appendix 1 of the EPA Separation Guidelines states:

(a) the environmental impact of “Extractive industries – sand and limestone extraction” cause loss of amenity, being “an unreasonable impact on a person”, caused by noise and dust; and

(b) the minimum buffer distance is: “300-500 [metres], depending on size”.

Local Planning Policy 6.2: Extractive Industries

28. The objectives of Local Planning Policy 6.2: Extractive Industries (**LPP 6.2**) include:

(a) ensuring extractive industries do not adversely affect the environment or the amenity of the locality during or after extraction;

(b) ensuring volumes of extraction occurs where the available haulage routes and road hierarchy are satisfactory or can be upgraded to support an extractive industry without affecting the safety of road users and the sustainability of the transport network; and

(c) achieving a high level of ground water protection.

29. Under LPP 6.2:

(a) the development must not prejudicially affect native flora and fauna; groundwater quality, quantity and use; surface drainage and surface water quality including discharge of sediment and sites of cultural and/or historic significance on or near the land: LPP 6.2 AS1.2.1;

(b) excavation must not occur within 2 metres of the estimated maximum ground water levels: LPP 6.2 AD1.2.3;

(c) buffer distances must be in accordance with the EPA Separation Guidelines: LPP 6.2 AD1.3.1;

(d) visual screening must be provided through the retention of existing vegetation or the provision of an appropriate landscaping screen/bund: LPP 6.2 AD1.4.1; and

(e) the development application should be accompanied by a Traffic Impact Assessment that demonstrates the local network capacity is sufficient to accommodate the additional traffic and proposed truck volumes generated by the development: LPP 6.2 AD1.5.4.

30. If the Application does not satisfy the requirements of the LPP 6.2 as described at above paragraph 30, the Applicant must demonstrate how it will satisfy the performance criteria set out in LPP 6.2, including that the proposed development:

(a) “demonstrates a negligible impact on the amenity of residential areas by way of vehicular traffic, noise, dust, blasting and vibration”: LPP 6.2 PC1.1.1.; and

(b) “demonstrates satisfactory mitigation and management measures in accordance with [the EPA Separation Guidelines]”.

Application of the relevant legislation and policies

Separation Distance

31. The Application proposes a separation distance of 140 metres between the proposed extraction site on 103 Boyanup Road West and the sensitive land use, being the residential dwelling on 121 Boyanup Road West: Table 4, Paragraph 2.11 of the Operations Plan.

32. Therefore:

    (a) the Application does not comply with the minimum separation distance of 300 to 500 metres as recommended in the EPA Separation Guidelines which are incorporated into and become the minimum separation distance requirements under SPP 2.4, SPP 2.5 and LPP 6.2; and

    (b) the Application proposes a separation distance of less than 50% of the minimum required separation distance.

33. The Operations Plan relies on the assertions that:

    (a) 121 Boyanup Road West is: “periodically uninhabited”; and

    (b) it will undertake excavation activities on the part of the development closest to 121 Boyanup Road West during periods when it is uninhabited.

34. However, the above described assertions in the Operations Plan are false because 121 Boyanup Road West is inhabited by Marie Fisher, her Husband Dudley Fisher and, from time-to-time, permanent lodgers: paragraphs 7 to 11 of the Statutory Declaration. The question of habitation is not limited to instances of permanent residence but categorised by human occupation, use and activity: *Nona on behalf of the Badulgal, Mualgal and Kaurareg Peoples (Warral & Ului) v State of Queensland (No 5)* [2023] FCA 135 at [196].

35. Therefore, it will not be possible for the Applicant to undertake excavation as proposed in the Application because 121 Boyanup Road West is inhabited.

36. The Operations Plan does not otherwise demonstrate, or even address, how the Applicant proposes to mitigate or manage a sensitive land use within 140 metres of the proposed extraction area.

37. Further, the Operations Plan states that the Applicant has: “undertaken extensive consultation” with Marie Fisher, being “Resident No.1” referred to in the Application: paragraph 2.11 of the Operations Plan.

38. However, the Applicant’s assertion in that regard is false because the Applicant has never consulted about the Application with Ms Fisher: paragraph 11 of the Statutory Declaration.

39. If the Applicant had consulted with Ms Fisher, it would likely have ascertained that Mr Fisher suffers from various significant health concerns, including:

    (a) Chronic Obstructive Pulmonary Disease (Emphysema);

    (b) Heart Failure;

    (c) Dementia; and

    (d) Post Traumatic Stress Disorder,

    each of which will likely be exacerbated by the proposed extractive works: paragraphs 14 to 18 of the Statutory Declaration and attachment “MF2” to the Statutory Declaration.

40. Therefore, the Operations Plan does not:

    (a) demonstrate: “that extractive industry operations are adhering to designated separation distances and will not impact or be impacted by sensitive land uses” as required under clause 6.5(d) of SPP 2.4;

(b) demonstrate satisfactory mitigation and management measures in accordance with [the EPA Separation Guidelines] as required under LPP 6.2 PC1.3.

41. The Shire should reject the Application in accordance with clause 3.2(a) of the SPP 2.4 Guidelines because the proposed extractive industry should not be approved within the separation distance of a sensitive land use (residential habitation).

42. Alternatively, the Shire should, to allow appropriate consideration of the Application, at least:

(a) require the Applicant to obtain a scientific study based on site-and industry-specific information demonstrating that a separation distance of 140 metres from the residential dwelling at 121 Boyanup Road West will not result in: "unacceptable impacts" to the environment, use and amenity of 121 Boyanup Road West; and

(b) if the Applicant cannot demonstrate that unacceptable environmental impacts are likely to be avoided, the Shire must dismiss the Application,

in accordance with clause 5.12(d) of SPP 2.5 and the EPA Separation Guidelines.

Groundwater Separation

43. The Application proposes a minimum separation distance of 1 metre between the maximum groundwater elevation: paragraph 5.2.2 of the Operations Plan.

44. Therefore, the Application does not comply with the minimum 2 metre groundwater separation requirements under LPP 6.2, AD1.2.3.

45. Further, Marie Fisher relies on the letter enclosed with these submissions from MBS Environmental dated 14 December 2023 (**MBS Environmental Report**) which states under the heading: "Groundwater" that:

> "The methods used to estimate the maximum groundwater levels for the extraction area, as presented in the application, are not particularly reliable. The methods involve rudimentary extrapolation from two bores, neither of which cover the southern part of the extraction area where the groundwater level is assumed to be the highest. As the maximum groundwater level is a significant factor for the project design in determining the bottom of the pit floor, MBS Environmental suggest that further work is undertaken."

46. The Shire should reject the Application on the grounds that it does not comply with the groundwater requirements under LPP 6.2 because:

(a) clause 5(e) of SPP 2.4 recognises the need to: "ensure the extraction of basic raw materials avoids, minimises or mitigates any adverse impacts on water resources"; and

(b) clause 4 of the SPP 2.4 Guidelines requires the Shire to determine the Application by "avoid[ing] the exposure of groundwater and maintain the required vertical separation distances to groundwater for sequential land use".

47. Alternatively, the Shire should, to allow appropriate consideration of the Application, at least require the Applicant to:

(a) undertake further assessment of the maximum groundwater level at the proposed development site using a more reliable method of assessment taking into account the groundwater levels across the whole development site; and

(b) obtain and produce a report from a suitably qualified hydrologist including modelling of the groundwater levels in the local area and any adverse impacts on the groundwater caused by the proposed extraction works,

as referred to in the MBS Environmental Report.

Traffic Impacts

48. The Application is not supported by a Traffic Impact Assessment demonstrating that the road network capacity is sufficient to accommodate the additional traffic and proposed truck volumes of approximately 100 trucks and vehicles each day as required under LPP 6.2, AD1.5.4.

49. The Applicant's proposed haulage route includes an: "internal track" along the boundary of 121 Boyanup Road West.

50. The Application states at paragraph 4.1 of the Operations Plan that only a single car length of the proposed haulage route will be asphalt at the intersection and the remainder of the track will be: "gravel".

51. The Application includes insufficient information about how the Applicant intends to mitigate or manage the generation of dust along the haulage route, which bounds 121 Boyanup Road West.

52. Therefore, the Shire of Capel should dismiss the Application because it is devoid of the information required to demonstrate that the increased haulage traffic to the proposed development will not cause an adverse impact on the inhabitants of 121 Boyanup Road West, including by virtue of noise, dust pollution and safety, particularly when 100 trucks and vehicles each day are entering and exiting the proposed development along the boundary of 121 Boyanup Road West.

53. Alternatively, the Shire should, to allow appropriate consideration of the Application, at least require the Applicant to obtain a Traffic Impact Assessment addressing the criteria described in Appendix 1 of the SPP 2.4 Guidelines.

MBS Environmental Report

54. The MBS Environmental Report refers to various defects in the Application which support Ms Fisher's submission that the Application should be dismissed, in summary including:

(a) the Application does not include the Finished Development Plan or a sufficient Existing Features and Contour Plan as required under Appendix 1 of LPP 6.2;

(b) the 10 metre setbacks provided for in the Application are less than half of the 20 metre setbacks required for the proposed development without any justification or explanation of how the reduction in set backs will be managed;

(c) the Application does not include a flora and vegetation survey meeting current Environmental Protection Authority standards;

(d) vegetation immediately to the south and east of the extraction area is highly likely to qualify as the federally listed "TEC Banksia Woodlands of the Swan Coastal Plain" (state PEC) and has been tentatively mapped as such by DBCA in their TEC/PEC database. The current extraction plan includes 10 m setbacks from property boundaries and this TEC. The approved federal conservation advice for the TEC recommends minimum 20 m buffer (Department of the Environment and Energy, 2016);

(e) a DBCA data layer called Tuart Woodlands (DBCA-048) indicates potential presence of tuart woodlands on the 103 Boyanup Road West and some surrounding properties. Tuart woodlands could qualify as federally listed TEC Tuart (*Eucalyptus gomphocephala*) Woodlands and Forests of the Swan Coastal Plain ecological community (state PEC). The application is not clear on whether tuarts are present on the 103 Boyanup Road West. A targeted survey for the Tuart woodland TEC would be required to confirm presence or absence and to guide consideration of further setbacks;

(f) the Application notes that there is an Environmentally Sensitive Area (ESA) associated with a TEC approximately 400 m to the south of the subject site. However, the application does not clarify that the mapping for this ESA (that includes a buffer around the TEC) intersects the southern parts of the extraction area. The proposed haulage route is also within the mapped, buffered boundary of the ESA. The TEC is associated with a wetland that is downgradient from the proposed extraction area and access track. Further information on the ESA and impact avoidance for example including minimising clearing and maintaining hydrology and water quality is needed;

(g) the fauna survey included in the Application does not cover the entire proposed extraction area;

(h) further information is required about the location and design of the bund referred to at paragraph 4.4 of the Water Management Plan;

(i) further information is required about the location and design of the “hand stand area” referred to at paragraph 4.4 of the Water Management Plan;

(j) the access track to the site is proposed to be constructed across mapped multiple use wetlands that are upgradient of the conservation category wetland TEC (ESA) located south of Boyanup Road West but the Application does not include any information about how the existing hydrology will be maintained and sedimentation minimised;

(k) the Noise Management Plan states that the pit floor of the extraction area will be at 12.6m AHD, however the noise assessment has assumed that pit floor will be at 10m AHD (see Section 4.2.2 of noise assessment). This significant difference could have resulted in noise levels at 121 Boyanup Road West being underestimated in the noise assessment;

(l) there are inconsistencies in the application documentation regarding what machinery will be used on site. Therefore it is unclear whether the noise modelling is accurate;

(m) the Application includes insufficient information about the proposed noise bund. The location of the proposed noise bund and the location of the proposed haulage route appear inconsistent. There is no information in the Application about the maintenance of existing drainage where the noise bund crosses mapped wetlands or how the bund will be constructed and managed to minimise dust emissions;

(n) the dust rating in the Dust Management Plan is incorrectly calculated. The correct dust rating would require additional measures to control and monitor dust;

(o) the assertion in the Application that the proposed development is not visible from Boyanup Road West and Bussell Highway is wrong; and

(p) the proposed noise bund will block views of the rural landscape and have a visual impact on the residents of 121 Boyanup Road West.

Land Valuation

55. Marie Fisher relies on the Valuation Report by Damien Schifferli AAPI Licenced Valuer 37986, a certified practicing valuer of Accumentis dated 18 December 2023 (**Valuation Report**) enclosed with these submissions.

56. The Valuation Report states at paragraph 5.1 that:

> *"There is a proposal by the adjoining northern property owner to extract the sand resource contained on their property. This sand extraction will detrimentally affect the subject property's value due to the noise, sand and dust pollution and truck movements that will be visible from the residence"*.

57. The Shire must consider the Valuation Report under the Regulations because it demonstrates, considering the relationship between Lot 103 Boyanup Road West and 121 Boyanup Road West, being adjoining land, that the proposed Extractive Industry will have detrimental effect on the value of Lot 121 Boyanup Road West (clause 67(2)(m)(ii) of the Regulations).

58. The Shire must consider the Valuation Report under the Regulations because it demonstrates that the proposed Extractive Industry on 103 Boyanup Road West will have a detrimental impact on the amenity of the locality including detrimental social impacts, particularly on 121 Boyanup Road West (clause 67(2)(n) of the Regulations) by decreasing the value of the adjoining land; 121 Boyanup Road West.

59. The Shire should, therefore, dismiss the Application because will cause a loss of amenity to the locality, particularly to Ms Fisher in her capacity as the Registered Proprietor of 121 Boyanup Road West, and it is incompatible with its setting.

Defective Application

60. Appendix 1 of LPP 6.2 stipulates the minimum requirements for: "Extractive Industry Applications".

61. The Application does not comply with the minimum requirements under the LPP 6.2 because it does not include:

    (a) background information regarding existing utilities and services or confirming that no such utilities or services exist (Item 2.l of LPP 6.2);

    (b) the proposed clearing methods in circumstances where "vegetation clearing" is referred to at clause 5.3 of the Operations Plan (Item 4.e of LPP 6.2);

    (c) proposed infrastructure (Item 4.m of LPP 6.2);

    (d) public danger signage and fencing (Item 4.n of LPP 6.2);

    (e) Traffic Impact Assessment (Item 4.r of LPP 6.2);

    (f) justification for variation from Shire requirements (Item 4.s of LPP 6.2);

    (g) vegetation Clearing Plan including DWER clearing application documentation and status (Item 5.a of LPP 6.2);

    (h) visual impact on surrounding properties (Item 5.k.iii of LPP 6.2);

    (i) Rehabilitation Implementation Plan – Risk Assessment (Item 6.d of LPP 6.2);

(j) Rehabilitation Implementation Plan – Implementation Strategy (Item 6f of LPP 6.2); and

(k) Rehabilitation Implementation Plan – Implementation Methodology – fence installation and access tracks (Item 6.g of LPP 6.2).

62. Therefore, the Shire of Capel should reject the Application.

Considerations under the Regulations

63. The Shire of Capel should dismiss the Application considering the criteria under clause 67 of the Regulations for the above described reasons and because:

(a) the proposed development of an "Extractive Industry" at 103 Boyanup Road West is incompatible with its setting, being only 140 metres from a residential dwelling, particularly in circumstances where that residential dwelling is inhabited by a resident with serious medical conditions that will likely be exacerbated by noise and dust emanating from the proposed development (clause 67(2)(m)(ii) of the Regulations);

(b) the proposed development of an "Extractive Industry" will have an unreasonable impact on the amenity of the rural locality caused by:

(i) noise and dust emissions;

(ii) significantly increased haulage traffic potentially exceeding 100 trucks or vehicles each day;

(iii) the clearing of native vegetation,

each of which will have an environmental and social impact on the locality, particularly on 121 Boyanup Road West (clause 67(2)(n) of the Regulations);

(c) 103 Boyanup Road West is not suitable for the development of an "Extractive Industry" taking into account the possible risk to human health or safety, particularly of the residents of the residential dwelling located only 140 metres from the proposed development (clause 67(2)(r) of the Regulations);

(d) there is no evidence in the Application that the road system in the locality can support the traffic, being 100 trucks and vehicles each day, to be generated by the proposed development or of the probable effect of such traffic on traffic flow and safety (clause 67(2)(t) of the Regulations); and

(e) the Valuation Report supports the above propositions about the incompatibility and unreasonable impact on amenity by its conclusion that the proposed Extractive Industry will reduce the value of 121 Boyanup Road West.

Orderly and proper planning principles

64. The Application must be assessed in accordance with the: "principle of orderly and proper planning", being:

(a) "Commercial considerations such as competition or demand are not relevant in determining the community need and the planning authority must turn to matters which are the proper subjects of town planning such as demographics, transportation, land use patterns, government policies, environmental considerations and the panoply of factors that make up the concept of orderly and proper planning": *City of Wanneroo v Tah Land Pty Ltd* [2020] WASC 249 at [391] citing *Pinder Architects Pty Ltd v City of Stirling* (1996) 92 LGERA 165, 172 (per Malcolm CJ);

(b) “where it is proposed to develop part of the land, the development is to be assessed by regard to the uses of the remainder of the land together with the land and infrastructure that surrounds it”: *City of Wanneroo v Tah Land Pty Ltd* [2020] WASC 249 at [391];

(c) “the exercise of a discretion within the planning context should be conducted in an orderly way - that is, in a way which is disciplined, methodical, logical and systematic, and which is not haphazard or capricious”: *Marshall v Metropolitan Redevelopment Authority* [2015] WASC 226 at [179];

(d) “the exercise of discretion would clearly need to have regard to any applicable legislation, subsidiary legislation and planning schemes (such as region schemes, town planning schemes, local planning schemes) and policy instruments”: *Marshall* at [180];

(e) “there is no reason in principle why planning legislation and instruments will be the only matters warranting consideration in determining what is a 'proper' planning decision. The matters which warrant consideration will be a question of fact to be determined having regard to the circumstances of each case”: *Marshall* at [181]; and

(f) “While the exercise of discretion will involve a judgment about what is suitable, appropriate, or apt or correct in a particular case, that judgment must (if it is to be ‘orderly’) be an objective one. If the exercise of discretion is to be an orderly one, the planning principles identified as relevant to an application should not be lightly departed from without the demonstration of a sound basis for doing so, which basis is itself grounded in planning law or principle. A broad range of considerations may be relevant in that context”: *Marshall* at [182].

65. The Shire cannot both:

(a) satisfy the requirement under the Regulations and the above cited authorities that it consider the Application in accordance with orderly and proper planning principles; and

(b) approve the Application,

because the Application does not comply with the applicable legislation, subsidiary legislation, planning schemes and policy instruments and does not include any reason, grounded in planning laws, principles or otherwise, why the Shire should depart from those principles.

EPA

66. Section 38(4) of the *Environmental Protection Act 1986* (WA) (**EPA**) requires that a decision making authority refer a proposal to the Environmental Protection Authority if it has notice of a proposal that “appears to be” a significant proposal.

67. The term “Significant proposal” under the EPA means: “a proposal likely, if implemented, to have a significant effect on the environment”.

68. The term “environment” means: “living things, their physical, biological and social surroundings, and interactions between all of these”.

69. Clause 4.8 of the SPP 2.4 Guidelines recognises:

(a) “Noise, dust and blasting are the main risks that require management to avoid adverse health and amenity impacts to sensitive land uses and the community in general”; and

(b) “Extractive industry proposals that are likely to generate dust and could affect human health may be subject to the provisions of the Environmental Protection Act 1986 and subsidiary regulation and policies”.

70. The Applicant has, without justification, ignored the minimum separation distance requirements under the EPA Separation Guidelines and proposes a separation distance of less than half of the minimum required separation distance between an Extractive Industry and a residential dwelling.

71. If the Shire of Capel does not dismiss the Application, it must refer the Application to the Environmental Protection Authority for assessment particularly in circumstances where:

(a) the proposed development will be situated 140 metres from a residential dwelling; and

(b) Mr Fisher, being a permanent resident of that residential dwelling, suffers from significant medical conditions which are likely to be exacerbated by the dust and noise from the proposed development.

Conclusion

72. The Shire of Capel should dismiss the Application.

73. If the Shire of Capel does not dismiss the Application, it should:

(a) require the Applicant to provide for public comment the further documents and information referred to above; and

(b) refer the Application to the Environmental Protection Authority under section 38 of the EPA.

Dentons Australia

Dentons Australia
For and on behalf of Marie Anne Fisher

DOCUMENT 2
STATUTORY DECLARATION OF MARIE ANNE FISHER

Statutory Declaration of Marie Anne Fisher
Oaths, Affidavits and Statutory Declarations Act 2005 (WA)

I, Marie Anne Fisher of 121 Boyanup Road West, Stratham in the State of Western Australia, farmer declare as follows:

1. I declare this statutory declaration in support of my opposition of Leeuwin Civil Pty Ltd's application to the Shire of Capel for development approval for use of part of Lot 103 Boyanup Road West, Stratham (**103 Boyanup Road West**) for an "Extractive Industry (Sand)" (**Application**).

2. I am the Registered Proprietor of Lot 153 on Deposited Plan 301915 being all of the land shown on Certificate of Title Volume 1026 Folio 912 more commonly known as 121 Boyanup Road West, Stratham (**121 Boyanup Road West**). Attached hereto and marked "**MAF1**" is a true copy of the Certificate of Title for 121 Boyanup Road West.

3. The northern boundary of 121 Boyanup Road West abuts the southern boundary of 103 Boyanup Road West.

4. My husband, Dudley Bernard Fisher, and I live at the homestead at 121 Boyanup Road West.

5. The homestead is approximately 140 metres from the site of the quarry proposed in the Application.

6. 121 Boyanup Road West is our family farm and it has been owned by various members of our family since approximately 1975.

7. Dudley and I occasionally spend one or two nights at our beach house in Dunsborough and previously spent longer periods of time at our holiday home in Broome. However, we sold our holiday home in Broome in 2022.

8. I am never away from the farm for more than one or two nights at a time because I need to be at the farm to feed and tend to our animals.

9. Recently, Dudley spent some extended periods of time in hospital because of the health issues described at below paragraph 14.

10. Dudley and I also often have lodgers staying with us at 121 Boyanup Road West. Until recently, a French couple lived with us for over a year.

11. Any assertions by the Applicant or any of its agents or representatives, that:

    (a) the Applicant has consulted with me about the Application; or

    (b) 121 Boyanup Road West is "periodically uninhabited",

    is false.

12. The only engagement I have had with any representative of the Applicant is when I walked out of my homestead one day earlier this year and found a person standing on our farm with some

equipment. I asked the person what they were doing and they said to me words to the effect that they were conducting some "monitoring" for the owner of the land next door.

13. The Applicant did not ask me whether its representative could enter onto our farm or whether they could undertake "monitoring". I have never given the Applicant permission to enter onto our farm or to undertake any "monitoring".

14. I have significant concerns about the Application for the reasons detailed in the documents submitted to the Shire of Capel with this Statutory Declaration, particularly because Dudley is a Vietnam Veteran and he suffers from the following medical conditions:

    (a) Chronic Obstructive Pulmonary Disease (Emphysema);

    (b) Heart failure; and

    (c) Dementia.

    Attached hereto and marked "**MAF2**" is a letter from Dudley's doctor detailing his medical history.

15. Dudley suffers from shortness of breath, wheezing and coughing.

16. Air pollution and dust are triggers for Chronic Obstructive Pulmonary Disease (Emphysema) and even something as minor as cooking fumes can trigger a flare up of those symptoms.

17. I am concerned that if the Application is approved, the dust from the extraction works and caused by the 100 trucks and vehicles travelling along the boundary of our farm each day will be a major health hazard to Dudley.

18. I am also concerned that the noise of:

    (a) the extraction works,

    (b) the loading, unloading and manoeuvring of trucks and vehicles (estimated 100 each day),

    will confuse Dudley and cause him distress and anguish and have a negative effect on his dementia symptoms.

19. In addition to my concerns about Dudley, I expect the works undertaken if the Application is approved will grossly adversely affect my and other's amenity of my farm caused by the undoubted dust, noise and substantial increase in traffic by 100 large trucks each day accessing 103 Boyanup Road West using Boyanup Road West and Bussell Highway and the busy intersection between them.

20. I am also concerned that the proposed quarry will destroy a place of cultural significance because I believe, based on stories passed down through my family, that 103 Boyanup Road West was given to a European convict called "Moses" when he was pardoned for the crime of kicking a police man's horse and the land then became a public stopping spot.

21. I oppose the Application for the reasons set out in this Statutory Declaration and my submissions filed with the Shire of Capel.

22. This declaration is true and I know that it is an offence to make a declaration knowing that it is false in a material particular.

23. This declaration is made under the *Oaths, Affidavits and Statutory Declarations Act 2005* (WA).

At RMB 121 STRATHAM 6237 (place)

On 15. 12. 2023 (date)

By _____ (signature of Marie Anne Fisher)

In the presence of:

_____ (signature of authorised witness)

HEATH NAYTON FISHER (name of authorised witness)

LICENSED SURVEYOR. (Qualification of authorised witness)

MAF1

WESTERN AUSTRALIA

TITLE NUMBER	
Volume	Folio
1026	**912**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts
REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 153 ON DEPOSITED PLAN 301915

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

MARIE ANNE FISHER OF UNIT 1 4 MENTOR PLACE DUNSBOROUGH WA 6281
(T O636116) REGISTERED 9/2/2021

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	1026-912 (153/DP301915)
PREVIOUS TITLE:	600-199
PROPERTY STREET ADDRESS:	121 BOYANUP RD WEST, STRATHAM.
LOCAL GOVERNMENT AUTHORITY:	SHIRE OF CAPEL

NOTE 1: L331404 DEPOSITED PLAN 301915 HAS YET TO BE PRODUCED.

MARIE FISHER

HEATH FISHER

LANDGATE COPY OF ORIGINAL NOT TO SCALE 01/12/2023 02:23 PM Request number: 65937470

Landgate
www.landgate.wa.gov.au

MAF2

DUNSBOROUGH
MEDICAL CENTRE

Suite 4, Seymour house, 54 Dunn Bay Road
Dunsborough WA 6281
PH: (08) 9746 3300 Fax: (08) 9746 3388
E: dunsborough.mc@partneredhealth.com.au
Healthlink EDI: dunsmedc

14/12/2023

Summary of past medical history

RE: **Mr Dudley Fisher**
4 Mentor Place
DUNSBOROUGH. 6281
0487 001 224

lcolton@ychh.com.au

DOB: 30/05/1945

Past Medical History:

	hypertension
	PTSD - DVA
	Aortic stenosis
20/06/2023	Congestive cardiac failure
28/06/2023	Rapid atrial fibrillation
09/08/2023	Microdiscectomy
09/08/2023	TAVI - aortic valve surgery
09/08/2023	Emphysema
09/08/2023	Dementia

Yours sincerely

Dr Christopher Jensen
MBBS, Dip Child Health, FRACGP

236468CX

HEATH FISHER.

MARIE FISHER

DOCUMENT 3
LETTER FROM MBS ENVIRONMENTAL TO THE FISHER FAMILY DATED 14 DECEMBER 2023

MARTINICK BOSCH SELL PTY LTD
ABN 60 102 614 479
MBS ENVIRONMENTAL
environmental and geoscience consultants

4 Cook Street
West Perth WA 6005
Australia

Telephone +61 8 9226 3166
Facsimile +61 8 9226 3177
Email: info@mbsenvironmental.com.au

14 December 2023

Fisher Family
121 Boyanup Road West
Stratham WA 6237

Attention: Heath Fisher

Dear Heath

Re: Proposed Extractive Operations on Lot 103 Boyanup Road West in Stratham — Comments on Development Application

As requested, Martinick Bosch and Sell Pty Ltd (MBS Environmental) have reviewed the Development Application for sand extraction on Lot 103 (Diagram 51141) along Boyanup Road West in Stratham, currently open for public comment on the Shire of Capel website. It is understood that the proposed operations are located adjacent to 121 Boyanup Road West, where the Fisher family residence is located.

This letter provides a summary of the key concerns identified in the review by MBS Environmental. It is understood that this letter may be used to support the Fisher family's submission regarding the development application.

Development Plans

- Shire of Capel Local Planning Policy (LPP) 6.2 for extractive industries details requirements for an 'Existing Contour and Feature Plan' and a 'Finished Development Plan'. The application package being advertised on the Shire of Capel website does not seem to include such plans. Whilst a range of figures are included, these do not meet the specified level of detail.
- Whilst a contour survey for part of the property is included, there is no plan presenting the proposed extraction area and access track in the context of the landform contours, other features and setbacks. There is also no plan showing stockpiling locations or indicating the direction of extraction.
- Extractive Industry report Figure 8 called 'Final Contours' appears to be incorrect as in order to achieve the proposed final contours, substantial ground disturbance would be required outside the extraction area (based on comparison to the site survey showing existing contours). The Final Contour Plan should be revised to more accurately present the planned post-extraction landform and also to show how this final pit landform ties into the surrounding landform at least 40 m outside the extraction area (as requested in LPP 6.2).
- Detailed development plans are a critical part of any development application and should be made available for public comment.

Setbacks and Separation Distances

- The Development Application proposes that the extraction area will have 10-m setbacks from the southern and eastern property boundaries. This is half of the typical 20-m requirement along property boundaries detailed in the Shire of Capel LPP 6.2 for extractive industries. Further detail on why a reduction in setbacks

is being proposed and how this will be managed to avoid adverse impacts is needed to assess the appropriateness of these setbacks.

- Separation distance from the extraction area to the closest residential dwelling is only 140 m. The closest residence is located on 121 Boyanup Road West, to the south of the proposed extraction area. For extractive operations, the Environmental Protection Authority (EPA) typically recommends a buffer of 300 m to 500 m from sensitive land uses. Whilst this buffer distance can be reduced (and often is reduced), such a reduction will need to be supported by evidence that the proposed operations can be managed without significant impacts on the closest residences, particularly in relation to impacts from noise and dust. As detailed below under noise and dust, further information is needed to determine whether the proposed 140-m separation distance is sufficient.
- It is noted that the Fisher family has advised that, contrary to information included in the Development Application, they have not been sufficiently consulted and that the residential dwelling on 121 Boyanup Road West is in use all year round. Further, dust is a particular concern to the elderly residents and has potential to aggravate pre-existing health conditions.

Flora and Vegetation

- No flora and vegetation survey meeting current EPA standards has been undertaken on the property to date based on information contained in the application documentation. Therefore uncertainty remains regarding vegetation types, vegetation condition and the potential for significant flora to occur on site. A fauna survey undertaken by a zoologist has been used to describe flora and vegetation values, however it is noted that this survey focused on key habitat species for fauna and evidence of fauna presence. The work was undertaken by a zoologist, not a botanist, and was undertaken in April 2023 which is outside of the main flora and vegetation survey season for the area subject of the application. Therefore, whilst the fauna survey provides reliable information on fauna habitat, it is not suitable to use as a replacement for a flora and vegetation survey.
- Vegetation remaining in the proposed extraction area is unlikely to meet criteria for Threatened or Priority Ecological Communities (TEC or PEC) due to the degraded condition. However, vegetation immediately to the south and east of the extraction area is highly likely to qualify as the Federally listed TEC Banksia Woodlands of the Swan Coastal Plain (also a State listed PEC) and has been tentatively mapped as such by DBCA in their TEC/PEC database. The current extraction plan includes 10-m setbacks from property boundaries and this TEC. The approved Federal conservation advice for the TEC recommends a minimum 20-m buffer (Department of the Environment and Energy, 2016).
- It is noted that DBCA data layer called Tuart Woodlands (DBCA-048) indicates potential presence of tuart woodlands on the property and some surrounding properties. Tuart woodlands may qualify as a Federally listed TEC Tuart (*Eucalyptus gomphocephala*) Woodlands and Forests of the Swan Coastal Plain ecological community (state PEC). The application is not clear on whether tuarts are present on the property. A targeted survey for the Tuart woodland TEC would be required to confirm presence or absence and to guide consideration of further setbacks. It is noted that depending on the size of a tuart patch (that could extend to surrounding properties), the vegetation may qualify as TEC even if the understorey has been largely replaced by weeds.
- Section 5.3 of the document called 'Extractive Industry (Sands) Operations Plan' (EI report) mentions that "as a component of the environmental approval process, it is proposed to protect and improve areas of onsite native vegetation (refer to Figure 9)". Figure 9 indicates that an area of vegetation will be retained. It is not clear what this means and why only this area has been selected for retention. All native vegetation is required to be retained unless clearing approvals are obtained or relevant exemptions apply. Further information is required concerning whether this area is proposed to be fenced off to exclude grazing and protected with a conservation covenant. Further information is also needed regarding what the proposed improvement works are. It would also be good to have baseline surveys for this area to be retained to understand flora, vegetation and fauna values that are currently present in this area and how these compare to the proposal area.
- Section 4 of the EI report states that a 10-m buffer to the drip line of all trees outside of the extraction area will be maintained. If this means that operations will not in any way disturb the ground within 10-m of the

drip line of all trees outside the extraction area, then the extraction area boundary and final contours should be adjusted accordingly.

Environmentally Sensitive Areas

- The application notes that there is an Environmentally Sensitive Area (ESA) associated with a TEC approximately 400 m to the south of the subject site. However, the application does not clarify that the mapping for this ESA (that includes a buffer around the TEC) intersects the southern parts of the extraction area. The proposed haulage route is also within the mapped, buffered boundary of the ESA. The TEC is associated with a wetland that is downgradient from the proposed extraction area and access track. Further information on the ESA and impact avoidance (e.g. minimising clearing, maintaining hydrology and water quality) is needed.

Fauna

- The fauna survey (Harewood 2023) does not cover the entire proposed extraction area. Along the southern and eastern property boundaries, the fauna survey area appears to have a 20-m setback from the property boundary whereas the proposed extraction area has a 10-m setback. Based on aerial photography, there may be potential Black Cockatoo breeding trees (trees with diameter at breast height >50 cm) within this unsurveyed area. Therefore Section 2.6 of the EI report describing the number of DBH trees impacted may require revising.
- Fauna habitat available within the proposed extraction area is very limited but it is noted that based on DBCA records, the surrounding areas of native vegetation are known to support a range of significant fauna species (e.g. Western Ringtail Possum, Black Cockatoos, Brush-tailed Phascogale, Western Brush Wallaby) that have potential to utilise the proposed extraction area to some degree.

Groundwater

- The methods used to estimate the maximum groundwater levels for the extraction area, as presented in the application, are not particularly reliable. The methods involve rudimentary extrapolation from two bores, neither of which cover the southern part of the extraction area where the groundwater level is assumed to be the highest. As the maximum groundwater level is a significant factor for the project design in determining the bottom of the pit floor, MBS Environmental suggest that further work should be required to be undertaken. The application proposes to maintain 1 m separation to the maximum groundwater level as opposed to the 2 m separation preferred in accordance with Shire of Capel LPP 6.2. Other recent extractive projects that have proposed less than 2 m separation, have involved an assessment by a suitable qualified hydrologist, including modelling of the groundwater levels in the local area, incorporating longer-term data from DWER regional monitoring bores.

Water Management Plan

- Section 4.2 of the Water Management Plan states that there will be a bund for water containment along the western margin for some stages. Further information on the location and design of this bund is necessary.
- Section 4.4 of the Water Management Plan states that fuelling will be undertaken on a hard stand area outside the pit area. Further information is required on the location of this hard stand and whether vegetation clearing for this area is needed.
- The Water Management Plan includes no figure to illustrate the location of water management related 'infrastructure'.
- The access track to the site is proposed to be constructed across mapped multiple-use wetlands that are upgradient of the conservation category wetland TEC (ESA) located south of Boyanup Road West. It would be good to provide further detail on the track design and associated drainage infrastructure to show how the existing hydrology will be maintained and sedimentation minimised.

Noise Assessment

- The noise assessment by Lloyd George Acoustics appears to be a draft document rather than final report. It is not clear whether the draft document has been included as an error or whether there is no final report.
- The Noise Management Plan states that the pit floor will be at 12.6 mAHD, however the noise assessment has assumed that pit floor will be at 10 mAHD (see Section 4.2.2 of noise assessment). This is a significant difference and may have resulted in underestimation of noise levels at the closest residence. The noise assessment should be revised to incorporate the accurate pit floor level of 12.6 mAHD.
- There are inconsistencies in the application documentation regarding what machinery will be used on site. For example, Section 3.1.2 of the Noise Management Plan states that bulldozer will be used, but this is not included in the equipment list in Section 3.3 of the same document. There is a similar issue in the EI report. Another example is that Section 3 of the Noise Management Plan states that no crushing or screening of material will be undertaken but the noise assessment indicates that screening will be undertaken. As different machinery emit different levels of noise, it would be good to clarify what machinery will be used and ensure noise modelling is undertaken for the specific machinery proposed to be in use.
- The noise assessment includes results for ambient noise measurements undertaken to determine background noise levels. The report does not specify where this data was collected apart from referring to Boyanup Road West in Stratham. Sampling location coordinates are required in order to verify the relevance of the presented noise results. It is noted that the sampling dates provided in text differ from dates in Figure 4-1 of the noise assessment.
- Section 3.2.2 of the noise assessment states that topographical data for the quarry area natural ground surface was sourced from GoogleEarth. The feature and contour survey undertaken for this site is likely more accurate than GoogleEarth and therefore it is suggested that the noise assessment is updated to incorporate site specific contour data.
- Section 4.2.1 of the noise assessment indicates that predicted noise levels during construction phase (topsoil removal and building noise bunds) exceed the normally assigned levels at the closest receiver (121 Boyanup Road West). Whilst it is acknowledged that noise exemptions apply to construction activities, these are subject to the construction activities meeting certain conditions as detailed in Section 2.1 of the noise assessment. Additional information on the construction phase should be included in Section 5 of the noise assessment and also in the Noise Management Plan. It is noted that the noise assessment states that an excavator will be used whenever possible to undertake the construction phase works (as excavator has lower noise emissions), however this has not been incorporated into the Noise Management Plan that states that a front end loader will be used for removal of topsoil.
- The proposed 4-m-high bund for noise mitigation is a relatively common requirement for extractive sites. However, further information is needed on the location of the proposed noise bund versus the location of the access track (the proposed locations seem to clash), maintenance of existing drainage where the noise bund crosses mapped wetlands, and how the bund be constructed and managed to minimise dust emissions.

Dust Management Plan

- Dust is typically one of the key management concerns for extractive operations, particularly when the closest residences are less than 300 m away.
- The risk assessment in Section 4.2 of the Dust Management Plan rates nuisance potential of the soil as low (2). This is considered too low for sand, with more appropriate rating being medium (4).
- The risk assessment also rates topography and protection provided by undisturbed vegetation as Medium screening (6). This is considered too low as the closest residence has very little screening by way of topography or undisturbed vegetation. Therefore, the more appropriate score is considered to be Little screening (12). It is noted that the 4-m-high noise bund along the property boundary may also generate additional dust if not sufficiently stabilised.
- Together, the above rating changes would result in the overall risk score increasing from 360 (low risk) to 504 (medium risk). Accordingly, additional measures to control and monitor dust are considered necessary.

Truck Movements

- No Traffic Impact Assessment has been provided as part of the Development Application. This is contrary to the current best practice and the 'acceptable development' criteria set in the Shire of Capel LPP 6.2 for extractive industry. Whilst a Traffic Impact Assessment may not always be necessary, MBS Environmental suggest that one is undertaken for this project considering:
  - The proposed maximum of 100 truck movements per day.
  - The proposed creation of a new entry point (cross over) to Boyanup Road West.
  - The relatively busy section of the Bussell Highway, with entries from Boyanup Road West, Fishermans Road and the Puma petrol station in close vicinity to each other, as well as the Bunbury Outer Ring Road works not far to the north.

Visual Impacts

- The application states that views of the subject site from the Boyanup Road West and Bussell Highway are obscured by roadside vegetation and that vegetation on the western boundary of the extraction footprint will be retained.
- Based on Google Maps street view and recent drive-byes, parts of the proposed extraction area will be visible from sections of the Boyanup Road West and Bussell Highway (including the Puma petrol station). The clearing of road side vegetation along Boyanup Road West to achieve sufficient sight distances for the new entry point, may also increase the visibility of the operations from Boyanup Road West.
- As a 4-m-high noise bund is proposed along the entire northern boundary of 121 Boyanup Road West, the sand extraction operations themselves are unlikely to be visible from this property. However, the bund itself and the way it blocks views of the rural landscape to the north, has a visual impact to the residents of 121 Boyanup Road West.
- Overall, it is suggested that the visual impacts of the project are explored further, with further management measures (e.g. planted vegetation screens) put in place where necessary.

Rehabilitation

- The application states that the entire extraction area will be rehabilitated to pasture that is consistent with the rural zoning and pre-existing landuse. However, as the proposed works involve removal of native vegetation, some native revegetation may be required by DWER as part of the Native Vegetation Clearing Permit process.
- It is noted that the rehabilitation section of the EI report does not include the level of detail specified for a rehabilitation implementation plan in the LPP 6.2.

Overall, the review identified a range of concerns regarding the proposed operations. Some of these concerns are critical to the project design and may impact the viability of the project. MBS Environmental suggest that the Fisher family request that the application documentation is revised to address the concerns raised and that any revised application is made available to the closest residents for another review.

Yours sincerely
MBS Environmental

K. Kauhanen

Kirsi Kauhanen
Senior Environmental Scientist

References

Department of the Environment and Energy (2016). Approved Conservation Advice (incorporating listing advice) for the Banksia Woodlands of the Swan Coastal Plain ecological community. Canberra: Department of the Environment and Energy. Available from: http://www.environment.gov.au/biodiversity/threatened/communities/pubs/131-conservation-advice.pdf.

DOCUMENT 3
VALUATION REPORT BY ACCUMENTIS DATED 18 DECEMBER 2023

Acumentis.



ABN: 30 096 877 191
ACN: 096 877 191

10 Victoria Street,
Bunbury WA 6230
PO Box 2493, Bunbury WA 6231

Tel: (08) 9792 5544

Valuation Report

[redacted]

Reliant Party:	Heath Fisher.
Purpose:	Property Sale Purpose.
Instructed By:	Heath Fisher.
Valuation Date:	14 December 2023
Inspection Date:	14 December 2023
Acumentis Ref:	2312004341

Acumentis are experts in Property Advisory Services for ...

- Family Law Services
- Self Managed Super Funds
- Tax Depreciation
- Commercial Valuations

Liability limited by a scheme approved under Professional Standards Legislation.



[redacted]

Executive Summary

IMPORTANT: All data provided in this summary is wholly reliant on and must be read in conjunction with the information provided in the attached report. It is a synopsis only designed to provide a brief overview and must not be acted on in isolation.

For the purpose of this report "Acumentis" means the company identified on the front of this report.

1.1 Property summary

Property address	[redacted]t, Stratham WA 6237			
Real property description	[redacted]lan 301915 as contained within Certificate of Title Volume 1026			
Registered proprietor/owner	Marie Anne Fisher. Registered 9 February 2021.			
Encumbrances	Nil			
Basis of valuation	Market Value Existing Dwelling.			
Site area	11.4406 ha			
Property description 'As Is'	Residential house with 4 bedrooms and 2 bathrooms.			
Built about	Circa 1974			
Building areas	**Living**	200 m²	**Verandah/alfresco**	64 m²
	Gazebo	24 m²	**Garage**	54 m²
Car accommodation	Detached lock-up garage for two vehicles.			
Marketability	Good			
Environmental issues	Known		**Heritage issues**	Known
Essential repairs	No			
Local authority/zoning	Shire of Capel		Rural	
Current use	Residential			
Relevant dates	**Valuation date**	14 December 2023	**Inspection date**	14 December 2023
	Date of issue	18 December 2023		

1.2 Recent sale history

	Sale date	Sale amount
Previous sale	19 December 2020	$850,000
Comment	Related party transaction.	

[redacted]

1.3 Valuation & assessment summary

Interest valued	Fee Simple Vacant Possession
Value component	Existing Dwelling
Land	$750,000
Improvements	$450,000
Market value	**$1,200,000**
	(One Million, Two Hundred Thousand Dollars)

1.4 Signatory



Valuer Damien Schifferli
AAPI Lic Val #37986
Certified Practising Valuer

Position Director

Entity Southpoint Nominees Pty Ltd trading as Acumentis

Office ACU - Bunbury & Busselton - WA

Acumentis are experts in Property Advisory Services for ...

Family Law Services

Self Managed Super Funds

Tax Depreciation Schedules

Commercial Valuations

Liability limited by a scheme approved under Professional Standards Legislation.

This Valuation Report is for the sole use only of the instructing party only and is not to be used for any other purpose by any other party. Any reliance, use, distribution, publication of the Report and/or any other representations made relating to the contents of the Report is restricted solely to the instructing party, and any additional parties expressly named in this Report.

No responsibility is accepted by the Valuer and/or Valuation Firm in the event that the instructing party to which this Report is addressed, or any other agreed additional reliant party(s) noted in this Report, relies, uses, distributes, publishes and/or otherwise represents anything contained in the Report for any other purpose apart from that expressly noted previously.

No responsibility is accepted by the Valuer and/or Valuation Firm to any other parties who rely, use, distribute, publish and/or otherwise represent anything contained in the Report for any purpose.

2.1 Assumptions, conditions and limitations

The valuation is prepared based on the following pertinent assumptions, conditions and limitations:

- Based on an unencumbered Fee Simple Title being obtained.
- **Without regard to the detriment caused by proposed sand extraction on the adjoining property.**
- The improvements comply with the approvals, conditions and requirements of all appropriate authorities.
- All the information supplied/sourced, including tenancy information (where applicable), in conducting this valuation consists of a full and accurate disclosure of all information that is relevant.
- Based on our observations, the site is not contaminated and we assume that no remediation works are required.
- No encroachment of the building over the lot boundaries nor any encroachment of adjoining buildings onto the subject land.
- The property is not affected by historical or anthropological matters other than those identified by the valuer within the body of this report.
- Any objective information, data or calculations set out in the Valuation will be accurate so far as is reasonably expected from a qualified and experienced valuer, reflecting due skill, care and diligence.
- It should be noted that this valuation does not purport to be a structural survey of the improvements nor was any such survey sighted or undertaken. This valuation is conditional upon detailed reports in respect of the structure and serviced installations of the property not revealing any defects requiring significant expenditure. Additionally, in the absence of a Building Certificate issued by Council or other approved certifier, this valuation is conditional upon the property complying with all relevant statutory requirements in respect of such matters as health, building and fire safety regulations.
- The client must review all Critical Documents to sight, prior to relying on this valuation assessment, to confirm that there are no issues which have a pertinent impact on the market value of the subject property.
- **Verifiable assumptions** relate to environmental issues, structural integrity of the improvements, compliance with applicable building regulations, condition of building services, zoning and encroachments and can be confirmed by obtaining appropriate documentation relating to each.
- Should any of the assumptions upon which our valuation assessment is made prove to be incorrect or inaccurate, this report should be referred to Acumentis for further comment/reassessment.

2.2 Disclaimers

Illicit Substances

Unless stated in the Report, we are unaware as to whether the subject property has undergone any testing for the presence of residual illicit drug substances. This assessment is predicated on the condition that the subject property is not contaminated as a result of user consumption and/or manufacture of illicit substances, and that there are no related chemical residues present on or in the premises. If the Reliant Party has concerns in this regard, we would recommend that you engage an appropriately qualified expert to undertake such a test. If chemical residue related to illicit substances is found to be present, this report should be returned to Acumentis for review and potential amendment.

GST

Valuations of residential property are undertaken on the basis that GST is not applicable. This valuation is prepared on the assumption that the subject property does not constitute a 'new residential premises' as defined under ATO Ruling GSTR 2003/3. Further it is assumed the basis that the subject property will transact as a residential property between parties not registered (and not required to be registered) for GST. The market valuation herein reflects a market transaction to which GST is not applicable.

[redacted]

Improvements/Structural Survey

This Valuation inspection and Report does not constitute a structural survey and is not intended as such. We have carried out an inspection only of the exposed and readily accessible areas of the improvements. Note, the Valuer is not a building construction or structural expert and is therefore unable to certify the structural soundness of the improvements. Readers of this report should make their own enquiries.

This valuation is on the basis that all improvements have been constructed in accordance with the appropriate planning and building regulations in force at the time of construction, and that all appropriate approvals have been obtained from the relevant authorities.

Improvements

This Valuation has been based on the condition of the structural improvements and the property in general as at the inspection date, and if the property has to be sold in circumstances where its condition has deteriorated and/or essential fixtures/fittings removed there is likely to be a significant write down in the asset value when compared to the current assessment. Under these circumstances the Valuer will not be responsible for any reduction in value. This valuation also assumes that all improvements on site are constructed in accordance with the Building Codes of Australia and that all materials used comply with relevant Australian Standards.

Aluminium Composite Cladding - Unless otherwise stated in our assessment evidence of aluminium composite cladding was not evident during the inspection and the assessment is on the basis that the improvements are not subject to rectification works.

Survey

The valuation is made on the basis that there are no encroachments by or upon the property. If the instructing party has any concerns regarding encroachments they should be referred to a Registered Surveyor for advice or current survey report. Should any encroachments exist or other affectations be noted by a survey report, this report should be returned to the valuer for comment. We reserve the right to amend our report upon receipt of this information.

Comparable Sales Evidence

The comparable sales evidence used in this valuation report are considered the most relevant sales based on our research, both in terms of physical comparison to the subject property and allowing for market changes between sale and valuation date. In many cases, we have not physically inspected the interior of the sales evidence quoted and have relied on sales evidence as recorded in available property sales databases including the number of bedrooms. We therefore cannot guarantee the accuracy of the information provided.

Land Dimensions/Area

Unless stated as otherwise in this report we advise that we have not searched or been provided with a copy of the current Title or Registered Plans and that any dimensions or land areas quoted in this report have been obtained from third party information sources and whilst every endeavour has been made to verify such information we accept no responsibility for inaccuracy of any information provided and relied upon.

Environmental

Unless stated otherwise in the report, no soil tests or environmental studies have been made available. Therefore, it should be noted that the valuation is subject to there being no surface or sub-surface soil problems including instability, toxic or hazardous wastes, toxic mould, asbestos or building material hazards in or on the property that would adversely affect its existing or potential use or reduce its marketability. Should any problems be known or arise, then the valuation should be referred to Acumentis for review as Acumentis deems appropriate.

The reliant party client acknowledges and recognises that Acumentis are not an expert in identifying environmental hazards and compliance requirements affecting properties.

Market Movement Clause

This valuation is current at the date of valuation only. The value assessed herein may change significantly and unexpectedly over a relatively short period including as a result of general market movements or factors specific to the particular property. Acumentis does not accept liability for losses or damage arising from such subsequent changes in value including consequential or economic loss. Without limiting the generality of the above comment, Acumentis does not assume any responsibility or accept any liability where this valuation is relied upon after the expiration of three months from the date of the valuation, or such earlier date if you become aware of any factors that have any effect on the valuation.

[redacted]

Certificate of Title

Unless stated as otherwise in this report we advise that a copy of the current Certificate of Title has not been provided or searched. It is a critical condition of this valuation that the property has clear title. Should any encumbrances, easements, leases or other restrictions not mentioned in this report be known or discovered then the valuation should be referred to the valuer for comment. We recommend a full title search be carried out. Should any easements, encumbrances or impediments on title be noted, our report should be returned for comment or amendment at that time. We reserve the right to amend our report at that time.

Asbestos

Unless stated otherwise within the report, no Asbestos Materials Report has been provided. Should any such matters be known or discovered, no reliance should be placed on the assessment of value unless Acumentis has been advised of these matters and has confirmed that the assessment is not affected. Acumentis has not physically inspected enclosed cavities or air-conditioning plant and equipment and this assessment assumes these areas do not include asbestos based materials.

Town Planning, Building and Other Searches

We advise that a search with the appropriate Council or other relevant authorities has not been carried out or has not been obtained and therefore this valuation has been undertaken on the on the basis that all necessary and appropriate town planning and/or building, consents, approvals and certifications have been issued for the use and occupation of the improvements as described in this report. We recommend the reader make their own enquiries in this regard. Should any issues arise from these enquiries, this report should be returned to the valuer for comment. We reserve the right to reassess value at that time.

Pest & Termite Infestation

Unless otherwise noted we advise that the inspection of the subject property did not reveal any obvious visible pest or termite infestation within reasonably accessible areas to the valuer. The client acknowledges and recognises that the valuer is not a pest inspector or pest expert. The absence of pests, including termites, can only be confirmed by a suitably qualified expert after a comprehensive inspection and the use of specialist equipment. Should any pest or termite infestation issues become apparent, this report should be returned to the valuer for comment. We reserve the right to reassess the value of the property at that time.

Utility Services

We advise that the valuer has not tested any of the services. Should any utility service concerns become apparent, this report should be returned to the valuer for comment. We reserve the right to reassess the value of the property at that time.

Flood Search

We advise that we have not undertaken a formal search to confirm whether or not the property is subject to flooding, or has previously been flooded. We recommend you undertake your own enquiries in this regard. Should any issues arise this report should be referred back to the valuer for comment and or amendment.

Full Disclosure & Reasonably Available Information

The instructing party acknowledges its responsibility for full disclosure of all relevant information and undertakes to provide all relevant documents in its possession that may have an effect on the service to be provided. This valuation is based upon information reasonably available to the valuer as at the date of issue in accordance with usual valuation practices.

Neither the valuer nor Acumentis has any pecuniary interest giving rise to a conflict of interest in valuing the property.

2.3 Definitions

Market Value is the estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion.

Highest and Best Use is the use of an asset that maximises its potential and that is physically possible, legally permissible and financially feasible.

[redacted]

Property Details

3.1 The land

Property identification	Site inspection, street address, cadastral map and Certificate of Title.
Title search undertaken	Yes
Real property description	[redacted]ted Plan 301915 as contained within Certificate of Title Volume
Site area	11.4406 ha



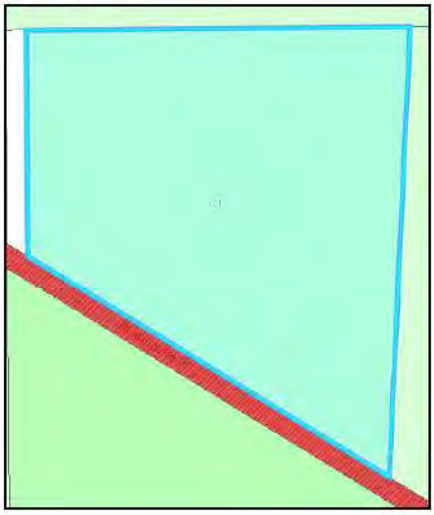
Source: Landgate

Local authority	Shire of Capel.
Zoning	Rural
Zoning effect	Single residential use is permitted under this zoning.

Land Information:
121 Boyanup Road West, STRATHAM 6237
Transfer of Land Act (Type 1) (114406.319m²)

Greater Bunbury Region Scheme (GBRS)
About the Greater Bunbury Region Scheme (GBRS)
Details :
Rural (Zone)

Local Planning Scheme (LPS)
About Local Planning Schemes
Shire of Capel Scheme No. 8
Rural (capel)
No R-code
No Restricted or Additional Uses
Special Control Area - Strategic Minerals and Basic Raw Materials - SCA6 (capel)



Source: PlanWA

[redacted]

Site description & access	The land comprises an irregular shaped, gently undulating, inside lot. The land is predominantly level with the exception of the portion of land to the north-western corner of the property which is defined by the existing bitumen driveway which is elevated consisting of bleached grey sand. The remaining predominantly level portion of land comprises sandy loams.



Source: Landgate

Services	Electricity, telephone, bottled gas, septic and rainwater tank(s) are connected to the property.
Location	The subject property is situated in the locality of Stratham, within the Shire of Capel, approximately 16 kilometres south of Bunbury and 187 kilometres south of Perth CBD. The locality has a population of approximately 793 (ABS 2021 SAL). The Shire has a population of approximately 18,175 (ABS 2021 LGA). There are limited facilities available within this locality, however a full range of amenities can be found within the City of Bunbury. Stratham is a coastal special rural locality south of Bunbury. All essential amenities are within close proximity. More specifically, the subject property is located on the eastern side of Bussell Highway near the intersection of Boyanup West Road.



Source: Google Maps

[redacted]

3.2 Building construction details

Year built	Circa 1974	
Style	Conventional	
Levels	Single level.	
Main walls & roof	Rendered brick and tile.	
Window frames	Aluminium	
Main interior linings	Plastered brick.	
Flooring	Concrete	
Parking	Lock-up detached garage.	
Internal condition	Good	
External condition	Good	
Areas	**Living**	200 m²
	Verandah/alfresco	64 m²
	Gazebo	24 m²
	Lock-up garage	54 m²
Accommodation	4 bedrooms, 2 bathrooms, kitchen, laundry, entry, lounge, meals, family room and wc.	
Interior layout	Good	
PC items	Kitchen: Floor cupboards with granite benchtop, stainless steel sink, wall oven, cooktop, rangehood and pantry. Bathroom - Single bowl vanity with laminate top, shower recess, bath and separate toilet. Ensuite - Single bowl vanity, shower recess and spa bath. Laundry - Single trough.	
Fixtures and features	Walk-in robe with good quality shelving. Upgraded bathroom to main bedroom. Built-in robes to secondary bedrooms. Upgraded kitchen and laundry facilities. Upgraded polished timber, tile and carpet floor coverings. Ducted air-conditioning. Timber bi-fold doors to lounge/dining. Wood heater.	

3.3 Ancillary improvements

Front timber decked alfresco terrace, additional side verandah, rear brick paved pergola, "Balinese style" thatched gazebo, below ground swimming pool enclosed by glass fencing, metal detached garage with additional 6 metre lean-to, rural Jarrah timber post and wire fencing, gravel driveway and paved parking area.

3.4 Essential repairs

An essential repair is any observable works required that renders the subject dwelling uninhabitable and/or does not meet the minimum standards to offer the subject for lease. It also covers items which if not given immediate attention, will diminish the structural integrity of the improvements and/or result in further decline in the value of the asset. Please note that unless otherwise stated, the subject property has been valued on an "AS IS" basis.

[redacted]

3.5 Heritage issues

We have undertaken a search of all relevant local, state and federal government databases as at the date of valuation which has indicated that the subject is not listed as a heritage interest as at the date of valuation.

3.6 Environmental issues

We have undertaken searches of readily available resources relating to any potential environmental issues with regard to the subject property. Acumentis do not accept any responsibility or liability whatsoever for the accuracy of the information contained in these third party resources.

Any environmental issues which are considered to impact the subject property have been outlined below. As valuers, we are not experts in the field of environmental contamination and if more detailed advice is required, an environmental consultant should be engaged and their report and/or any additional professional advice provided should be provided to the valuer for comment.

3.7 Bush fire prone area

The property is contained within the Department of Fire and Emergency Services map of bush fire prone areas which is a general risk for the area. The map identifies the bush fire prone areas of the State as designated by the Fire and Emergency Services Commissioner. Additional planning and building requirements may apply to new proposals within bush fire prone areas. A further assessment of bush fire risk may also be required. These requirements ensure future developments in bush fire prone areas are better protected from bush fires. The additional planning and building requirements may be at a significant cost to develop the land. We have not been provided with a bush fire risk assessment and without such document it is difficult to determine the likely impact on value.



Source: DFES

Photographs

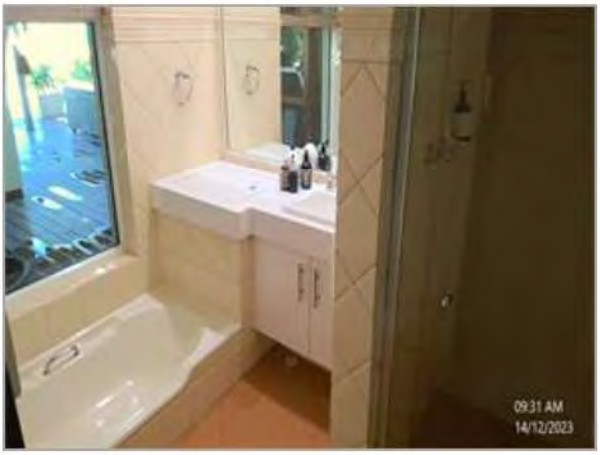
4.1 Supporting Photographs



Front elevation



Kitchen



Bathroom



Ensuite



Laundry



"Bali style" thatched gazebo



"Bali style" thatched gazebo



Swimming pool



Metal detached garage

[redacted]

Comments

5.1 Property comment

The subject property comprises a circa 1974 built, "Hacienda style", single level, four bedroom, two bathroom, brick and tile dwelling incorporating two verandah areas and a detached garage. The home is situated on an elevated sandy hill section of an 11.4406 hectare rural allotment of which the remaining majority is level. The property has frontage to a busy local thoroughfare near Bussell Highway.

Internally, the dwelling has a functional layout when taking into consideration its age and has a good standard of presentation. The dwelling was a quality built home for its era, but at near 50 years of age it has been renovated to a modern standard.

Externally, the property incorporates a large timber decked verandah terrace area leading out to a below ground swimming pool. To the rear of the dwelling is a brick paved pergola area. There is also an additional verandah plus a "Bali style" timber decked gazebo. A driveway leads from the road frontage to the main dwelling and incorporates a large, paved hardstand area fronting the detached garage and dwelling. One of the bays within the garage has been fully lined to provide a study.

Overall, the property comprises a renovated older style family residence which has a good standard of presentation and large outdoor entertainment areas. The landholding is of a size which allows for rural hobby pursuits whilst having good access to major arterial roads providing direct access to the Bunbury CBD and Busselton.

There is a proposal by the adjoining northern property owner to extract the sand resource contained on their property. This sand extraction will detrimentally affect the subject property's value due to the noise, sand and dust pollution and truck movements that will be visible from the residence. This valuation has had no regard to this detriment and is based upon the assumption that no sand extraction will take place on the adjoining lot.

5.2 Market comment

As at the date of inspection, the rural residential lifestyle property market has been in a boom phase of the property market cycle. The market is currently experiencing a shortage of supply of properties for sale and strong buyer demand.

Property values have experienced strong growth over the past 3 years however there is caution, that current market conditions may change quickly as the recent interest rate rises take effect.

5.3 Key market indicators

Level of market activity	Strong sales activity.
Recent market direction	Strengthening

6.1 Valuation methodology

In establishing a market value for the subject property, we have used the following approaches.

Direct Comparison Approach

This is the analysis of sales of similar properties by comparative basis. When undertaking this comparison factors such as, but not limited to, the following are assessed and then related back to the subject property as a whole.

- Location
- Land Area
- Frontages
- Topography
- Services and Access
- Rental Income Potential
- Zoning
- Development Potential
- General Presentation
- Site Layout
- Car Parking
- Type of Buildings
- Design and Function
- Construction Materials
- Age and Quality
- Degree of Obsolescence

Summation Approach

The Summation approach is the land value plus the depreciated value of the existing improvements allowing for condition of the building(s) and both physical and functional obsolescence. This method has been used as a cross check to the Direct Comparison approach.

In applying appropriate replacement cost rates for the building areas, we have relied upon our experience as valuers along with utilising current construction costs detailed in building cost guides such as Rawlinson's Australian Construction Handbook. For the purpose of the valuation, we have adopted an appropriate depreciation rate that reflects the age, degree of obsolescence and condition of improvements. The underlying land value and applied depreciation rate are assessed by comparison to the available sales evidence.

[redacted]

Sales Evidence

7.1 Sales evidence

The following sales provide a sample of the information that has been investigated and analysed for the purpose of this assessment. Whilst we believe the information to be accurate, it was obtained from third party sources and not all details have been formally verified.

Properties that are under offer with an unsettled contract of sale are listed as unsettled. The sale date in these circumstances is the best known date of the contract being signed by both parties. These unsettled transactions are used with caution when making comparisons. Though often the most recent evidence, they are not finalised transactions.

We have reviewed all available evidence carefully and have included the most recent and comparable sales in the report to the best of our knowledge.

Address	Sold/under offer	Sale date	Sale price
Lot 10 Mallokup Road, Capel WA 6271	**Settled**	**30/05/2023**	**$840,000**



A cleared vacant lot adjoining the Capel River. The site area is 6.35 hectares.

Notional apportionment of $840,000 to the land.

In Comparison to Subject:

Superior location. Inferior land size. Inferior ancillary improvements. Inferior structural improvements. The sale is considered inferior overall.

146 Plantation Road, Capel WA 6271	**Settled**	**27/06/2023**	**$900,000**



This is a single level conventional style house with Colorbond walls and an iron roof that was built in circa 2000. Accommodation comprises 3 bedrooms and 1 bathroom. Approximate living area is 141 m². The site area is 80,347 m². Settled Source: RP Data.

Notional apportionment of $600,000 to the land and $300,000 to the improvements.

In Comparison to Subject:

Inferior location. Inferior land size. Inferior ancillary improvements. Inferior structural improvements. The sale is considered inferior overall.

262 Capel Tutunup Road, Ludlow WA 6280	**Unsettled**	**02/10/2023**	**$950,000**



This is a single level conventional style residential house with brick walls and an iron roof that was built in circa 1990. Accommodation comprises 4 bedrooms, 2 bathrooms. The site area is 25,000 m². Unsettled Source: RP Data agent's advice.

Notional apportionment of $550,000 to the land and $400,000 to the improvements.

In Comparison to Subject:

Similar location. Inferior land size. Inferior ancillary improvements. Inferior structural improvements. The sale is considered inferior overall.

[redacted]

Address	Sold/under offer	Sale date	Sale price
[redacted]	**Unsettled**	**24/10/2023**	**$980,000**



This is a single level conventional style detached residential house with brick walls and an iron roof that was built in circa 1997. Accommodation comprises 4 bedrooms and 2 bathrooms. Approximate living area is 250 m². The site area is 20,545 m². Unsettled Source: RP Data agent's advice.

Notional apportionment of $500,000 to the land and $480,000 to the improvements.

In Comparison to Subject:

Similar location. Inferior land size. Inferior ancillary improvements. Superior structural improvements. The sale is considered inferior overall.

[redacted]	**Unsettled**	**15/11/2023**	**$1,150,000**



This is a single level conventional style residential house with brick walls and a Colorbond roof that was built in circa 2013. Accommodation comprises 4 bedrooms and 2 bathrooms. Approximate living area is 180 m². The site area is 34.07 hectares. 7 paddocks, dam and ample ground water, 6m x 12m powered workshop. Unsettled Source: RP Data agent's advice.

Notional apportionment of $750,000 to the land and $400,000 to the improvements.

In Comparison to Subject:

Inferior location. Superior land size. Inferior ancillary improvements. Inferior structural improvements. The sale is considered inferior overall.

[redacted]	**Settled**	**03/02/2023**	**$1,400,000**



This is a single level conventional style residential house with rammed earth walls and a Colorbond roof that was built in circa 2005. Accommodation comprises 4 bedrooms and 2 bathrooms. Approximate living area is 315 m². Large workshop and pool. The site area is 3.927 hectares.

Notional apportionment of $700,000 to the land and $700,000 to the improvements.

In Comparison to Subject:

Superior location. Inferior land size. Similar ancillary improvements. Superior structural improvements. The sale is considered superior overall.

[redacted]	**Settled**	**14/11/2022**	**$1,500,000**



This is a single level conventional style detached residential house with double brick walls and a tile roof that was built in circa 2013. Accommodation comprises 4 bedrooms and 2 bathrooms. Approximate living area is 265 m². Second dwelling is a 2 bedroom, 2 bathroom house. Below ground pool, large patio, 6 bay powered hay shed, machinery shed, 2 bores and 9 paddocks all with troughs and two rainwater tanks . The site area is 13.82 hectares. Settled Source: RP Data.

Notional apportionment of $700,000 to the land and $800,000 to the improvements.

In Comparison to Subject:

Inferior location. Similar land size. Superior ancillary improvements. Superior structural improvements. The sale is considered superior overall.

[redacted]

7.2 Subject property sale history

	Sale date	Sale amount
Previous sale	19 December 2020	$850,000
Comments	Related party transaction.	

[redacted]

Valuation

8.1 Adopted value

The following table presents the results from the approaches that have been utilised in this valuation report and the value that has been adopted for the subject property.

Land	$750,000
Improvements	$450,000
Market value	**$1,200,000 (One Million, Two Hundred Thousand Dollars)**

8.2 Signatory



Valuer	Damien Schifferli AAPI Lic Val #37986 Certified Practising Valuer
Position	Director
Entity	Southpoint Nominees Pty Ltd trading as Acumentis
Office	ACU - Bunbury & Busselton - WA

Liability limited by a scheme approved under Professional Standards Legislation.

[redacted]

Annexures

1. Instruction

2. Title Search

[redacted]

ANNEXURE 1 INSTRUCTION

77486

Instructions

Acceptance of Proposal

Acumentis Ref: [redacted] WA 6237

I accept the proposal on the terms and conditions outlined in this document and authorise you to proceed with the proposal.

Reliant Party / Party to whom the valuation/invoice is to be addressed: (Please state below if different to Instructing Party)

Signature

Name Heath Fisher Date

Phone [redacted] Email [redacted]

Access Details

To assist Acumentis in gaining access to inspect the property, please provide the following details of the nominated access provider:

Name Email

Phone Number Other

Type of Property

☒ Residential ☐ Commercial ☐ Industrial ☐ Rural

Reason for Valuation

☐ Separation/Family Court ☐ Superannuation ☐ Taxation ☐ Asset Management

☐ Finance ☐ Insurance ☒ Other (please specify):Sale purposes

Date of Valuation

☐ Current Date ☐ Retrospective Date (please specify): (DD/MM/YYYY)

Special Comments Relating to the Valuation

ANNEXURE 2 TITLE SEARCH

WESTERN AUSTRALIA

TITLE NUMBER	
Volume	Folio
1026	**912**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts
REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 153 ON DEPOSITED PLAN 301915

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

MARIE ANNE FISHER OF UNIT 1 4 MENTOR PLACE DUNSBOROUGH WA 6281
(T O636116) REGISTERED 9/2/2021

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	1026-912 (153/DP301915)
PREVIOUS TITLE:	600-199
PROPERTY STREET ADDRESS:	121 BOYANUP RD WEST, STRATHAM.
LOCAL GOVERNMENT AUTHORITY:	SHIRE OF CAPEL

NOTE 1: L331404 DEPOSITED PLAN 301915 HAS YET TO BE PRODUCED.

LANDGATE COPY OF ORIGINAL NOT TO SCALE 13/12/2023 12:08 PM Request number: 65985474

Landgate
www.landgate.wa.gov.au

decision certainty

www.acumentis.com.au

Liability limited by a scheme approved under Professional Standards Legislation.

SCHEDULE OF SUBMISSIONS
DAP – INDUSTRY EXTRACTIVE
LOT 103 BOYANUP ROAD WEST, STRATHAM

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
1. ICR148769 Name and address supplied	No objection	**APPLICANTS COMMENT:** Please see Attachment 7 **OFFICER COMMENTS:** Note. **OFFICER RECOMMENDATION:** Note.
2. ICR148975 Name and address supplied	The whole Ridge u plan to mine has been undisturbed for a very long time this is a disaster for native birds and people living in the area I live at 321 Boyanup west road don't destroy this area please	**APPLICANTS COMMENT:** Please see Attachment 7 **OFFICER COMMENTS:** Note. The amended proposal is to extract sand from a 6.1ha in area with the widest extent being approximately 340m in length of the ridge line. The selected area has been cleared for grazing, except for isolated trees. A fauna assessment has been undertaken to determine potential impacts on habitation and concluded that the area has limited to now value due to the historical clearing. The proposal has also been supported by a dust and noise management plan to address external impacts associated with the operation. These documents have been assessed by DWER and Shire staff and are considered to address impacts in line with legislative requirements. **OFFICER RECOMMENDATION:** Note the submission

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
3. ICR149023 Name and address supplied	Some attempt at rehabilitation with trees should be conducted – No objections	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note. The proposal is supported by a rehabilitation plan which proposes to return the land to grazing. It is recommended that the end landform grade be increased to a 1 in 6 slope and that strategically placed tree planting occur to reduce potential for erosion. **OFFICER RECOMMENDATION:** Note and include conditions to increase end landform to have a grade of 1 in 6 slopes and that strategically place tree planting occur to reduce potential for erosion.
4. ICR149235 Name and address supplied	I appose this application on many levels.	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note. Please see comments below responding to the specific reasons for objection.
	1. Amenity	**OFFICER COMMENTS:** Note. External impacts on amenity relating to dust and noise will be addressed in comments immediately below this response. In this instance, impacts will be considered in terms of landscape impacts during extraction. In this regard, an analysis has been conducted on impacts from public receptor points along Bussell Hwy and Boyanup West Road. The extraction area will have limited visibility from these roads due to a combination of the limited extent of the extractive area, setbacks, topographical features and tree coverage on the property and within the road reserves.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	2. Noise	**OFFICER COMMENTS:** Note. The proposal has been updated to realign the internal access to increase the separation distance. Further, the noise management plan is supported by an acoustic report that shows that activity can satisfy the requirements of the Noise Regulations through construction of a noise bund.
	3. Dust	**OFFICER COMMENTS:** Note. The proposal is supported by a dust management plan. Conditions are recommended to ensure that dust is controlled to minimise off site impacts.
	4. Not in keeping with shires land use statement	**OFFICER COMMENTS:** Note. The local government is required to assess applications in accordance with the established local planning framework.
	5. Wildlife habitat	**OFFICER COMMENTS:** Note. The proposal is supported by a fauna assessment prepared by a suitably qualified professional. The assessment concludes that the site has limited to no impacts on fauna habitat due to historical clearing for grazing. It is noted that a clearing permit process will separately address impacts associated with removal of remnant vegetation.
	6. trucks	**OFFICER COMMENTS:** Note. Haulage is proposed to use an unconstructed road reserve to access Boyanup West Road and then Bussell Hwy. Boyanup West Road is of a suitable standard to accommodate the vehicle

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		movements as proposed, noting that it is a designated as part of the (restricted access vehicles (RAV) network. Bussell Hwy is under the control of MRWA, who raise no objections to the proposal. It is recommended that a condition be imposed to upgrade the intersection of the unconstructed road reserve and Boyanup West Road to include a 30m sealed apron to reduce drag of materials onto Boyanup West Road.
	7. Heavy machinery use all day	**OFFICER COMMENTS:** Note. The proposal is supported by a noise management plan which addresses among other things, hours of operations. Restrictions on hours will be in accordance with the Shire's LPP 6.2.
	8. I don't have faith the applicant is able to meet stated objectives	**OFFICER COMMENTS:** Note
	9. its just ugly	**OFFICER COMMENTS:** Note. Please see comments in relation to 1 amenity above. **OFFICER RECOMMENDATION:** Note and include conditions to require compliance with the noise and dust management plans.
5. ICR149242 Name and address supplied	Dear Sir I have only two objections to the proposed sand extraction.	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note
	My first objection is that at Boyanup West Road it is extremely dangerous especially on Thursdays and Fridays, between cars its only a matter of seconds. To make it worse there are no slip streams for trucks to safely access the highway.	**OFFICER COMMENTS:** Note. Boyanup West Road forms part of the RAV network and allows haulage trucks as a right to

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		use the road. Further MRWA is the responsible authority for use of Bussell Highway and have raised no objections to the proposal. A condition is recommended to upgrade the intersection of the unconstructed road reserve and Boyanup West Road to improve surfaces and sight lines.
	My second objection would be in relation to Mr & Mrs fisher whose home is only 200m from the proposed haul road. It would be utterly ruined by dust and noise from the trucks non stop all day. Dudley fisher is a Vietnam Vet (infantry) and is in his retirement years and this would just destroy him, his house would be unsellable. I hope you consider these issues.	**OFFICER COMMENTS:** Note. Concerns relating to the neighbouring property will be addressed separately as part of there submission which raises identical and in a more comprehensive level of details. **OFFICER RECOMMENDATION:** Note and recommend inclusion of conditions requiring intersection upgrading of access onto Boyanup West Road and compliance with noise and dust management plans.
6. ICR149149 Name and address supplied	Highway traffic with the BORR roadworks is already horrendous without adding 100 slow moving trucks.	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note. Please see comments above in relation to road matters (point 6 of submission 4). **OFFICER RECOMMENDATION:** Note and recommend condition to upgrade intersection of unconstructed road and Boyanup West Road
7. ICR149129 Name and address supplied	It is currently extremely difficult to enter the highway north and south from Fisherman's Road. An extra 50-100 trucks a day will be a huge amount that will be added to the already congested road network. Noise and dust are a big concert.	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note. Please see comments above in relation to road matters (point 6 of submission 4).

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		OFFICER RECOMMENDATION: Note and recommend condition to upgrade intersection of unconstructed road and Boyanup West Road
8. CS2329591 Name and address supplied	NO to this, reason being 100 trucks a day on narrow Boyanup west Rd is accident waiting to happen. This is main route used by locals to get to Boyanup, Donnybrook, Bridgetown ,South west highway etc . Boyanup post office is also where all parcels are sent for Stratham residents. Having to negotiate 100 trucks on this frequently used narrow rural road is not safe for motorists.	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note. Please see comments above in relation to road matters (point 6 of submission 4).
	I also object on the environmental issues from sand extraction mining , noise that effects all fauna in the area, dust in the air and the threat of groundwater contamination .	**OFFICER COMMENTS:** Note. Please see comments above in relation to fauna (point 5 of submission 4). In relation to dust, the proposal is supported by a dust management plan that, subject to conditions will ensure dust is managed appropriately. In relation to groundwater contamination, DWER have provided technical advice on this matter, noting that a 1m separation is proposed and that no storage of hydro carbons or maintenance and repair of machinery is to occur onsite. Conditions are recommended to enforce these practices.
	Has this proposed Sand extraction application been approved by DWER ? Regards Name supplied	**OFFICER COMMENTS:** Note. The proposal has been referred to DWER and advice has been provided (see Attachment 8 – see submission 10). **OFFICER RECOMMENDATION:** Note and recommend conditions addressing noise and dust management and rehabilitation.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
9. ICR149369 Name and address supplied	Our only concerns are dust and noise pollution & increased traffic flow on Boyanup West Road. We chose to live here for the serenity – NOT NOISE & busy roads.	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note. In relation to haulage movements, please see comments above (point 6 of submission 4). In relation to dust and noise, the applicant has provided noise and dust management plans that comply with relevant legislation. **OFFICER RECOMMENDATION:** Note and recommend conditions addressing noise and dust management and rehabilitation.
10. ICR149327 Name and address supplied	No objections	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note **OFFICER RECOMMENDATION:** Note
11. ICR149315 Name and address supplied	I object to the above development plan	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note. **OFFICER RECOMMENDATION:** Note.
12. ICR149301 Name and address supplied	I object to this	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note **OFFICER RECOMMENDATION:** Note

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
13. ICR149399 Name and address supplied	The corner of Boyanup West Rd adjacent to the extraction is a dangerous blind corner for cars let alone trucks. ? better via sand removal from Bussell Highway. Double lane and more suitable.	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note. Please see comments above (point 6 of submission 4). **OFFICER RECOMMENDATION:** Note
14. ICR149541 Name and address supplied	Brough too much traffic / road are too small Noise / dust	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note. In relation to traffic, please see comments above (point 6 of submission 4). In relation to noise and dust please see comments above (submission 9). **OFFICER RECOMMENDATION:** Note and recommend conditions in relation to dust and noise management.
15. ICR149482 Name and address supplied	No comment made. Objection circled.	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note **OFFICER RECOMMENDATION:** Note
16. ICR149593 Name and address supplied	I am happy to support the application. The proposal shows limited risk to an already disturbed area.	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Dust management appears addressed.	**OFFICER COMMENTS:** Note
	Traffic management is my only concern in regards to access and egress off and onto the West Boyanup Road and the South West Highway with the current levels of traffic. Hopefully appropriate signage not just basic requirements will be installed.	**OFFICER COMMENTS:** Note. Please see above comments (point 6 of submission 4). **OFFICER RECOMMENDATION:** Note and recommend condition for upgrading of intersection of unconstructed road reserve and Boyanup West Road.
17. ICR149646 Name and address supplied	No comment made. Objection circled.	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note **OFFICER RECOMMENDATION:** Note
18. ICR149957 Name and address supplied	The intersection of Boyanup Road West and Bussell Hwy is not safe ordinarily, and if the traffic flow was to be increased by even 20+ trucks the chances of serious accidents and fatalities occurring will increase.	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note. Please see comments above (point 6 of submission 4)
	The intersection should have a 'runway' for all vehicles to be able to gain speed before merging with the traffic lanes. It should be similar to the SW Highway intersection - Marriott Road, Wellesley	**OFFICER COMMENTS:** Note. Please see comments above (point 6 of submission 4) **OFFICER RECOMMENDATION:** Note and recommend condition to require upgrading of intersection with unconstructed road reserve and Boyanup West Road.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
19. ICR149920 Name and address supplied	Don't be so stupid u can't put a mine there that Ridge hasn't been disturbed in along time the road that goes into the property next door was put in by the bird society a long time ago when Ronny own it because they found a rear bird in the Ridge and it was only 12 months ago that was all the one property u didn't give a permit when APH owned it so what's change mates doing favours for mates and stuff everyone else and the environment	**APPLICANTS COMMENT:** Please see Attachment 7 **OFFICER COMMENTS:** Note. Applications are considered and assessed against the established planning framework. In relation to history, the site has been cleared and used for grazing. The proposed end use is to return the land for grazing purposes. In relation to the fauna, the proposal has been assessed by a suitably qualified professional and advice has been requested from relevant State Government agencies for technical advice. **OFFICER RECOMMENDATION:** Note.
20. ICR149890 Name and address supplied	To whom it may concern Recently, we returned our ' Invitation to Comment" to the Capel Shire regarding the matter of extracting sand from Lot 103 Boyanup West Rd, Stratham.	**APPLICANTS COMMENT:** Please see Attachment 7 **OFFICER COMMENTS:** Note.
	When we completed the form we were under the impression this sand was going towards the BORR to complete the road from which we and my family will benefit. However it has come to our attention this sand is going elsewhere and not to be used on the BORR, or for some useful and necessary project in the Shire of Capel. This is a totally unacceptable situation and daft on behalf of the Council.	**OFFICER COMMENTS:** Note. The proposal has been lodged and the local government is required to be assessed against the established local planning framework. The intended use of the resource is not a relevant planning consideration and cannot be reasonably used as a reason for refusing the application. It is also noted that in this instance, the local government is not the decision making authority.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	In this era of climate change, knocking down more areas of original vegetation with tall trees and a unique understorey is negative for the local environment. Note, the area of bush to our immediate north (bordered by the Boyanup West Road) the plants thought to be extinct in the 1930's were found in existence by the rangers 2 years ago. Further, clearing parts of this temperate forest in WA, seems a poor solution to allow the sand to be sold to profit 1 or two landholders. Clearing of the temperate forest that exists here in the southwest of WA will affect rainfall not just in WA but across the southern food bowl in Australia. I would also like to mention that in the 10 years that we have lived here; this area of temperate rain forest appears to be important to/for birds of prey whom regularly appear to roost in the trees there and breed.	**OFFICER COMMENTS:** Note. The extraction area has been confined to an area that has primarily been cleared for grazing (with the exception of isolated trees). The intended end land use is to return the land to grazing. A fauna assessment has been undertaken by a suitably qualified professional which concludes that the site as limited to no value for fauna due to the degraded condition. It is recommended that the end landform be amended to achieve a 1 in 6 batters slope to minimise potential for erosion.
	Further matters of concern include: - the volume of trucks expected to be using the road. This is a small rural road not prepared in any way for multiple trucks per day loaded with sand weighing up to a 100 tons. Already the stock truck in our immediate area causes the bitumen on a hot day to be torn up when the trailer wheels go sideways. This will be further exacerbated with many trucks per day especially when the point below is considered.	**OFFICER COMMENTS:** Note. Please refer to comments above (point 6 of submission 4).
	- The road was repaired in 2022, and the bitumen covering is much too thin. In short, the road is woefully insufficient to carry multiple heavy loads on a daily basis. There is too little space for the trucks to pull onto the road with no shoulder or turning lane which complicates access to and from the site. Further many young people seem to drive extremely fast on this road and a heavy vehicle rumbling along is asking for a serious accident to occur.	**OFFICER COMMENTS:** Note. Please refer to comments above (point 6 of submission 4).
	-The entrance on and off the Bussell Highway to the Boyanup West Road has cars approaching at more than 110kmh, drivers will not move across lanes to allow easy turning and attempting an entrance from the Bussell highway from the south is very difficult with many road users hogging the right hand lane at an excessive speed.	**OFFICER COMMENTS:** Note. Please see comments above (point 6 submission 4).

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	What preparations has the Shire made to improve the road itself, the road access from both directions and what considerations have been made for the other road users of Boyanup West Rd? Yours sincerely Names supplied	**OFFICER COMMENTS:** Note. Boyanup West Road has recently been upgraded and is designed to form part of the RAV network. It is noted that MRWA raises no objections to the proposal in terms of the intersection with Bussell Hwy. The unconstructed access to Boyanup West Road will require construction, including a 30m bitumen seal to ensure safety. **OFFICER RECOMMENDATION:** Note and recommend conditions be imposed.
21. ICR149958 Name and address supplied	Seventy-two critically endangered western ringtail possums were relocated/pushed into this area due to the Outer Ring Road work in Gelorup. Can the applicants ensure that they will not displace any endangered animals and plants? Can they guarantee that the revegetated land will be suitable for native plants and animals, and that the native plants will grow well so that the animals will return?	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note. The proposal is supported by a Fauna Assessment that concluded that the extraction area has limited to no value as fauna habitat due to historical clearing for grazing that has left limited and isolated trees in place.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	My family had local land (in the Capel Shire) mined by Iluka and they revegetated it 20+ years ago, but we have been unable to grow good grass, shrubs or large trees in that area since the extraction occurred, so the native animals and plants have never returned. https://protect.checkpoint.com/v2/___https://www.smh.com.au/environment/conservation/critically-endangered-possums-to-lose-home-to-1-billion-wa-road-20220503-p5ahy0.html___.Y3A0YTpzaGlyZW9mY2FwZWw6YzpvOjE2YTRjNGY5MWYzMmI5MWZmNGI2MmZhYjdiNzFmZGFhOjY6NjA3YjpkZjJhNDcyMDE1YTQxN2Q3Nzg5YmU1MWExMDFmZDI2NjFmNjZhYzQ0NDk4NGExYjBjMjYyM2UzMWRiNDcxYzg1OnQ6VA	**OFFICER COMMENTS:** Note. The Shire has obtained independent technical advice regarding the proposed end landform. It is recommended that the rehabilitation plan be amended to require at least a 1 in 6 slope to improve long term viability for grazing and reduce the risk of erosion **OFFICER RECOMMENDATION:** Note and recommend conditions to modify end landform to achieve a 1 in 6 batter slope.
22. ICR149971 Name and address supplied	To whom it may concern, I am writing to you regarding my concerns with the proposed Sand Mine at the above location.	**APPLICANTS COMMENT:** Please see Attachment 7
		OFFICER COMMENTS: Note.
	1 As a local resident, I am very concerned about the impact this will have on not only the safety, but also the health of the local residents and the destruction of the local fauna and flora.	**OFFICER COMMENTS:** Note. In relation to impacts on local fauna, please see comments above (submission 21). In relation to impacts on safety and health of local residents, the application is supported by noise and dust management plans. These plans satisfy legislative requirements, and advice has been provided by relevant state government. The proposed plans are considered suitable to control risk impacts associated with dust and noise and conditions are recommended.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	2 There has been a significant increase in traffic on the Busselton Highway over the last few years and with the added roadwork with the construction of the BORR road, this road will just keep getting busier. Currently it is difficult and sometimes dangerous to enter the highway as you have to try and safely enter traffic traveling 110km/hr. To add additional 100 semi-trailer trucks will create more dangerous situations as well as traffic congestion for this stretch of road. I am also concerned that Boyanup Rd, which currently is used by school busses and other locals, will not be able to handle the added traffic as this is a very narrow road. Who is going to pay for the maintenance of these roads that will most definitely be damaged with the increase of heavy vehicles?	**OFFICER COMMENTS:** Note. Please see comments above (point 6 of submission 4)
	3 The increase in dust pollution will absolutely have a negative impact on the health of the local residence as the area is already very sandy and it doesn't take much disturbance to create dust in the air. There will also be more noise and light pollution that raises more concerns for the well being of local residents.	**OFFICER COMMENTS:** Note. A dust management plan has been prepared and subject to conditions, will ensure that dust is appropriately managed. A noise management plan has also been prepared and support by an acoustic report that demonstrates that noise can be appropriately managed. Light pollution is addressed through restrictions to the hours of operation.
	4 Another concern is that this will disrupt and damage the local bushland and therefore have a major impact on our very vulnerable fauna and flora. There are a number of endangered species in the area like the ringtail possum who spend most of their time in the trees around the Stratham area and are actually classified as Critically Endangered.	**OFFICER COMMENTS:** Note. The extraction area is confined to a location that is predominately already cleared for grazing. The proposal is supported by a fauna assessment prepared by a suitably qualified professional. The assessment concludes that site has limited to no habitat value due its degraded condition resulting from historical clearing for grazing. Agency comments confirm that issues associated with removal of vegetation can reasonably be addressed separately through the clearing permit process.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	5 Mining will also have a major impact on our water supply as most of the locals rely on a bore as we do not have water supply from the Council. With the decline in rainfall every year, this is vital for to maintain our tank water during the dry seasons as well as provide drinking water to our animals. I am concerned that it will decrease our water supply and most likely contaminate it and therefore reduce the water quality so much that is will not be safe to use as drinking water.	**OFFICER COMMENTS:** Note. The proposal will not impact groundwater conditions and will be required to maintain a 1m separation distance. DWER have advised that the updated information on groundwater data is satisfactory and impacts on groundwater can be managed by setting a maximum pit depth of 15m AHD (see Attachment 8 – Submission 10). A dust management plan addresses impacts from dust and includes suitable solutions in the event of high winds or if dust requires more stringent measures for containment. A condition is recommended to amend and comply with the dust management plan to ensure that dust impacts are appropriately controlled.
	6 It should be noted that several years ago an application for a school building in this location was rejected due to concerns regarding increased traffic, although it would have been beneficial to the local residence. I can't see that local residents will have any benefit in having a mine site on their doorstep. Financially it will most likely cost the residents more in rates and living cost due to damage caused by mining.	**OFFICER COMMENTS:** Note. Please refer to comments above regarding haulage (point 6 of submission 4). In relation to financial impacts to landowners and a past school proposal, the local government is required to assess applications against the established local planning framework.
	7 I hope that all the concerns received will be taken into account before making this decision. It is vital that we preserve our lovely area. Kind regards Name supplied	**OFFICER COMMENTS:** Note. The local government is required to consider comments in accordance with clause 67 of the deemed provisions of the planning regulations. **OFFICER RECOMMENDATION:** Note and grant approval subject to conditions to manage noise, dust, water environment and require rehabilitation of the site.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
23. ICR149982 Name and address supplied	Attn Bob Wallin Please find my objection to this sand extraction proposal 103 Boyanup west Rd. I would also bring to your attention the very inconsistent communications with the community, some residents got letters informing them but alot didn't.Surely fully informing residents is essential or is the outcome already decided ? Hope the latter is wrong and the voice of all effected residents is given full consideration. Regards Name supplied	**APPLICANTS COMMENT:** Please see Attachment 7 **OFFICER COMMENTS:** Note. Consultation involved referral letters to properties within a 1km radius of the extractive area. This is greater than the 500m radius required in the Shire's Local Planning Policy for consultation. Information was also available at the Shire's administration office and on the Shire's website. An advertising period of 28 days was provided. It is noted that a landowner did not receive a letter. This was due to incorrect mailing addresses being supplied to the Shire. Once brought to the Shire's attention, the correct mailing address was supplied by the landowner and the Shire provided an extension to comment and provided with a hard copy of the application to assist with providing feedback. **OFFICER RECOMMENDATION:** Note
24. ICR150452 Name and address supplied	In reference to the request to (names supplied) to provide an NO OBJECTIONS/OBJECTS comment on the Proposed Variation to the Local Planning Scheme No 8 and/or R-Codes for Industry Extractive. We, as residents in Stratham STRONGLY OPPOSE/OBJECT to the proposed variation and are extremely concerned at the prospect of mining so close to our home of 30+ years. Please see attached letter of reasons and some questions I was unable to get answers to through Shire of Capel. Shire of Capel PO Box 369 CAPEL WA 6271 info@capel.wa.gov.au	**APPLICANTS COMMENT:** Please see Attachment 7

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	DEVELOPMENT ASSESSMENT PANEL – INDUSTRY EXTRACTIVE AND EIL – LOT 103 BOYANUP WEST ROAD STRATHAM To whom it may concern: In reference to the request to GM and RA Cormack (please note owners are GM Cormack and RA Digby) to provide a NO OBJECTIONS/OBJECTS comment on the Proposed Variation to the Local Planning Scheme No 8 and/or R-Codes for Industry Extractive. We, as residents in Stratham OBJECT and STRONGLY OPPOSE the proposed variation and are extremely concerned at the prospect of mining so close to our home of 30+ years. We object because of the following reasons:	**OFFICER COMMENTS:** Note.
	1 The EI study was performed to assess for nesting Black cockatoos and nesting sites in April 2023, when they are not nesting and are foraging in broad areas for food. It is apparent form the report that the assessment occurred on site for 1 night and 1 day. This would not provide adequate information for fauna habitation of the area. There is no clear reference to the seasonal variation of the species assessed to determine present and potential numbers	**OFFICER COMMENTS:** Note. The fauna assessment was prepared by a suitably qualified professional. The overall conclusions about the conditions of the site are the primary facts that prevail. In this instance, the area identified for extraction has been historically cleared and used for grazing. Trees retained are isolated and provide no level of continuity of canopy, mid or understorey. On this basis, the findings of the study that the area provides limited to no habitat value due to its degraded condition is considered a reasonable conclusion. It is noted that other more heavily vegetated areas on the property have been excluded from the extraction area. Further, the clearing permit process provides a separate additional process to consider this element of the proposal.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	2 It is possible this area will be considered by fauna displaced by the BORR Gelorup forest clearing; as this is a recent event does not capture potential for nesting for these dislocated species	**OFFICER COMMENTS:** Note. P lease see above comments to point 1 above.
	3 There is no reference to other species that may have been present but unobserved such as phascogales (we have had 1 on our property since commencement of roadworks; first in 33 years on this block); native bees/wild bees/; migrating ducks in the larger trees and the potential for major impact on the migrating ducks that lead their young to the wetlands opposite the service station and the area proposed for mining.	**OFFICER COMMENTS:** Note. Please see above comments to point 1 above.
	4 The EI report states the disclaimer than the possum and black cockatoos have been included in the brief assessment and that the assessment was directed by the scope of the request by the requesting body and noted it's limitations	**OFFICER COMMENTS:** Note. Please see above comments to point 1 above.
	5 The mining is to occur as deep as within 1 metre of the water table. Under the heading Hydrocarbons and Dangerous Goods Management it states "There is the minor possibility for soil and water contamination as a result of an incidental hydrocarbon leakages or spills during the operation of machinery". This will have a devastating effect on us if a spill occurred in the pit and leaked the 1m down to the water table as we run our house and garden on filtered bore water. It would also be devastating for the flora of Stratham. It is inconceivable that a mine so close to a growing community may contaminate the water with no access to scheme water to replace it	**OFFICER COMMENTS:** Note. The proposal indicates that no storage of hydro carbons will occur on site and that no maintenance and repair of machinery will occur on site. It is recommended that conditions be imposed to enforce this practice. The application has been referred to DWER for comments in relation to potential impacts on the local water environment. DWER's comments are provided in Attachment 8 Submission 10. DWER's comments indicate that the proposal will satisfy legislative requirements in relation to the water environment.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	6 The major roadworks has produced an increase in the airborne dust we experience. The summer prevailing winds are easterly and we believe the dust and airborne contaminants from the 22 tonne diesel semi trailers (up to 100/day) will have a definite and noticeable impact air quality.	**OFFICER COMMENTS:** Note. The proposal is supported by a dust management plan that ensures that dust is appropriately managed during operations. It is recommended that a condition be imposed to ensure compliance with the dust management plan.
	7 Water is to be used for dust suppression but the report specifies "off-site" so may still be from our local ground water having major implications for Stratham's residents	**OFFICER COMMENTS:** Note. Extraction of groundwater will be subject of a separate application determined by DWER. In this instance, water for dust suppression is to be provided from a Busselton source.
	8 Screening to manage dust particulates is referenced as by "stabilised bunds and roadside vegetation" but the roadside vegetation is not wide or thick. The site classification score is 360 – with the top score in Low risk only 399. It is only 39 points from being medium risk, rather than 160 from being lowest end risk. That is concerning that is it presented as low risk.	**OFFICER COMMENTS:** Note. The dust management plan has been referred to DWER that includes dust suppression measures. In respect to dust, there are limited sensitive receptors in the immediate locality. Only one dwelling is within 500m of the extraction area. There is a total of seven dwellings within a radius of 1km. It is noted that the nearest property is 140m from the nearest edge of the extraction area. The proposed dust management plan provides suitable measures to control dust impacts, when considered in combination of the site conditions (topography and vegetation) that provide potential to mitigate dust impacts. The updated plans have also modified the internal haulage route to increase separation distance as well as limited traffic speeds to 10km per hour to reduce dust generation from haulage activity.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	9 It is apparent the only risk mitigation strategy is “additional watering”.	**OFFICER COMMENTS:** Note. Please see comments provided to point 8 above.
	10 The noise management plan references sand extraction – however the dust management report references gravel extraction. This is inconsistent for the reader to make appropriate investigations as to impact on resident	**OFFICER COMMENTS:** Note. The proposal is for sand extraction. The applicant has updated the plan to remove the inconsistency.
	11 Noise has been stated as being indistinct from typical rural noise. This cannot be the case as noise from the semi trailers will continue beyond the mine site as it traverses from mine to next destination. 100 semi’s a day is not typical rural noise. I have not read any reference to this noise reading.	**OFFICER COMMENTS:** Note. Technical Advice has been requested from DWER in relation to the noise management plan. The updated plan includes a modified internal haulage route to increase separation distances. The nearest traffic will be on the section of presently unconstructed road which is at least 300m from the dwelling. It is noted that noise from public roads is excluded from the Noise Regulation requirements.
	12 It has been extremely difficult to have a proper conversation with the shire repetitive on this proposal due to the very short turn around for feedback and comments and the said representative taking leave.	**OFFICER COMMENTS:** Note. A total of 28 days consultation has been provided in accordance with the Shire’s Local Planning Policy.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	It is likely I have more comments to demonstrate my concerns and great disappointment in this proposal. We were well aware of the mining activity in Capel shire when we were looking for a property. The Stratham are offered a rural option away from the Iluka activities. I have lived experience of the noise and dust impact from the passing trucks as I resided on Minninup Road during the excavation of Ilmenite from Minninup Beach in 1989. The noise was all day, and reverse beeping and trucks changing gear was hard to dispel. I also have the following questions for the Capel Shire to respond to:	**OFFICER COMMENTS:** Note.
	Accendo EI report states the limitations on the report were according to the scope provided by the client. Who was the client? Was it the Shire of Capel or the mine applicant?	**OFFICER COMMENTS:** Note. The operator is Leeuwin Civil as detailed in the application document (section 1.1 Background – page 1).
	Where will the water for dust suppression activity and mining activity be sourced? How will this impact the ground water levels locally? It is too expensive to truck water from too far; will the mine be using the bores set for the BORR?	**OFFICER COMMENTS:** Note. Any water new water supply using groundwater will require a separate approval from DWER and will require consideration of availability in the aquifer and potential impacts on the groundwater environment more generally.
	Will the trucking in of water be additional to the 100 trucks used for content removal?	**OFFICER COMMENTS:** Note. The applicant confirms that the water tanker will be additional. However, the water tanker will be a smaller vehicle. Water carting trucks will not be of a significant number to have any material impacts on the overall local traffic environment in the context of overall haulage movements and when considering the capacity of the road network.
	Why were only some residents given the written opportunity to provide feedback and not all residents in the same area?	**OFFICER COMMENTS:** Note. A letter drop was provided for a radius of 1km (above the required 500m radius required by the Local Planning Policy for consultation.
	Why were the invitations to comment only to one householder per home; we have 3 voting adults in our home that all wanted the opportunity to object. Your sincerely	**OFFICER RECOMMENDATION:** Note.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Name supplied	The Shire provided a mail drop to each household which is considered a reasonable practice.
25. ICR150449 Name and address supplied	We would like it to be noted that we are strongly against the proposed development application for a sand mine at Lot 103 Boyannup West Road Stratham. Our concerns are in relation to the dust, noise, air contamination and truck traffic. We live on Bourne Loop in Stratham which is on the opposite side of the proposed sand mine but still within close proximity. Plus I work in Bridgetown and use that road to commute to work. It is already a busy Junction with speed limit of 110km and with the new bypass coming it will be even worse with the traffic, let alone more mine trucks.	**APPLICANTS COMMENT:** Note. The proposal is supported by noise and dust management plans that will address dust and noise impacts. In respect to traffic movements, please see comments above (point 6 submission 4).
	Was disappointed that we were not include in the official invitation to comment but as residents of Stratham we are strongly opposed to the development application and wish our submission be noted and passed to council. Regards Name and addressed supplied	**OFFICER COMMENTS:** Note. **OFFICER RECOMMENDATION:** Note and recommend conditions be imposed to address noise and dust and site management.
26. ICR150451 Name and address supplied	Invitation to comment on the Industry Extractive &EIL - Lot 103 Boyanup West Road Stratham I OBJECT - this is my formal response and see attached letter for reasoning. Shire of Capel PO Box 369 CAPEL WA 6271 info@capel.wa.gov.au	**APPLICANTS COMMENT:** Please see Attachment 7

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	DEVELOPMENT ASSESSMENT PANEL – INDUSTRY EXTRACTIVE AND EIL – LOT 103 BOYANUP WEST ROAD STRATHAM To whom it may concern: In reference to the request to GM and RA Cormack (please note owners are GM Cormack and RA Digby) to provide a NO OBJECTIONS/OBJECTS comment on the Proposed Variation to the Local Planning Scheme No 8 and/or R-Codes for Industry Extractive. We, as residents in Stratham OBJECT and STRONGLY OPPOSE the proposed variation and are extremely concerned at the prospect of mining so close to our home of 30+ years. We object because of the following reasons:	**OFFICER COMMENTS:** Note.
	1 The EI study was performed to assess for nesting Black cockatoos and nesting sites in April 2023, when they are not nesting and are foraging in broad areas for food. It is apparent form the report that the assessment occurred on site for 1 night and 1 day. This would not provide adequate information for fauna habitation of the area. There is no clear reference to the seasonal variation of the species assessed to determine present and potential numbers	**OFFICER COMMENTS:** Note. Please see comments above (point 1 of submission 24)
	2 It is possible this area will be considered by fauna displaced by the BORR Gelorup forest clearing; as this is a recent event does not capture potential for nesting for these dislocated species	**OFFICER COMMENTS:** Note. The fauna assessment concluded that the site has limited to no value for fauna due to its degraded condition. Please see comments above (point 1 of submission 24).
	3 There is no reference to other species that may have been present but unobserved such as phascogales (we have had 1 on our property since commencement of roadworks; first in 33 years on this block); native bees/wild bees/; migrating ducks in the larger trees and the potential for major impact on the migrating ducks that lead their young to the wetlands opposite the service station and the area proposed for mining.	**OFFICER COMMENTS:** Note. Please refer to comments above (point 1 of submission 24)

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	4 The EI report states the disclaimer than the possum and black cockatoos have been included in the brief assessment and that the assessment was directed by the scope of the request by the requesting body and noted it's limitations	**OFFICER COMMENTS:** Note. Please refer to comments above (point 1 of submission 24)
	5 The mining is to occur as deep as within 1 metre of the water table. Under the heading Hydrocarbons and Dangerous Goods Management it states "There is the minor possibility for soil and water contamination as a result of an incidental hydrocarbon leakages or spills during the operation of machinery". This will have a devastating effect on us if a spill occurred in the pit and leaked the 1m down to the water table as we run our house and garden on filtered bore water. It would also be devastating for the flora of Stratham. It is inconceivable that a mine so close to a growing community may contaminate the water with no access to scheme water to replace it	**OFFICER COMMENTS:** Note. Please refer to comments above (point 5 of submission 24)
	6 The major roadworks has produced an increase in the airborne dust we experience. The summer prevailing winds are easterly and we believe the dust and airborne contaminants from the 22 tonne diesel semi trailers (up to 100/day) will have a definite and noticeable impact air quality.	**OFFICER COMMENTS:** Note. This matter is addressed in the dust management plan and conditioned.
	7 Water is to be used for dust suppression but the report specifies "off-site" so may still be from our local ground water having major implications for Stratham's residents	**OFFICER COMMENTS:** Note. This matter has been clarified with a water supply being proposed from Busselton. A modification is recommended to the Dust Management Plan to require a contingency of an on-site water supply.
	8 Screening to manage dust particulates is referenced as by "stabilised bunds and roadside vegetation" but the roadside vegetation is not wide or thick. The site classification score is 360 – with the top score in Low risk only 399. It is only 39 points from being medium risk, rather than 160 from being lowest end risk. That is concerning that is it presented as low risk.	**OFFICER COMMENTS:** Note. Please see comments in the planning assessment section of the main report. The Dust Management Plan is considered acceptable, subject to modifications and a condition is recommended.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	9 It is apparent the only risk mitigation strategy is "additional watering".	**OFFICER COMMENTS:** Note. The Dust Management Plan has been updated following advertising to address concerns raised. The updated Dust Management Plan is considered acceptable, subject to modifications and a condition is recommended.
	10 The noise management plan references sand extraction – however the dust management report references gravel extraction. This is inconsistent for the reader to make appropriate investigations as to impact on resident	**OFFICER COMMENTS:** Note. The updated Dust and Noise Management Plans have been updated following the advertising process.
	11 Noise has been stated as being indistinct from typical rural noise. This cannot be the case as noise from the semi trailers will continue beyond the mine stie as it traverses from mine to next destination. 100 semi's a day is not typical rural noise. I have not read any reference to this noise reading.	**OFFICER COMMENTS:** Note. A Noise Management Plan has been prepared and updated to increase the separation distance for haulage. It is noted that the Noise Regulations do not apply to haulage once on a public road, which includes the section of presently unconstructed road proposed for access. The proposed haulage route is at least 300m from the nearest dwelling and speed limits are limited to 10km per hour on site.
	12 It has been extremely difficult to have a proper conversation with the shire repetitive on this proposal due to the very short turn around for feedback and comments and the said representative taking leave.	**OFFICER COMMENTS:** Note.
	It is likely I have more comments to demonstrate my concerns and great disappointment in this proposal. We were well aware of the mining activity in Capel shire when we were looking for a property. The Stratham are offered a rural option away from the Iluka activities. I have lived experience of the noise and dust impact from the passing trucks as I resided on Minninup Road during the excavation of Ilmenite from Minninup Beach in 1989. The noise was all day, and reverse beeping and trucks changing gear was hard to dispel.	**OFFICER COMMENTS:** Note. The proposal is supported by a Noise Management Plan to includes requirements for alternative vehicle warning systems that do not rely on reverse beeping. Further, speed on site will be restricted to 10km per hour to reduce dust and noise.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	I also have the following questions for the Capel Shire to respond to: 13 Accendo EI report states the limitations on the report were according to the scope provided by the client. Who was the client? Was it the Shire of Capel or the mine applicant?	**OFFICER COMMENTS:** Note. The operator is Leeuwin Civil.
	14 Where will the water for dust suppression activity and mining activity be sourced? How will this impact the ground water levels locally? It is too expensive to truck water from too far; will the mine be using the bores set for the BORR?	**OFFICER COMMENTS:** Note. Water is proposed to be provided from Busselton. It is recommended that the Dust Management Plan be updated to provide for on-site water supply as a contingency.
	15 Will the trucking in of water be additional to the 100 trucks used for content removal?	**OFFICER COMMENTS:** Note. The water tanker is in addition to the vehicle count, however, it is noted that the water tanker is a much smaller vehicle.
	16 Why were only some residents given the written opportunity to provide feedback and not all residents in the same area?	**OFFICER COMMENTS:** Note. Residents within a 1km radius were contacted by mail. Further, the application was advertised in the local paper and the Shire's website.
	17 Why were the invitations to comment only to one householder per home; we have 3 voting adults in our home that all wanted the opportunity to object. Your sincerely Name and address supplied	**OFFICER COMMENTS:** Note. There is opportunity for each householder to make a submission if desired. **OFFICER RECOMMENDATION:** Note the submission and recommend conditions to address issues associated with haulage, dust and noise.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
27. ICR150373 Name and address supplied	Good Morning I did not receive a copy the invitation to comment and as a property owner living on Boyanup Road West in Stratham I ask that you please accept the attached letter from myself as objection to the proposed extractive licence at Lot 103 Boyanup Rd West, Stratham. I also ask that the letter attached is forwarded to the attention of Mr Bob Wallin, Senior Planning Officer for the Shire of Capel and that the recipient of this email acknowledge that the attached letter has been received by the shire within the timeframe for comments on the proposal. Regards Name supplied 15 December 2023 Bob	**APPLICANTS COMMENT:** Please see Attachment 7

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Wallin Shire of Capel Dear Bob, I am writing to you as I strongly object to the proposal for an extractive licence at Lot 103 Boyanup Rd West, Stratham. My wife and I did not receive the letter posted out by the Shire of Capel and gained knowledge of the proposed sand mine through a neighbour. Since learning about the letter I have also found that many other Stratham residents didn't receive one and had no knowledge of the proposal. I believe that the Shire has a duty to these rate payers to allow them to voice their opinion and the application should be made known to all residents in Stratham, Elgin and Gelorup. I object to Application No. PA205/2023 at Lot no. 103, Boyanup Rd West, Stratham for the following reasons.	**OFFICER COMMENTS:** Note. Consultation involved referral to properties within a 1km radius of the extractive area. This is greater than the 500m radius required in the Shire's Local Planning Policy for consultation. Information was also available at the Shire's administration office and on the Shire's website. An advertising period of 28 days was provided. It is noted that a landowner did not receive a letter. This was due to incorrect mailing addresses being supplied to the Shire. Once brought to the Shire's attention, the correct mailing address was supplied by the landowner and the Shire provided an extension to comment and provided with a hard copy of the application to assist with providing feedback.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Dust, Noise & Danger to residents The proposed sandpit is very close to one residence and will no doubt have a huge impact on their way of life and the enjoyment they take from the environment around them. The trucks will no doubt create dust and noise travelling to and from the pit and the wind will carry the dust in the summer months to surrounding residences despite best efforts to mitigate it from doing so. Many families live in the area of the proposed pit and the road is already busy with truck and farm traffic along with the general public use. The Boyanup road West is a dangerous road made worse when it was widened and resurface recently. The volume of trucks proposed will increase the likelihood of further accidents and deaths on this road, create noise and dust and generally detract from the amenity of this area. Is the projected truck and other vehicle movements proposed in this application acceptable to the Shire without any form of off ramp into the property from Boyanup Rd West?	**OFFICER COMMENTS:** Note. In relation to haulage please refer to comments above (point 6 of submission 4). In relation to dust and noise, the application is supported by a noise and dust management plan. The updated documents provide suitable solutions to addressing noise and dust impacts. Conditions are recommended to ensure compliance with the relevant management plans.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Water table The water table is high in this area and the landscape is littered with shallow streams - any interference with the ebbs and flows has a knock on affect for the environment. There should be a thorough hydrological assessment done to understand the impact to the shallow/superficial aquifers and environment in the area proposed for extraction.	**OFFICER COMMENTS:** Note The proposal is not proposing to extract sand in proximity to the water course located to the west. The proposal is to extract sand from the ridge line. The Updated Water Management Plan addresses potential ground water impacts. This has been reviewed by DWER and is considered satisfactory subject to increasing the maximum pit level to 15m AHD.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Social impact It is easy to claim a degraded and unnatural landscape is of no value other than for further exploitation. The Capel shire supposedly wants to create a framework for people within its boundary's governed by sustainability. Our Vision - A lifestyle of Choice: Connecting Community, Culture and Country. I don't feel that the continued exploitation of the Landscape around areas where people live and work adds to the Shires vision. The mine is in full view of those travelling on the Bussell and with the twin Iluka towers in the background this will only reinforce the industrial nature of our shire. No one wants to visit or live in industrial landscapes - do we want to be known as the Kwinana of the South west	**OFFICER COMMENTS:** Note. The proposal is assessed against the established local planning framework. The extent of the extraction area has been limited in an effort to retain higher quality areas of vegetation. In respect to landscape impacts, the proposal will have limited visibility from public receptor points (Bussell Highway and Boyanup West Road) due to the limited extent of the extraction area, setbacks, topography and existing vegetation.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Pioneer pit for future Mining activities I believe that there is interest from the mineral sands industry in the areas of the proposed pit and I feel that this proposal is just a lead in / exploratory pit. The proposed mine is small in scale with relatively low yield and there are possibly better resources to be found up the road in the already established sand pit. My fear as a local resident is that If this development was to progress then it will only make it easier for future applicants to open up rest of the area to the east of Bussell highway. This would have a devastating impact on the water table, environment and the people that reside close by. In closing I ask that you consider the details within my letter and balance it along with the thoughts of others. I note that the Shire states that it has no obligation to support the views of adjoining owners on the documents sent out and feel that it also should state that it has no obligation to support industrial activities either. Sincerely yours, Name supplied	**OFFICER COMMENTS:** Note. Each proposal for extractive industries is required to be assessed on its individual merits against the established planning framework. It is noted that land in the immediate locality contains strategic mineral resources. Any future application to extraction of these resources will be determined under separate legislation. **OFFICER RECOMMENDATION:** Note and recommend conditions addressing groundwater and end landform/land use.
28. ICR150379 Name and address supplied	We have these concerns regarding the proposed sand extraction plan for lot 103. Firstly, we are concerned about the dust and noise from the mine as we live in close proximity and to the east of the proposed mine. During summer, prevailing wind is from the east, meaning much of Stratham will be effected.	**APPLICANTS COMMENT:** Refer to Attachment 7 **OFFICER COMMENTS:** Note. In relation to dust and noise, the application is supported by updated noise and dust management plans that reasonably demonstrate that these issues can be managed through treatments including: • Limiting haulage speeds to 10km per hour • Applying dust suppression treatments to surfaces and ceasing works during dry and windy events; • Constructing a noise bund • Staging

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		• Design of internal haulage routes to maximise separation distances from the closest dwelling • Limiting the hours of operation. Conditions are recommended to ensure compliance with the relevant management plans. .
	Secondly, the intersection of Boyanup West Road and Bussell Highway will be incapable of handling the proposed number of heavy vehicle movements. The speed limit through this intersection is 110km/hr and the highway has high traffic movement numbers.	**OFFICER COMMENTS:** Note. Please refer to above comments (point 6 of submission 4)
	Thirdly, it appears that the mine scaring will be visible from the highway and will be a blight on the landscape.	**OFFICER COMMENTS:** Note. The extraction area will have limited visibility from these roads due to a combination of the limited extent of the extractive area, setbacks, topographical features and tree coverage on the property and within the road reserves.
	We were not notified by the Shire of Capel of this application despite being close to the site and affected by it. We therefore request an extension of time so that we can do more research into the proposal.	**OFFICER COMMENTS:** Note. Consultation involved referral to properties within a 1km radius of the extractive area. This is greater than the 500m radius required in the Shire's Local Planning Policy for consultation. Information was also available at the Shire's administration office and on the Shire's website. An advertising period of 28 days was provided. It is noted that a landowner did not receive a letter. This was due to incorrect mailing addresses being supplied to the Shire. Once brought to the Shire's attention, the correct mailing address was supplied by the landowner and the Shire provided an extension to comment and provided with a hard copy of the application to assist with providing feedback.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		OFFICER RECOMMENDATION: Note and recommend conditions to address upgrading of the intersection of the unconstructed road reserve and Boyanup West Road and noise and dust management.
29. ICR150344 Name and address supplied	Excessive traffic, pollution – sand etc in nearby resident's rainwater tanks use for drinking & showering, flora & fauna concerns.	**APPLICANTS COMMENT:** Refer to Attachment 7.
		OFFICER COMMENTS: Note. In relation to traffic, please refer to above comments (point 6 of submission 4). In relation to dust and noise, the application is supported by a noise and dust management plan. The updated plans include measures to reduce impacts of dust, including, limiting internal haulage speeds to 10km per hour, realigning the internal haulage route to maximise separation distances and using other dust suppression measures where necessary (including water carting and ceasing works when weather conditions will generate unreasonable dust).
	It's very dangerous turning onto the highway now let alone with an extra 50-100 trucks per day!	**OFFICER COMMENTS:** Note. Please refer to above comments (point 6 of submission 4). **OFFICER RECOMMENDATION:** Note and recommend conditions to manage potential external impacts of noise and dust
30. ICR150313	Attention Bob Wallin Boyanup west road We live less than 3km from the proposed sandpit, on Boyanup West Road. We have	**APPLICANTS COMMENT:** Refer to Attachment 7.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
Name and address supplied	received no information from the council regarding said sandpit.	**OFFICER COMMENTS:** Note.
	I assume that we will be impacted by increase traffic on a road that " has been upgraded " in the last few years. The road was better before the upgrades. The councils communication on this matter needs begin!	**OFFICER COMMENTS:** Note.
	No wonder there is so much local opposition	**OFFICER COMMENTS:** Note. The applicant will be assessed against the local planning framework and the assessment process includes the need to have due regard to submissions received during any consultation. **OFFICER RECOMMENDATION:** Note
31. IPA18157 Name and address supplied	Att: Mr Bob Wallin Dear Bob I am Stratham resident and I have many concerns over the proposed sand pit at Lot 103 Boyanup west road Stratham.	**APPLICANTS COMMENT:** Refer to Attachment 7.
		OFFICER COMMENTS: Note
	I am concerned about the environmental impact on the area as I assume many trees will be felled and a big hole will be the legacy as well as much dust from the pit for ever after the extraction is finished.	**OFFICER COMMENTS:** Note. The extent of the extraction area has been limited to preserve areas of trees. The area identified has been mostly cleared for grazing, with isolated individual trees being scattered. A fauna assessment has concluded that the existing area is in a degraded state and offers limited to no value for habitat. A clearing permit will be required separately to this approval and will ensure that loss of habitat is given a full and proper consideration.
	I am concerned about the dust created by the extraction and dust especially during the summer months when the wind in predominantly from the east.	**OFFICER COMMENTS:** Note. The application is supported by a dust management plan.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		Please see comments above related to dust management.
	I am concerned about the dust from the trucks and machinery used to extract the sand	**OFFICER COMMENTS:** Note. Please refer to comments above (point 6 of submission 4)
	I am concerned about the noise level from the extraction location and on the road	**OFFICER COMMENTS:** Note. The application is supported by a noise management plan. Please see comments above related to dust and noise matters.. It is further noted that the noise regulations do not apply to noise generated on the public road network.
	I am concerned about the traffic impact on Boyanup west road and the Boyanup west road junction with Bussel Hwy.	**OFFICER COMMENTS:** Note. Please refer to comments above (point 6 submission 4).
	I am concerned about the impact on the water table in the area, we as well as the local farmers rely on ground water to water our stock and gardens, the experience of many households in Gelorup has been negative in relation to the impact on ground water ever since the BOOR road works has commenced.	**OFFICER COMMENTS:** Note. The application has been referred to DWER for technical advice on the water environment. Advice from DWER has confirmed that the proposal does not adversely impact the local groundwater conditions (see Attachment 8 – Submission 10).
	I have seen your proposed dust, water and noise management plans and I don't believe they will fully address the potential impacts of the proposed sand pit. I therefore ask that you not approve the sand pit as proposed for Lot 103 Boyanup West road Stratham.	**OFFICER COMMENTS:** Note. Please see above comments in relation to these points. **OFFICER RECOMMENDATION:** Note and recommend conditions.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Thank you for your consideration in this matter. Regards Names supplied	
32. ICR150461 Name and address supplied	and further, Please also be advised that we would like to see what the dust mitigation plan is for the mine and any subsequent agreement for area rehabilitation at the conclusion of any mine works??	**APPLICANTS COMMENT:** Refer to Attachment 7. **OFFICER COMMENTS:** Note. This information is publicly available on the Shire's website (under closed applications).
	The wind on our part of Bourne Loop is shocking and we therefore suffer greatly from dust and other airborne particles. This mine would enhance the volume of airborne dust and affect our health and quality of life.	**OFFICER COMMENTS:** Note. The application is supported by a dust management plan. It is noted that Bourne Loop is approximately 1.4km at it's closest point to the extraction site.
	We strongly oppose this mine site and will hold the Shire directly responsible for any affected quality of life we suffer should this mine/sand extraction be given approval! Names and addresses supplied	**OFFICER COMMENTS:** Note. The application is determined by the Joint Assessment Panel and not the Shire. **OFFICER RECOMMENDATION:** Note and recommend conditions to address dust.
33. ICR150464 Name and address supplied	Attn: Bob Wallin Senior Planning Officer Dear Bob,	**APPLICANTS COMMENT:** Refer to Attachment 7.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Thank you for your original letter dated 16 November 2023 regarding the proposed variation to the Local Planning Scheme No 8 and/or Residential Design Codes standards (R Codes) and the attached invitation to comment.	**OFFICER COMMENTS:** Note.
	We live on 22 Cheriton Court in Stratham and object to the proposed variations to the local planning scheme and/or residential code that would permit the proposed extraction of 400,000 tonnes of sand on West Boyanup Road over a five (5) year period - supply and demand dependent.	**OFFICER COMMENTS:** Note.
	I have taken the time to print off and read through the Operations, Dust, Noise & Water Management Plans. There were only a few discrepancies I noted, Accendo Australia stated operating hours for mine were from 7am to 6pm whereas the Lloyd George Acoustics report stated 7am to 7pm. As for noise control levels Lloyd George assumed trucks would be operating onsite at 30km per hour whereas Accendo Australia recommended a speed limit of 10km per hour.	**OFFICER COMMENTS:** Note. The applicant has updated to plans to remove the discrepancy. The times are now which accord with the Shire's Local Planning Policy 6.2 – Extractive Industries. In relation to haulage speeds, internal site movements will be limited to 10km per hour.
	Out of all the documents I read through, the thing that struck me the most was the last paragraph of page 12 in the Operations Plan, under the Planning Framework heading.	**OFFICER COMMENTS:** Note.
	Extractive Industries within Rural zoned areas are expected to be approved, where such operations can meet the requirements of these provisions and the Scheme, provided they do not have an adverse impact on Prime Agricultural land. A Development Approval after a minimum 21 day advertising period is required.	**OFFICER COMMENTS:** Note

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Does this mean that the whole Invitation to Comment is a moot point and we get a 400,000m3 sand mine in our backyard whether we like it or not?	**OFFICER COMMENTS:** Note. The local government and decision maker (DAP) is required to have due regard to any public submissions received during the advertising period in accordance with clause 67 of the deemed provisions.
	3.3.3 Shire of Capel's Local Planning Policy No 6.2 Extractive Industries 2. Ensure extractive industries are in the most appropriate locations. Approving a sand mine within 1.5km of a "Special Rural" zone is not an appropriate location. All land west of the proposed extraction area is "degraded vegetation" and provides no buffer/protection against prevailing easterly winds or noise, there is nothing but a pasture wasteland. I have a few questions around this?	**OFFICER COMMENTS:** Note. The EPA guidelines recommends a buffer of 500m to sensitive land uses for sand extraction. Any reduced buffer requires technical justification to demonstrate how off-site impacts can be mitigated. The proposal is supported by management plans that demonstrate that off site impacts can be suitably managed.
	• What controls are going to be in place on the mine-site to monitor wind speeds to ensure that no topsoil stripping activities occur?	**OFFICER COMMENTS:** Note. Conditions on approval are imposed to require compliance with dust plan requirements. Compliance actions can be undertaken when necessary, based on audits or response to complaints received from the public if the operator fails to address complaints received.
	• Who is the contact within the Shire of Capel who will be dealing with the Dust Complaints? Shire of Capel employees aren't particularly easy to get hold of, how can we, as community members, be reassured that the Shire of Capel are going to be proactive in handling any legitimate concerns around mining activities.	**OFFICER COMMENTS:** Note. The Shire is required to respond to complaints and enforce conditions on any approval issued. There are several avenues to reaching compliance and the Shire aims to achieve ongoing sustainable compliance by operators.
	• I am concerned about dust being carried on the easterly winds, landing on our roof and getting into our water supply. Having visible dust crossing the site boundary does not address the potential for drinking water supply contamination during periods of strong easterly winds. A consultant sitting in a Perth office doing modelling is one thing but they really have no idea of how strong the winds can be and what potential impact it could have.	**OFFICER COMMENTS:** Note. The application is supported by an updated dust management plan that provides suitable measures to control dust impacts. It is noted that Bourne Loop is approximately 1.4km at its closest point to the extraction site.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	• Upto 80-100 trucks per day exiting onto the Bussell Highway. I travel along West Boyanup Road twice per day Monday to Friday for work, having that volume of trucks exiting south onto the Bussell Highway is dangerous as it is difficult enough to cross with south bound traffic driving past at 110km per hour in a car, how is a 22tonne semi-trailer going to fare exiting onto the southbound lane? Has anyone even thought of this and gone and had a look for themselves? Especially on Friday afternoons and Saturday mornings? Not to mention the afternoon sun setting straight into your eyes as well. It is hazardous enough as it is without adding heavy haulage trucks into the mix without any thought given to current road infrastructure. If thought has been given it certainly hasn't been communicated.	**OFFICER COMMENTS:** Note. Please see comments above (point 6 of submission 4)
	• Effect of close mine proximity to house values. I am concerned that having a sand extraction mine and any ensuing issues that will come with it will have a negative impact on current house values for the duration of the mine - which may or may not last longer than 5 years. While Shire of Capel does have an obligation to consider a proposal from one landowner it also has to carefully consider the impact on a larger group of ratepayers within the Shire and how the proximity of a mine may impact their overall wellbeing and future prospects. We are hoping to leave our house as a positive legacy for our children. Leaving them a house in the middle of a potential future mine field isn't part of that plan.	**OFFICER COMMENTS:** Note. The local government and decision maker (DAP) are required to assess the application against the established local planning framework. Clause 67 of the deemed provisions provides a range of matters that the decision maker is required to have due regard to in making a determination. It is noted that impacts on land values is not a planning consideration and cannot be considered as part of the assessment process.
	• What guarantees are there that once the 400,000 tonnes have been extracted it won't be expanded into a bigger mining area? Does the Shire impose limits around how much can be extracted?	**OFFICER COMMENTS:** Note. The local government and decision maker (DAP) is required to assess the application presented before it. Any future application will require a separate application and will need to be assessed on its individual merits. It is noted that other immediate areas on the property that may contain a sand resource contain more extensive areas of remnant vegetation. This fact would require detailed assessment and clearing permits to be issued and potential for environmental off sets.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	• I feel as if there is a lack of clarity around what are the next steps in this process? Are you able to explain what happens once invitations to comments are closed?	**OFFICER COMMENTS:** Note. The process will be explained, and submitters being provided with notice when the decision maker (JDAP) sets an agenda for the item to be considered.
	• Are there any circumstances around which the proposed extraction will not go ahead? Enough community feedback against it or do we just have to put up and shut up?	**OFFICER COMMENTS:** Note. The decision making process requires the application to be considered on its individual merits against the established planning framework. The assessment process also requires the decision maker to have due regard to any public submissions made during the public consultation period.
	As Senior Planner I understand you are in a difficult predicament but I implore you to have a think about things from a community point of view and also from a Shire of Capel perspective? Is there a certain degree of risk the Shire is exposing itself too by allowing a mine within such close proximity to a special rural zoned area. Well written consultant reports are one thing but only give an academic view of mitigating risks and concerns. Have you done your due diligence and thought about the overall impact the presence of a mine will have within the immediate vicinity. Thank you for taking the time to read my concerns and I look forward to receiving a response in due course. Yours sincerely Name supplied	**OFFICER COMMENTS:** Note. The senior planning officer is not the decision maker in this instance. The decision making body is the Joint Development Assessment Panel. Please note that the panel is required to have due regard to all submissions received during the public consultation period. **OFFICER RECOMMENDATION:** Note and approve subject to conditions.
34. ICR150523 Name and address supplied	Please see attachment 1 for full submission. The key issues raised are summarised as follows:	**APPLICANTS COMMENT:** Refer to Attachment 7
	1. The use is listed as an "A" discretionary use and client does not know if the Shire has complied with the advertising requirements. If not, the Shire cannot exercise its discretion to grant approval.	**OFFICER COMMENTS:** Note.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		The Shire has satisfied the advertising requirements which has included letters to landowners within a 1km radius, notice in the local paper and the Shire's website.
	2. The Shire must consider the matters listed in the Deemed Provisions (clause 67).	**OFFICER COMMENTS:** Note. Please refer to the planning assessment section of the main report.
	3. SPP 2.4 applies and requires extractive industries to avoid, minimise or mitigate any adverse impacts on the community, water resources and biodiversity values.	**OFFICER COMMENTS:** Note. Please refer to the planning assessment section of the main report.
	4. SPP 2.4 requires development to demonstrate that it is compatible with sensitive land uses (single dwelling) and avoiding such uses with separation distances as outlined in the Environmental Protection Authority Guidance for the Assessment of Environmental Factors: Separation Distances between Industrial and Sensitive Land Uses (2005)	**OFFICER COMMENTS:** Note. Please refer to the planning assessment section of the main report.
	5. SPP 2.5 requires any off site impacts that do not meet standards to be addressed through more detailed consideration. If these impacts cannot be mitigated or managed, the application should be refused.	**OFFICER COMMENTS:** Note. Please refer to the planning assessment section of the main report.
	6. SPP 2.4 Guidelines state the sensitive land uses should not be considered within the separation distance and lists criteria for assessing including: • avoidance, of conflicts (noise, dust, vibration, blasting and vehicular traffic) • maintaining horizontal separations • avoiding exposure to groundwater and achieving the required vertical separation • the availability and suitability of the road access • effect on flora and fauna and general landscape values • ensuring all water resources are protected.	**OFFICER COMMENTS:** Note. Please refer to the planning assessment section of the main report.
	7. Clause 4.7 of SPP 2.4 guidelines recommends a vegetative screen of at least 50m width to assist with visual impacts and mitigate dust impacts.	**OFFICER COMMENTS:** Note. Please refer to the planning assessment section of the main report.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	8. EPA separation guidelines states that new projects do not proceed in the absence of site specific investigations and a report demonstrating that the separation distance will meet acceptability criteria and that these are enforceable through management plans.	**OFFICER COMMENTS:** Note. The proposal is supported by Noise and Dust Management Plans due to the location of a sensitive receptor (dwelling) being located closer than 500m. Please refer to the planning assessment section of the main report.
	9. LPP 6.2 Extractive Industries provides objectives and requirements to be demonstrated by applications.	**OFFICER COMMENTS:** Note
	Application of the relevant legislation and policy	
	Separation Distance	
	10. The application proposes a separation distance of 140m to a sensitive land use (single house) and therefore does not comply with the EPA Separation Guidelines. This single house while not inhabited by the owner as a permanent residence, it is still categorised as been subject to human occupation, use and activity.	**OFFICER COMMENTS:** Note. The proposal is supported by a Noise and Dust Management Plan. Please refer to the planning assessment section of the main report for further details.
	11. The operations plan does not demonstrate or address how the applicant proposes to mitigate or manage a sensitive land use within 140m of the proposed extraction	**OFFICER COMMENTS:** Note. This matter is covered in more detail in the planning assessment section of the main report.
	12. The applicant's comments that they have undertaken extensive consultation with the adjoining owner is false. If this had occurred, it would be known that one of the owners suffers from various significant health concerns.	**OFFICER COMMENTS:** Note. The Shire has satisfied the advertising requirements which has included letters to landowners within a 1km radius, notice in the local paper and the Shire's website.
	13. If approval is recommended, at a minimum, it must be necessary to demonstrate that impacts of the reduced separation (140m) be acceptable	**OFFICER COMMENTS:** Note. The proposal is supported by a Noise and Dust Management Plan. Please refer to the planning assessment section of the main report for further details.
	Groundwater Separation	
	14. A 1m separation is proposed which does not satisfy the 2m required under LPP 6.2.	**OFFICER COMMENTS:** Note.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		The proposal is supported by an updated Water Management Plan. The proposed treatments indicated in the plan are considered suitable and supported by DWER subject to a maximum pit floor level of 15m AHD being achieved. Conditions are recommended to ensure the Water Management Plan is implemented.
	15. An independent study undertaken by client by MBS Environment, concludes that the methods used are not particularly reliable and involve rudimentary extrapolation form two bores, neither cover the southern portion of the extraction area where the groundwater is assumed to be the highest. The application should be refused unless further and more reliable methods of groundwater assessment is completed.	**OFFICER COMMENTS:** Note. Updated documents have been prepared following advertising to address concerns raised by government agencies. Updated data has been provided to the satisfaction of DWER.
	Traffic impacts	
	16. The proposal is not supported by a Traffic Impact Assessment and proposes traffic volumes of approximately 100 movements per day. This is required under LPP 6.2.	**OFFICER COMMENTS:** Note. MRWA raises no objections to the proposal. Further, haulage is proposed to use a road network designed to accommodate vehicles of this volume and size. This matter is discussed in more detail in the planning assessment section of the main report.
	17. The proposal will generate significant impacts along boundary of property, creating dust, noise and safety issues.	**OFFICER COMMENTS:** Note. This matter is addressed through updated noise and dust management plans that include, among other things, restricting speed to 10km. Conditions are recommended to ensure compliance.
	MBS Environmental Report	
	18. The application does not include a finished development plan or a sufficient existing features plan as required under Appendix 1 of LPP 6.2	**OFFICER COMMENTS:** Note. This matter is discussed in more detail in the planning assessment section of the main report. It is recommended that the rehabilitation plan be modified to provide a minimum 1 in 6 slope.
	19. The setbacks are less than 20m required (10m proposed) and no justification has been proposed	**OFFICER COMMENTS:** Note. The amended plan proposes a 20m setback.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	20. Studies (fauna) submitted do not meet current EPA standards. No flora study was submitted.	**OFFICER COMMENTS:** Note. There is opportunity to address this issue through a separate clearing permit stage. This will be required prior to any works progressing.
	21. Vegetation immediately to the south and east is highly likely to qualify as federally listed TEC Banksia Woodlands of the Swan Coastal Plain data base. The approved federal conservation advice for the TEC recommends a minimum 20m buffer.	**OFFICER COMMENTS:** Note. Please see above. The Clearing Permit process provides opportunity to consider impacts on the wider locality and potential impacts on linkages.
	22. There is potential presence of tuart woodlands on the property. A targeted survey for Tuart woodland TEC would be required to confirm the presence or absence and guide consideration of further setbacks.	**OFFICER COMMENTS:** Note. Please see above.
	23. The application notes that there is an Environmentally Sensitive Area (ESA) associated with a TEC approximately 400m south of the subject site. The application does not clarify if buffer applies and if impacts arise from any proposed access tack.	**OFFICER COMMENTS:** Note. Please see above and Attachment 8 submissions from DBCA and DWER.
	24. The fauna survey does not cover the entire proposed extraction area	**OFFICER COMMENTS:** Note. Please see above and Attachment 8 submissions from DBCA and DWER.
	25. Further information is required on the location of the proposed bund	**OFFICER COMMENTS:** Note. The updated Noise Management Plan details the location of the proposed bund including the height (4m). A condition is recommended to ensure this is constructed prior to extraction and that it is maintained to not generate dust.
	26. Further information is required on the location of hard stand areas	**OFFICER COMMENTS:** Note. No hardstand is proposed.
	27. The access track is proposed through a multiple use wetlands that are upgradient of the of the conservation wetland south of the property.	**OFFICER COMMENTS:** Note. The updated plans have modified the proposed access track location, as well as increasing setback distances and reducing the size of the noise bund.
	28. The noise management plan includes inconsistencies with pit floor levels (assumes 10m AHD in section 4.2.2 of noise assessment while pit floor for extraction is set at 12.6m AHD. This will generate a significant difference.	**OFFICER COMMENTS:** Note.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		The Noise Management Plan has been updated and a condition is recommended to ensure compliance.
	29. There is inconsistencies with equipment proposed to be used.	**OFFICER COMMENTS:** Note. The Noise Management Plan has been updated.
	30. There is insufficient information on the proposed noise bund with inconsistencies between location and haulage routes and no information on maintenance of existing drainage, how it will be constructed and maintained to minimise dust	**OFFICER COMMENTS:** Note. The Noise Management Plan has been updated to reflect a modified haulage route that increases the separation distance from the nearest dwelling. A condition is recommended to ensure compliance.
	31. The dust rating in the dust management plan is incorrectly calculated. The correct dust rating would require additional measures to control and monitor dust.	**OFFICER COMMENTS:** Note. The Dust Management Plan has been updated to include additional control measures. A condition is recommended to ensure compliance.
	32. The assertion the that extraction will not be visible from Boyanup West Road and Bussell Hwy is wrong.	**OFFICER COMMENTS:** Note. The amended plans reduce the size of the noise bund and potential impacts on views. The Planning Assessment section of the main report provides additional comments on the impacts on landscape.
	33. The proposed noise bund will block views of the rural landscape and have a visual impact on the adjoining property.	**OFFICER COMMENTS:** Note. Please see above. The bund is significantly down slope from the closest dwelling and will not materially block views.
	Land Valuation	
	34. Valuation has been undertaken and demonstrates that the activity will have a detrimental impact on property value due to loss of amenity	**OFFICER COMMENTS:** Note. Planning decisions cannot consider impacts on land values as part of the assessment. Please refer to the planning assessment section of the main report in relation to Clause 67 items that a

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		decision maker is required to have due regard to.
	Defective Application	
	35. The application does not comply with the minimum standards of SPP 6.2 as it does not include: • Background information on existing utilities • Proposed clearing methods • Proposed infrastructure • Public danger and fencing • Traffic impact assessment • Justification for variations • A vegetation clearing plan • Visual impact assessment • Rehabilitation implementation plan And should therefore be refused	**OFFICER COMMENTS:** Note. Amended plans have been prepared to address issues raised during advertising. Please refer to the planning assessment section of the main report for further details.
	Consideration under regulations	
	Under clause 67 of the deemed provisions, the application should be refused as: • Is located 140m from a sensitive use with a resident with serious medical conditions that will be exacerbated by noise and dust • Unreasonable impacts on amenity of the rural locality due to noise and dust emissions, traffic and clearing of native vegetation • Impacts on human health • Incompatibility and unreasonable impact on amenity	**OFFICER COMMENTS:** Note. Please refer to the planning assessment section of the main report that considers Clause 67 matters that require due regard consideration when determining an application.
	Orderly and proper planning Principles	
	36. The proposal must be assessed against principle of orderly and proper planning which requires: 37. • exercise of discretion be conducted in a discipled, methodical, logical and systematic way; • need for regard to applicable legislation, subsidiary legislation and planning schemes, and policy instruments. • Not limited to planning legislation and instruments but also with facts to be determined having regard to circumstances of each case. The proposal has not demonstrated compliance with orderly and proper planning.	**OFFICER COMMENTS:** Note. Please refer to the planning assessment section of the main report that addresses considerations associated with the orderly and proper planning of the locality.

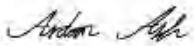
SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	EPA	
	38. The EPA requires all significant proposals to be referred (Section 38(4) of EPA Act. Significant is if "a proposal likely, if implemented, to have a significant effect on the environment". The term "environment means "living things, their physical, biological and social surroundings, and interactions between all of these". The proposal will generate dust and noise impacting human health	**OFFICER COMMENTS:** Note. Please refer to Attachment 8 relating to DWER and DBCA comments. Please note that the clearing permit process provides a separate and appropriate mechanism to address environmental impacts from clearing. Impacts associated with the water environment are addressed in the updated Water Management Plan.
	39. If the proposal is not refused, it will be necessary to refer the application to the EPA for assessment.	**OFFICER COMMENTS:** Note.
	Conclusion	
	40. If the Shire does not refuse the application, it should: a. Require applicant to provide for further public comment additional documents as mentioned above; b. Refer t=to the EPA under Section 38.	**OFFICER COMMENTS:** Note. The Shire is not the determining authority and cannot require a separate advertising process. It is noted that applicant has updated plans in response to submissions and that the DAP agreed to an extension to the assessment process to allow government agencies and the Shire additional time to review the updated plans. **OFFICER RECOMMENDATION:** Note and include conditions and advice notes.
35 ICR 150997 Michael Tichbon LCDC	Hello Bob I have considered this application and formed the opinion that an excavation of 7.4 ha would present an ugly scar on the lower slope of the large sand ridge which dominates the landscape to the east of Bussell Highway.	**APPLICANTS COMMENT:** Refer to Attachment 7.
		OFFICER COMMENTS: Note. The extraction area will have limited visibility from Bussell Highway due to setbacks, topography and existing vegetation both in the

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		road reserve and private property. Please see the main report for analysis.
	The excavation would also require the removal of numerous paddock trees which would also require the applicant to apply for a clearing permit.	**OFFICER COMMENTS:** Note. The application has been referred to DWER for comments. A clearing permit (if necessary) will be required to be obtained independently of this application and prior to starting works on site.
	If approved this application would set a precedent for further excavations along the western scarp of the large sand ridge. For these reasons this application is opposed to this application. Yours faithfully, Michael Tichbon Capel LCDC Member	**OFFICER COMMENTS:** Note. Each application will need to be assessed on its individual merits. It is noted that the extent of this area has been determined to exclude areas that contain better areas of remnant vegetation. **OFFICER RECOMMENDATION:** Note and recommend approval subject to conditions.

SCHEDULE OF SUBMISSIONS
DAP – INDUSTRY EXTRACTIVE
LOT 103 BOYANUP ROAD WEST, STRATHAM

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
1. ICR148819 MAIN ROADS	I refer to your email below and advise that Main Roads has no objection to the proposed extractive industry.	**APPLICANTS COMMENT:** Note **OFFICER COMMENTS:** Note. **OFFICER RECOMMENDATION:** Note submission

2. ICR149460 DPLH	Department of **Planning, Lands and Heritage** Our ref: ADV-10002947 / A00010-23 Enquiries: Aidan Ash Ph: (08) 6551 8040 Mr Bob Wallin By Email: info@capel.wa.gov.au Dear Mr Wallin **ABORIGINAL CULTURAL HERITAGE – APPLICATION FOR DEVELOPMENT APPROVAL REFERRAL DEVELOPMENT ASSESSMENT PANEL – INDUSTRY EXTRACTIVE & EIL – LOT 103 BOYANUP WEST ROAD STRATHAM** Thank you for your enquiry dated 20 November 2023 regarding the application for development at Lot 103 Boyanup West Road Stratham. A review of the Register of Places and Objects as well as the Department of Planning, Lands and Heritage (DPLH) Aboriginal Heritage Database concludes that the subject area does not intersect with any known Aboriginal heritage Places or Registered Sites. Therefore, based on the current information held by DPLH, no approvals under the Aboriginal Heritage Act 1972 (AHA) are required in this instance. Please note that limited Aboriginal heritage surveys have been completed over the subject land, as such it is unknown if there is Aboriginal heritage present. Therefore, the proponent undertaking the proposed activities needs to be made aware of their obligations under the AHA. The proponent may choose to consult the Aboriginal Heritage Due Diligence Guidelines 2013 (https://www.wa.gov.au/system/files/2019-04/Annexure%20D%20-%20Aboriginal%20Heritage%20Due%20Diligence%20Guidelines.pdf) when considering the activities at this location and obligations under the AHA. I also advise the proponent regularly check the Aboriginal Cultural Heritage Inquiry System (ACHIS) should new Aboriginal Cultural Heritage be reported within your subject area. You can search ACHIS by using the following link: Aboriginal Cultural Heritage Inquiry System (dplh.wa.gov.au) If you have any further questions regarding the AHA, please send enquiries to the ACHKnowledge Portal. Page 1 of 2 Locked Bag 2506 Perth WA 6001 140 William Street Perth WA 6000 Tel: (08) 6551 8002 info@dplh.wa.gov.au www.dplh.wa.gov.au ABN 68 565 723 484	**APPLICANTS COMMENT:** Note **OFFICER COMMENTS:** Note **OFFICER RECOMMENDATION:** Note submission

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Should you have any queries in relation to the above, please contact me on (08) 6551 8040 or email aidan.ash@dplh.wa.gov.au. Yours sincerely  Aidan Ash A/DIRECTOR REGIONS – SOUTH WEST HERITAGE AND PROPERTY SERVICES 1 December 2023	

3. ICR149496 DPIRD	Department of Primary Industries and Regional Development Your reference: PA205/2023 Our reference: LUP 1739 Enquiries: Leon van Wyk Bob Wallin Senior Planning Officer Shire of Capel PO Box 369 CAPEL WA 6271 info@capel.wa.gov.au 4 December 2023 Dear Bob **COMMENT: Application for Development Approval Referral Development Assessment Panel - Industry Extractive & EIL – Lot 103 Boyanup West Road Stratham** Thank you for the opportunity to comment on the proposed extraction of sand at Lot 103 Boyanup West Road Stratham. The Department of Primary Industries and Regional Development (DPIRD) does not object to the proposed extraction of sand at the abovementioned lot. DPIRD would like to provide the following comments: • DPIRD assessed the Weed Management Plan for rehabilitation and found that it does fulfil the guidelines. DPIRD recommends that this plan is also implemented during the extraction phase of the project. • The applicant noted that no interaction with groundwater is expected during excavation works and a separation of at least 1m between the final contours and the maximum groundwater elevation will be maintained. It is very important to maintain a separation to maximum seasonal groundwater of at least 0.5m to ensure the establishment of a productive pasture. • A clearing permit will be required to remove the remaining paddock trees in the area where sand is proposed to be extracted. • No extraction of sand is to be allowed within 20m of the boundary adjacent to the remnant vegetation. 444 Albany Hwy, Albany WA 6330 Telephone +61 (0)8 9892 8444 landuse.planning@dpird.wa.gov.au dpird.wa.gov.au ABN 18 951 343 786	**APPLICANTS COMMENT:** Refer to Attachment 7 Summary points: • A 0.5m groundwater separation is achieved • A clearing permit will be applied for prior to clearing • A 20m setback has been implemented. **OFFICER COMMENTS:** Note. The amended plans (October 2024) address the issues raised associated with groundwater separation and setbacks. It is noted that a clearing permit will be required. **OFFICER RECOMMENDATION:** Note and recommend conditions and advice notes be added to ensure activity occurs as proposed.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	If you have any queries regarding the comments, please contact Leon van Wyk at (08) 9780 6171 or leon.vanwyk@dpird.wa.gov.au. Yours sincerely Tim Overheu **Acting Director Agriculture Resource Management and Assessment** **Sustainability and Biosecurity**	
4. ICR150354 DEPARTMENT OF PLANNING, LANDS & HERITAGE	Good morning, The Properties Branch has no comment to make on this application. Kind regards, Joshua Nickchen-Long	**APPLICANTS COMMENT:** Note **OFFICER COMMENTS:** Note **OFFICER RECOMMENDATION:** Note
5. ICR149163 DWER	Refer to Attachment 3 5th January 2024 Our Reference: PA 060282 , DWERVT14042~1 Your Reference: PA205/2023 To: Shire of Capel From: Department of Water and Environmental Regulation Attention: Bob Wallin RE: Proposed Extractive at Lot 103 Boyanup West Road Stratham	**APPLICANTS COMMENT:** Refer to Attachment 7 for full comments. In summary • no crushing or screening of materials is proposed on site • Documents have been updated to reflect feedback including: • WMP • Ground Water monitoring undertaken over 2024 winter season • Additional surface water management • Including dieback management plan • Updating noise assessment details

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Dear Bob, Thank you for providing the above proposal for the Department of Water and Environmental Regulation (DWER) to consider. This proposal is to extract about 400,000 m^3 of sand over 7.4 ha at the above subject lot (see Screenshot 1 & 2 below). The following documents were reviewed in this extractive proposal: • *Extractive Industry (Sand) Operations Plan - Lot 103 Boyanup Road West, Stratham* (by accendo Australia, V1, dated: 20th September 2023) (to be referred to as the 'Operations Plan V1') • *Water Management Plan - Lot 103 Boyanup Road West, Stratham* (by accendo Australia, V2, dated: 19 October 2023) (to be referred to as the 'Water Management Plan V2') • *Dust Management Plan - Lot 103 Boyanup Road West, Stratham* (by accendo Australia, Version 1, dated: 20/9/2023) (to be referred to as the 'Dust Plan V1') • *Environmental Noise Assessment -Sand Extraction Pit Lot 103 Boyanup Rd West, Stratham* (by Lloyd George Acoustics Pty Ltd, Reference: 23058082-01 draft 2, dated: 22-08-23) (to be referred to as the 'Noise Plan V1') Due to insufficient information on groundwater levels (Issue 2), this proposal is unsupported in its current form. DWER has identified that the proposal will impact on the environment and water management. Key issues and recommendations are provided below, and these matters must be addressed to the satisfaction of the Department: • Issue 1: Prescribed premises and the *Environmental Protection Act 1986* (EP Act) • Advice 1: If no processing of material (such as crushing/screening) is proposed, the proposed extraction would not meet the requirements for a Prescribed Premises under the EP Act. However, the inconsistency pointed out in the noise advice below (Issue 10) requires clarification.	• Note need for clearing permit **OFFICER COMMENTS:** Note Note. The amended plans (October 2024) include winter groundwater monitoring as well as additional monitoring locations to reflect advice. Please refer to additional comments provided by DWER (submission 10) Note. No crushing or screening is proposed. Advice is recommended.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	• Issue 2: Groundwater and pit floor level • Advice 2: The following is advised: o a) Recommended condition: "The maximum pit floor depth shall be established to ensure groundwater is not intercepted and no dewatering works are to be undertaken without DWER consultation. The Local Government is to be notified within 24 hours if the water table is intercepted." o b) Advice: a monitoring bore be located at the southeastern portion (circled around the 12.6 label in Screenshot 10) – as this is critical if a pit floor of 12.6 m AHD is to be accepted o c) Advice: for greater data veracity, an additional 2 monitoring bores would allow the triangulation of groundwater levels across the site (Screenshot 10) o d) Advice: consideration of historical groundwater levels to determine the on-site maximum groundwater level – noting a full season of data is not needed, and this historical data could be compared to the on-site monitoring bores to infer a maximum seasonal groundwater level	Note. Please see comments above regarding amended plans (October 2024) as well as additional comments provided by DWER (submission 10) A condition is recommended to set maximum pit floor depth as recommended by submission 10.
	• Issue 3: Stormwater management • Advice 3: The following is advised: o a) Recommended condition: The stormwater measures provided in the referral are to be approved and implemented to the satisfaction of the Shire, in consultation with its engineers, consistent with WQPN 15 o b) Advice: Detailed design drawings be provided but not limited to diversion drains and bunds to prevent stormwater flows entering Gynudup Brook o c) Advice: An adequate monitoring and maintenance plan of stormwater management infrastructure (i.e. diversion drains/bunds) be in place until such time the land is adequately rehabilitated	Note. The amended plans (October 2024) address the comments made by providing additional solutions for managing stormwater. This includes provision of division bunds and surface water bunds to control runoff. A condition is recommended to enforce compliance with the Water Management Plan.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	• Issue 4: Water supply • Advice 4: Recommended condition: The proponent is to quantify their water requirements for all aspects of the proposed extraction and provide evidence of a secure water source, to the satisfaction of the Shire	Note. The amended Plan (October 2024) details that water supply for dust mitigation will be supplied from Busselton. It is recommended that a condition be imposed to update the Dust Management Plan to include a contingency measure for an onsite supply.
	• Issue 5: Environmental risks • Advice 5: Recommended condition: The proposed extraction is to be implemented in accordance with DWER's Water quality protection note (WQPN) no. 15 '*Basic raw materials extraction*' (July 2019) where appropriate to the site situation to ensure environmental risks are appropriately mitigated	Note. This requirement is addressed through implementation of management plans (including the Water Management Plan and other operational conditions to limit risk exposure such as storage of chemicals and repair of repair of vehicles.
	• Issue 6: Staging Plan • Advice 6: Recommended condition: Extraction must be undertaken in accordance with the agreed staging plan, as approved by the local government. Commencement of the subsequent extraction stage shall be subject to the previous extraction site having substantially commenced rehabilitation	Note. A condition is recommended.
	• Issue 7: Rehabilitation Plan and final landform • Advice 7: The following is advised: o a) Recommended condition: The proposed rehabilitation measures and final landform is to be approved and implemented to the satisfaction of the Shire consistent with WQPN 15 and the *Guidelines for Preparing Mine Closure Plans*[1]. The proponent is to adhere to the agreed intended staging and ensure successful rehabilitation to the final landform and landuse. Management and compliance reporting shall be included to ensure successful implementation o b) Advice: Due to the 'Rural' zoning of the subject land, the Shire is advised to consult with DPIRD regarding the potential impacts the removal of material would have on the agricultural landuse post-rehabilitation	Note. A condition is recommended to address rehabilitation outcomes. This matter is discussed separately in more detail in the planning assessment section of the report.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	• Issue 8: Fuel and chemical management • Advice 8: Recommended condition: Management of all activities involving hazardous chemicals (including plant refuelling and/or servicing) shall be in accordance with DWER's WQPN 56 – '*Toxic and Hazardous Substance Storage and Use*' (Dec 2018)	Note. A condition is recommended to address this matter.
	• Issue 9: Dieback management plan • Advice 9: Recommended condition: A Dieback Management Plan is to be approved, and implemented to the satisfaction of the Shire, in consultation with DBCA, consistent with the *Best Practice Guidelines for Management of Phytophthora Dieback in the Basic Raw Materials Industries*	Note. The amended plan (October 2024) includes a dieback management plan. A condition is recommended to address this matter.
	• Issue 10: Noise • Advice 10: See attached file '2023-06-21 Shire of Capel - Noise - Technical Review Repot - Lot 103 Boyanup West Rd Stratham – FINAL.pdf'	Note. An updated Noise Management Plan has been prepared to address points raised. This includes modifications to internal haulage routes to increase separation distances, treatment of reversing vehicle beepers or similar,, provision of a noise bund and staging of works. A condition is recommended.
	• Issue 11: Dust • Advice 11: See attached file 'Dust advice for Shire__AQ1870-M AQ Final.pdf'	Note. An updated Dust Management Plan has been prepared to address points raised. This includes controls on staging, internal haulage routes, restrictions on traffic speeds, dust mitigation measures (including management options for water dampening, hydro mulching, fencing. These measures are considered reasonable and are discussed in more detail in the planning assessment part of the main report. A condition is recommended.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	• Issue 12: The clearing of native vegetation is subject to the *Environmental Protection Act 1986* • Advice 12: The proponent is to apply for a clearing permit at https://www.der.wa.gov.au/our-work/clearing-permits/46-clearing-permit-application-forms If further clarification is required, please contact the Department's Native Vegetation Regulation section by email (admin.nvp@dwer.wa.gov.au) or by telephone (6364 7098). Where the Department has a statutory role, planning applications should be considered prior to the Department issuing any relevant permits, licenses and/or approvals. In the event that the applicant determines that a works approval or licence application is required under Part V of the *Environmental Protection Act 1986* (EP Act), the advice provided in this communication does not prejudice and must not be considered to infer the outcome of the EP Act licence and works approval process. More detail pertaining to the above issues are provided in Table 1 below. In the event there are modifications to the proposal that may have implications on aspects of environment and/or water management, the Department should be notified to enable the implications to be assessed. Should you require any further information on the comments please contact the undersigned. Thank you. Yours sincerely, Daniel Wong Environmental Officer Department of Water and Environmental Regulation Planning Advice South West Region Email: daniel.wong@dwer.wa.gov.au Phone: 08 9726 4113	Note. The applicant is aware of this requirement and advice is recommended.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Fax: 08 9726 4100 Postal: PO Box 261, Bunbury, WA 6231 Location: 71 McCombe Road, Bunbury, WA 6230 Table 1 - Department of Water and Environmental Regulation detailed comments on PA205/2023	Note. No crushing or screening is proposed. An advice note is recommended.

Item No.	Reviewer comment/advice
1	Issue 1: Prescribed premises and the *Environmental Protection Act 1986* (EP Act) Advice 1: If no processing of material (such as crushing/screening) is proposed, the proposed extraction would not meet the requirements for a Prescribed Premises under the EP Act. However, the inconsistency pointed out in the noise advice below (Issue 10) requires clarification. Discussion 1: Based on the information provided, it appears there is no processing of material (such as crushing/screening) proposed, to which the proposed extractive operations would not meet the requirements for a Prescribed Premises for the purposes of Part V Division 3 of *the Environmental Protection Act 1986* (EP Act). The Shire should however note in the unlikely event the processing of material is proposed into the future, this may cause the premises to be prescribed where the equipment has the capability to meet or exceed the specified production or design capacity* of the relevant category under Schedule 1 of the EP Regulations which are: Category 12 — Category description: Screening etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated — Production or design capacity: 50 000 tonnes or more per year Category — Category description — Production or design capacity

SUBMITTER	SUMMARY OF SUBMISSION		COMMENTS / RECOMMENDATION
		70 Screening etc. of material: premises on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated — More than 5 000 but less than 50 000 tonnes per year The Applicant is therefore advised to refer to the information and Industry Regulation Guide to Licensing available at http://www.der.wa.gov.au/our-work/licences-and-works-approvals and / or if they have queries relating to works approvals and licences to contact DWER at info@dwer.wa.gov.au or 6364 7000. * Production capacity and design capacity definitions: • The production capacity is the rate at which a product is produced as relevant to the description of the prescribed premises category; and • design capacity is the maximum capacity for which the facility or equipment is designed to receive, handle, process, contain or emit, as relevant to the description of the prescribed premises category. In the event that the applicant determines that a works approval or licence application is required under Part V of the Environmental Protection Act 1986 (EP Act), the advice provided in this communication does not prejudice and must not be considered to infer the outcome of the EP Act licence and works approval process.	
	2	Issue 2: Groundwater and pit floor level Advice 2: The following is advised: • a) Recommended condition: "The maximum pit floor depth shall be established to ensure groundwater is not intercepted and no dewatering works are to be undertaken without DWER consultation. The Local Government is to be notified within 24 hours if the water table is intercepted." • b) Advice: a monitoring bore be located at the southeastern portion (circled around the 12.6 label in Screenshot 10) – as this is critical if a pit floor of 12.6 m AHD is to be accepted • c) Advice: for greater data veracity, an additional 2 monitoring bores would allow the triangulation of groundwater levels across the site (Screenshot 10) • d) Advice: consideration of historical groundwater levels to determine the on-site maximum groundwater level – noting a full season of data is not needed, and this	Note. Additional information has been provided in the amended plans (October 2024). Please refer to the additional comments from DWER (submission 10) Conditions are recommended.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	historical data could be compared to the on-site monitoring bores to infer a maximum seasonal groundwater level Discussion 2: The proponent proposes in the Water Management Plan V2 (by accendo Australia) to extract down to 12.6m AHD, where it is claimed to achieve a 1m separation to groundwater. <u>Methodology of determining maximum groundwater levels</u> Two monitoring bores were used in this estimation, which are located within the extraction area and ~140 m to the north of the extraction area (Screenshot 3) – with monthly data collated from January 2021 to December 2022 (Screenshot 4). Accendo have stated that the maximum groundwater elevation of 10.4 m AHD in the northern bore and 11 m AHD in the bore within the extraction area (both in September 2022) lead to the assumption that the maximum groundwater in the southwestern (SW) corner of the excavation area will be approximately 11.6 m AHD. To ensure a separation to groundwater of at least 1 m a maximum excavation level of 12.6 m AHD has been proposed to be maintained across the site. <u>Topography and groundwater flow direction</u> The proposed pit floor level has been based off an <u>estimated</u> groundwater level in the <u>southwestern corner</u> (11.6m AHD) of the extraction area from the above methodology. This is 0.6 m higher than the measured maximum groundwater level on site, so it could be considered conservative. However, this seems to be on the assumption that the groundwater flow direction would be to the North <u>East</u> (NE) (Screenshot 3), which would not make sense conceptually given the local topography slopes towards the North <u>West</u> (NW) (Screenshot 5). If the groundwater flows towards the NW then it could be assumed the groundwater level would be higher in the South East (SE) corner of the site. As such, there would likely be a smaller separation distance from the pit floor to the maximum groundwater level in the SE corner of the extraction area (i.e. less than 1m separation). <u>NW bore used in Water Management Plan V2</u> While there is already a monitoring bore in the NW corner, it is 14.5 m deep. If a description of the lithology was provided, the use of this bore may be suitable in	

SUBMITTER		SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		determining groundwater levels for this proposal. However a lithological description from a private bore toward the southwestern corner of the extraction area describes 3 m of brown and green clay from 7 – 10 m bgl (Screenshot 6). Due to the depth of the NW bore and potential influence of a confining clay layer, this bore may not be suitable for groundwater level determinations for this proposal. Ideally the monitoring bore should be shallower and constructed above this clay layer if encountered when drilling. Historical groundwater levels require consideration DWER monitoring bores BY26B and BY21C are located in the general area (Screenshot 7). BY26B (Screenshot 8) and BY21C (Screenshot 9) show that groundwater levels have been historically higher than those levels recorded in 2021 and 2022. This historical data needs to be considered when establishing a maximum historical groundwater level across the extraction site. The new monitoring bores would not need a full season of data and could be compared to the current monitoring bores to infer a maximum seasonal groundwater level. DWER recommendations In view of the above, DWER recommends additional information be provided to the satisfaction of the City to confirm the proposed 12.6m pit floor level. This includes information such as, but not limited to: • a monitoring bore be located at the southeastern portion (circled around the 12.6 label in Screenshot 10) – as this is critical if a pit floor of 12.6 m AHD is to be accepted • for greater data veracity, an additional 2 monitoring bores would allow the triangulation of groundwater levels across the site (Screenshot 10) • consideration of historical groundwater levels to determine the maximum groundwater level – noting a full season of data is not needed, and this historical data could be compared to the on-site monitoring bores to infer a maximum seasonal groundwater level	
	3	Issue 3: Stormwater management Advice 3: The following is advised:	Note. The amended plan (October 2024) includes an updated Water Management Plan that addresses issues raised. Conditions are recommended.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	• a) Recommended condition: The stormwater measures provided in the referral are to be approved and implemented to the satisfaction of the Shire, in consultation with its engineers, consistent with WQPN 15 • b) Advice: Detailed design drawings be provided but not limited to diversion drains and bunds to prevent stormwater flows entering Gynudup Brook • c) Advice: An adequate monitoring and maintenance plan of stormwater management infrastructure (i.e. diversion drains/bunds) be in place until such time the land is adequately rehabilitated Discussion 3: There is a non-perennial watercourse (Gynudup Brook) located immediately to the west of the extraction area (Screenshot 2), and it appears that flows may occur to Lot 953 and Lot 1052 to the North based on our LiDAR contours. Lot 1052 contains a Conservation Category Wetland. As such, any contaminants entering Gynudup Brook from the extraction site has the potential to be carried downstream. To mitigate the stormwater risk, Table 4 (see below) of the Water Management Plan V2 proposes diversion drains around the excavation and hardstand areas to divert clean water away from the pit and contain any potentially sediment laden surface water within the pit. For Stages 1 & 2 located higher in the landscape, the proponent relies on retaining stormwater within the pit by ensuring the pits are internally draining – and no calculations of the required holding volume has been provided on the basis of the high topographical relief. DWER also notes the ~70m separation distance from the western edge of stage 1 to Gynudup Brook (Screenshot 2). As such, the effectiveness of this measure in mitigating the risk of erosion and subsequent sediment transport to Gynudup Brook depends upon conducting appropriate operations to ensure the Stage 1 & 2 pits remain internally draining for the duration of the extraction. For Stage 3, the holding volume at 1 m extraction depth was stated at 132,000 m^3, which is incorrect, and should instead be 13,200 m^3 (i.e. 220m x 60m x 1m = 13,200 m^3). This is however still greater than the required holding volume of 840 m^3 stated in the Water Management Plan V2. Due to the lower topographical elevation of Stages 3 & 4, a small bund is proposed to contain surface water within the pit when excavation is occurring adjacent to the western boundary – however noting no drawing details have been provided of the bunds and diversion drains.	

SUBMITTER		SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		No details have been provided regarding a monitoring and maintenance plan for the proposed bund and diversion drains. Major storms and general ground disturbing activities can result in erosion, sediment transport and the sedimentation of the diversion drains. To ensure the bund and diversion drains retain their effectiveness over the duration of the extraction/rehabilitation period, a monitoring and maintenance plan should be in place.	
		Table 4. Risk assessment associated with surface water and stormwater.	

Hazard	Source of Hazard	Potential Impacts	Mitigation	Likelihood	Consequence	Residual Risk
Erosion and sedimentation	Uncontrolled and contaminated stormwater runoff	Erosion and sedimentation resulting in poor surface water quality in surrounding waterways.	Construction of diversion drains around the excavation and hardstand areas to divert clean water away from the pit and contain any potentially sediment laden surface water within the pit. Excavation undertaken with a gradient to ensure that stormwater is contained within the excavation footprint.	1	2	Low

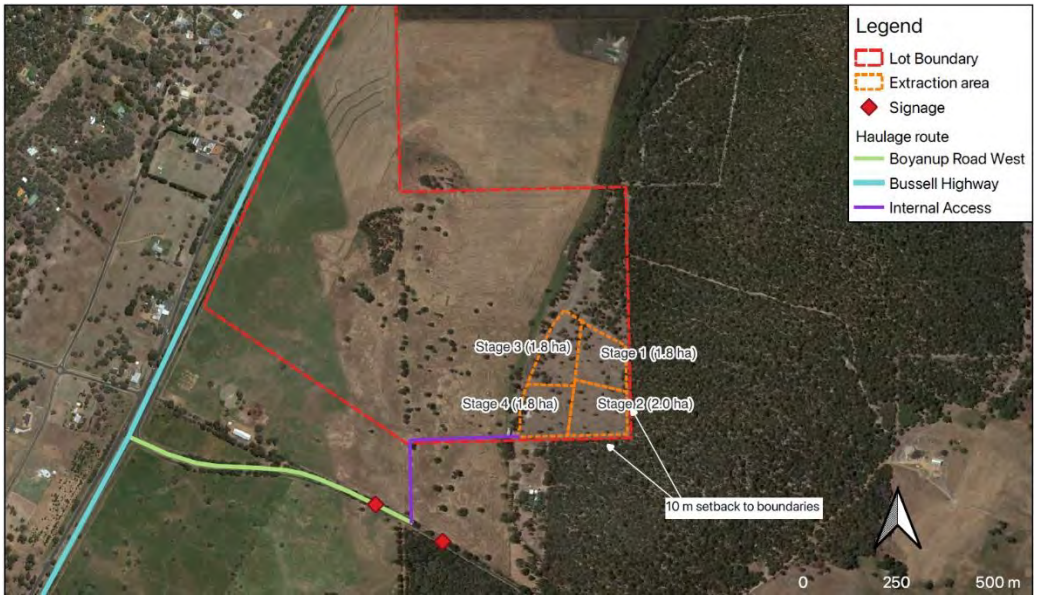
	4	Issue 4: Water supply Advice 4: Recommended condition: The proponent is to quantify their water requirements for all aspects of the proposed extraction and provide evidence of a secure water source, to the satisfaction of the Shire Discussion 4: The following statement is noted in the referral: • "Water is only required for dust suppression within the quarry and the access road. Water will be sourced from an offsite source and tankered to the site for dust suppression purposes, as required."	Note. The amended plan (October 2024) provides details on a water supply. It is recommended that the Dust Management Plan be updated to include a contingency for an on-site water supply in the event that dust management requires immediate attention. A condition is recommended.

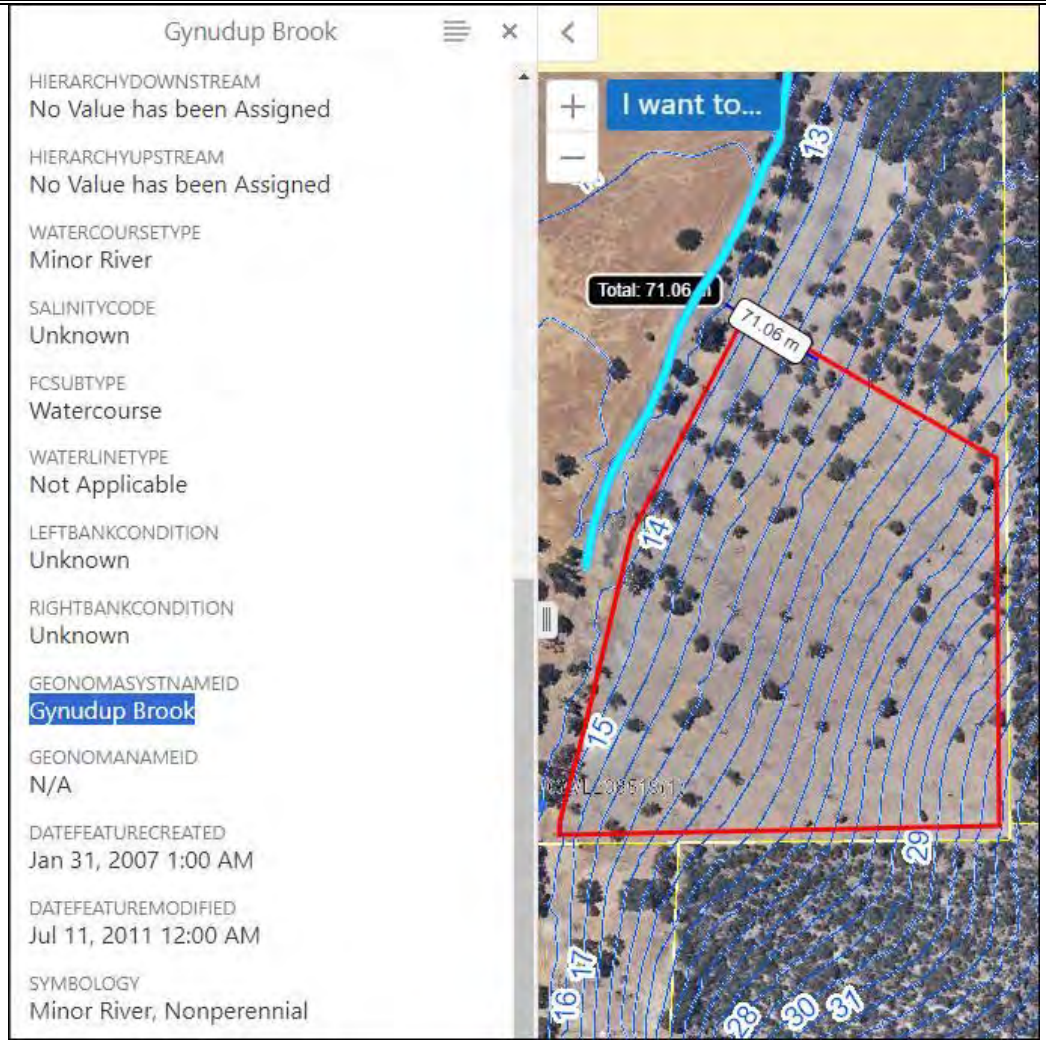
SUBMITTER		SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		However, there is no information provided regarding the sourcing of this water, or the total water requirements over the year – to which the above advice is recommended.	
	5	Issue 5: Environmental risks Advice 5: Recommended condition: The proposed extraction is to be implemented in accordance with DWER's Water quality protection note (WQPN) no. 15 '*Basic raw materials extraction*' (July 2019) where appropriate to the site situation to ensure environmental risks are appropriately mitigated Discussion 5: WQPN 15 provides recommendations on how to limit the impacts of their operations to the environment and water resources, to which the proponent is expected to adhere to where appropriate to the site situation (attached for your convenience)	Note. This matter is addressed through implementing the management plans.
	6	Issue 6: Staging plan Advice 6: Recommended condition: Extraction must be undertaken in accordance with the agreed staging plan, as approved by the local government. Commencement of the subsequent extraction stage shall be subject to the previous extraction site having substantially commenced rehabilitation Discussion 6: The proposal covers 4 stages ranging in size from 1.8 to 2.0 hectares as per Screenshot 1 below. As such, the above advice is recommended to ensure improved rehabilitation outcomes.	Note A condition is recommended to require staging to occur in accordance with the staging plan.
	7	Issue 7: Rehabilitation Plan and final landform Advice 7: The following is advised: • a) Recommended condition: The proposed rehabilitation measures and final landform is to be approved and implemented to the satisfaction of the Shire consistent with WQPN 15 and the *Guidelines for Preparing Mine Closure Plans1*. The proponent is to adhere to the agreed intended staging and ensure successful rehabilitation to the final landform and landuse. Management and compliance reporting shall be included to ensure successful implementation	Note. This matter is discussed in more detail in the Planning Assessment section of the main report that provides commentary on the proposed end landform and use. A condition is recommended to ensure end land use and landform outcomes are sustainable.

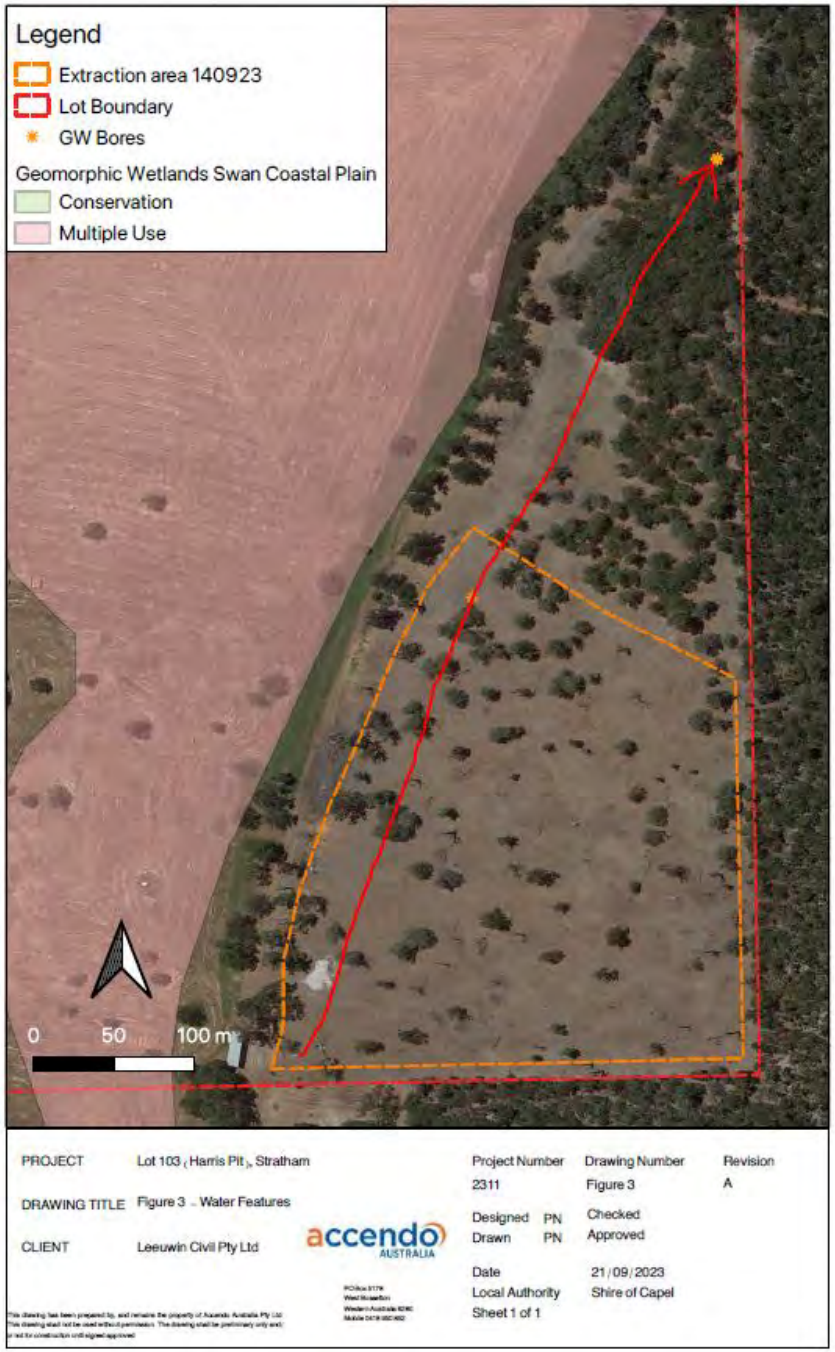
SUBMITTER		SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		• b) Advice: Due to the 'Rural' zoning of the subject land, the Shire is advised to consult with DPIRD regarding the potential impacts the removal of material would have on the agricultural landuse post-rehabilitation Discussion 7: The Rehabilitation Management Plan is contained within Section 6 of the Operations Plan V1. Based on the information provided, DWER notes the extraction areas are to be rehabilitated to pasture. A slope of 1:4 vertical to horizontal is proposed for the sides of the extraction area. In view of the 'Rural' zoning of the land, the above advice is recommended.	
	8	Issue 8: Fuel and chemical management Advice 8: Recommended condition: Management of all activities involving hazardous chemicals (including plant refuelling and/or servicing) shall be in accordance with DWER's WQPN 56 – '*Toxic and Hazardous Substance Storage and Use*' (Dec 2018) Discussion 8: The following statements are noted in the referral: • "Mobile refuelling of equipment and vehicles will be undertaken on site by a mobile fueling truck on a hard stand area outside of the pit area." • "Spill kits containing appropriate equipment for control, containment and cleanup of hydrocarbon and chemical spills will be available in appropriate locations onsite and maintained." • "No vehicles or machinery are to be serviced or cleaned within the subject site." As such, the above is recommended.	Note. A condition is recommended.
	9	Issue 9: Dieback management plan Advice 9: Recommended condition: A Dieback Management Plan is to be approved, and implemented to the satisfaction of the Shire, in consultation with DBCA, consistent with the *Best Practice Guidelines for Management of Phytophthora Dieback in the Basic Raw Materials Industries*	Note. The amended plan (October 2024) includes a dieback management plan. A condition is recommended.

SUBMITTER		SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		Discussion 9: The management of dieback is provided in Section 5.4 of the Operations Plan V1 – to which the DBCA should be consulted.	
	10	Issue 10: Noise Advice 10: See attached file '2023-06-21 Shire of Capel - Noise - Technical Review Repot - Lot 103 Boyanup West Rd Stratham – FINAL.pdf' Discussion 10: See attached file '2023-06-21 Shire of Capel - Noise - Technical Review Repot - Lot 103 Boyanup West Rd Stratham – FINAL.pdf'. In addition, relevant to Issue 1 above is the following DWER's noise advice seeking clarification: • "It was made clear in the first paragraph of Chapter 3 of the Noise Management Plan that "***The proposal does not include any crushing or screening of material***". However, it states in the second last paragraph of Chapter 4.2 of the Noise Management Plan that "*A Noise Assessment was undertaken by Lloyd George Acoustics (Lloyd George 2023) (refer to Appendix B) which demonstrated that noise levels resulting from the extraction and **crushing works** and the noise from trucks entering the site, are predicted to exceed the assigned level of 45dB LA10 at Resident 1*". Furthermore, while a crusher was not included in LGA's noise modelling, a Mobile Sand Screen was included."	Note. The amended plan (October 2024) includes an updated noise management plan. The measures proposed are considered reasonable and a condition is recommended.
	11	Issue 11: Dust Advice 11: See attached file 'Dust advice for Shire__AQ1870-M AQ Final.pdf' Discussion 11: n/a	Note. The amended plan (October 2024) includes an updated dust management plan. The measures proposed are considered reasonable and a condition is recommended.
	12	Issue 12: The clearing of native vegetation is subject to the *Environmental Protection Act 1986* Advice 12: The proponent is to apply for a clearing permit at https://www.der.wa.gov.au/our-work/clearing-permits/46-clearing-permit-application-	Note. An advice note is recommended. This matter is discussed in the planning assessment section of the main report.

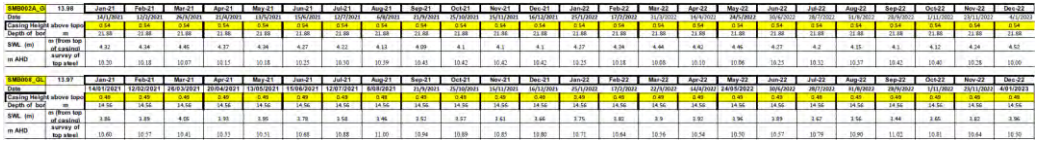
SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	forms If further clarification is required, please contact the Department's Native Vegetation Regulation section by email (admin.nvp@dwer.wa.gov.au) or by telephone (6364 7098). Discussion 12: Under section 51C of the *Environmental Protection Act 1986* (EP Act), clearing of native vegetation is an offence unless: • it is undertaken under the authority of a clearing permit • it is done after the person has received notice under Section 51DA(5) that a clearing permit is not required • the clearing is subject to an exemption Exemptions for clearing that are a requirement of written law, or authorised under certain statutory processes, are contained in Schedule 6 of the EP Act. Exemptions for low impact routine land management practices outside of environmentally sensitive areas (ESAs) are contained in the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (the Clearing Regulations). As clearing is proposed, a clearing permit is required, noting that exemptions do not apply. The Department has not received a clearing permit application for this proposal. Application forms are available from https://www.wa.gov.au/service/environment/environment-information-services/clearing-permit-forms Additional information on how to apply for a clearing permit is available from Clearing permit forms | Western Australian Government (www.wa.gov.au). Information regarding clearing permit fees can be found here: Clearing fees – frequently asked questions | Western Australian Government (www.wa.gov.au) If further clarification is required, please contact the Department's Native Vegetation Regulation section by email (admin.nvp@dwer.wa.gov.au) or by telephone (6364 7098).	

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	 Screenshot 1: Proposed stages	

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	 Screenshot 2: Watercourse to the west	


Legend
Extraction area 140923
Lot Boundary
GW Bores
Geomorphic Wetlands Swan Coastal Plain
Conservation
Multiple Use
0
50
100 m
PROJECT
Lot 103 (Harris Pit), Stratham
DRAWING TITLE
Figure 3 - Water Features
CLIENT
Leeuwin Civil Pty Ltd
accendo AUSTRALIA
Project Number
2311
Drawing Number
Figure 3
Revision
A
Designed PN
Drawn PN
Checked
Approved
Date
21/09/2023
Local Authority
Shire of Capel
Sheet 1 of 1

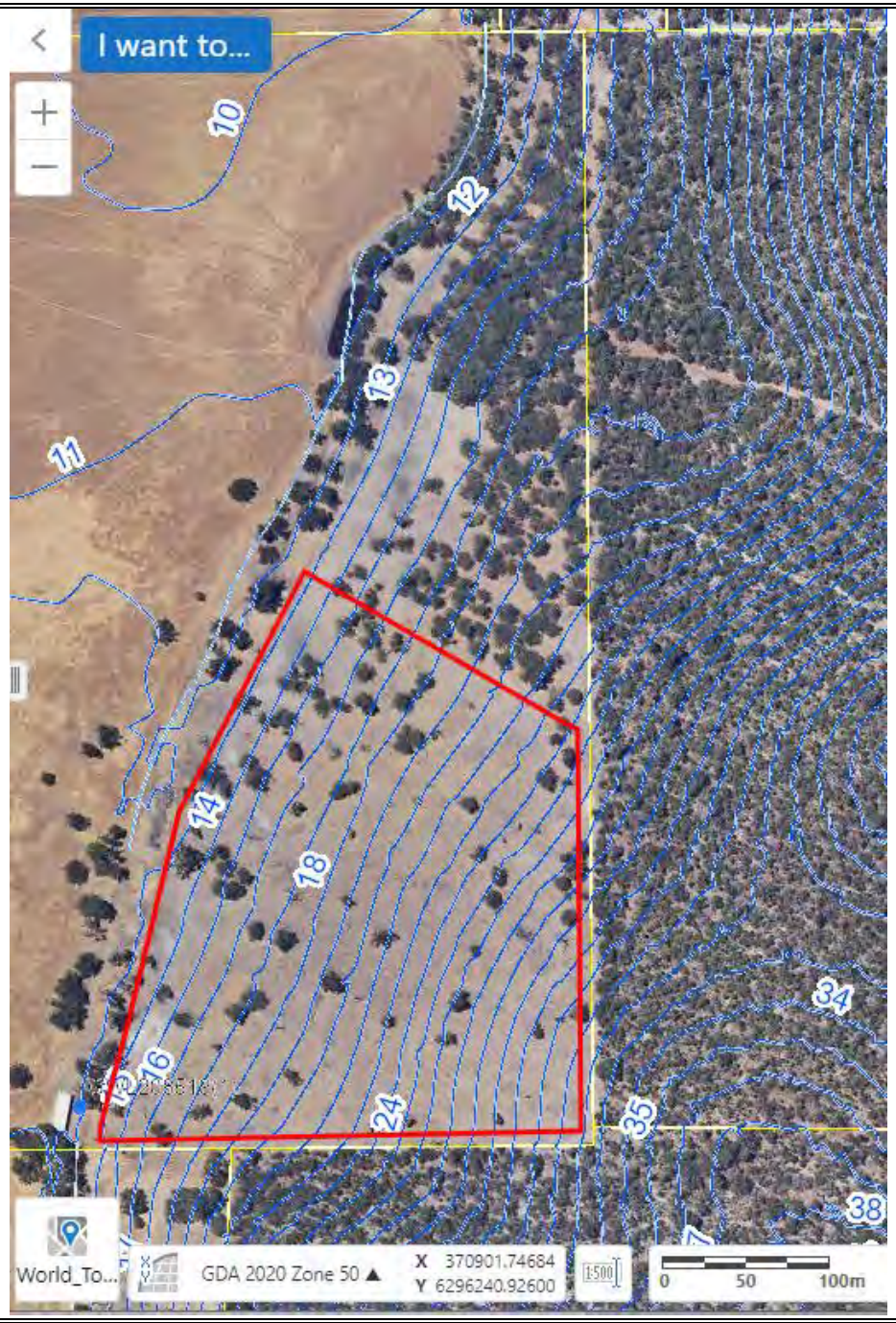
SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Screenshot 3: Groundwater flow direction considering Accendos estimated groundwater level in the SW corner (Figure 1 of Water Management Plan V2)	



SMB002A_GL	13.98	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Date		14/1/2021	12/2/2021	26/3/2021	05/4/2021	13/5/2021	15/6/2021	12/7/2021	6/8/2021	21/9/2021	25/10/2021	16/11/2021	14/12/2021	25/1/2022	17/2/2022	22/3/2022	14/4/2022	24/5/2022	30/6/2022	26/7/2022	31/8/2022	29/9/2022	1/11/2022	25/11/2022	4/12/2022
Casing Height	above topo	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Depth of bore	m	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60	21.60
SWL (m)	m (from top of casing)	4.32	4.34	4.46	4.37	4.36	4.27	4.22	4.13	4.09	4.1	4.1	4.1	4.27	4.28	4.44	4.42	4.46	4.27	4.2	4.15	4.1	4.12	4.24	4.52
m AHD	survey of top steel	10.20	10.18	10.07	10.15	10.18	10.25	10.30	10.39	10.45	10.42	10.42	10.42	10.25	10.18	10.08	10.10	10.06	10.25	10.32	10.37	10.42	10.40	10.28	10.00

SMB004_GL	13.97	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22
Date		14/01/2021	12/02/2021	26/03/2021	05/04/2021	13/05/2021	15/06/2021	12/07/2021	6/08/2021	21/9/2021	25/10/2021	16/11/2021	14/12/2021	25/1/2022	17/2/2022	22/3/2022	14/4/2022	24/5/2022	30/6/2022	26/7/2022	31/8/2022	29/9/2022	1/11/2022	25/11/2022	4/12/2022
Casing Height	above topo	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Depth of bore	m	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56	14.56
SWL (m)	m (from top of casing)	3.86	3.89	4.09	3.98	3.86	3.78	3.58	3.46	3.52	3.57	3.61	3.64	3.75	3.82	3.9	3.92	3.96	3.89	3.67	3.56	3.44	3.45	3.62	3.96
m AHD	survey of top steel	10.60	10.57	10.41	10.53	10.51	10.68	10.88	11.00	10.94	10.89	10.85	10.80	10.71	10.64	10.56	10.54	10.50	10.57	10.79	10.90	11.02	10.91	10.64	10.30

Screenshot 4: Appendix B of Water Management Plan V2 – Groundwater levels of 2 monitoring bores


I want to...
10
12
13
11
14
18
34
16
24
35
38
World_To...
GDA 2020 Zone 50
X 370901.74684
Y 6296240.92600
1:500
0
50
100m

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Screenshot 5: LiDAR contours of surface	

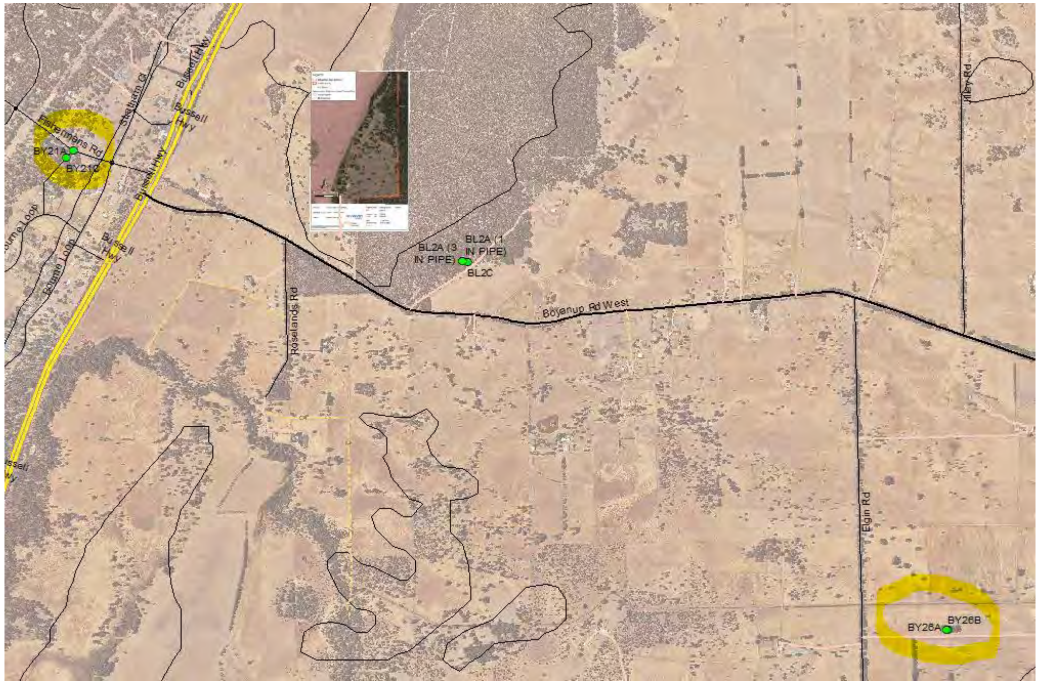
LOCATION: LOT 103 PLAN 51141 STRATHAM DRILLER: S.BARR LIC.# 262

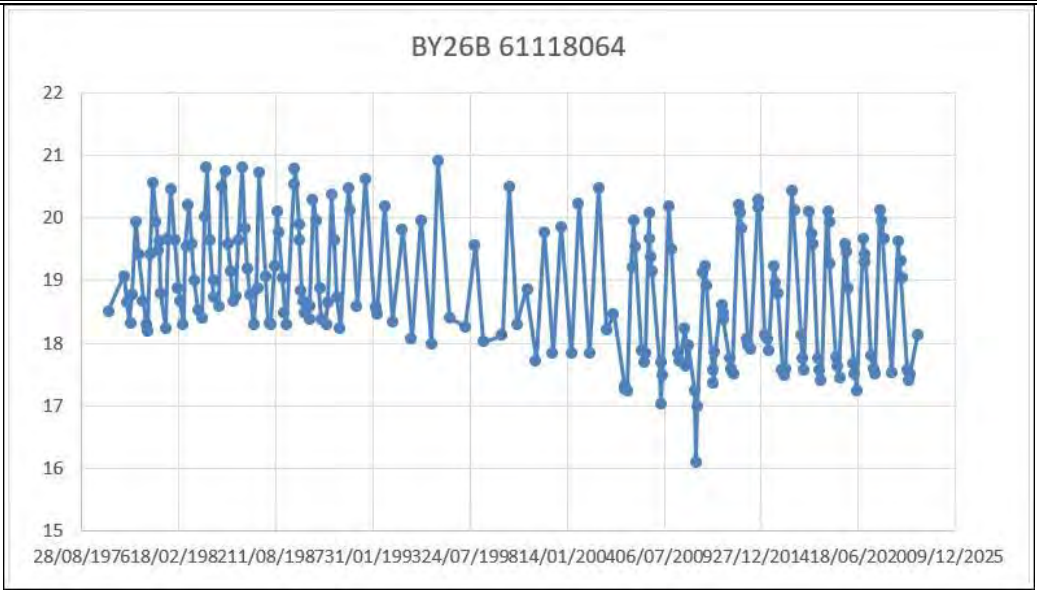
		DESCRIPTION OF STRATA	Pump Casing	
FROM	TO		Length (m)	
0.0	7.0	WHITE SAND	Diameter (mm)	
7.0	10.0	BROWN & GREEN CLAY	Material:	
10.0	17.0	COARSE BROWN SAND	**Production Casing**	
17.0	21.0	BLACK CLAY	Length (m)	11.0 BGL
			Diameter (mm)	100mm ID
			Material:	CL9
			Screening	
			Length (m)	6.0
			Diameter (mm)	100 ID
			Material:	CL9 PVC
			Slot Width:	0.5mm
			Packer	
			Gravel Packing	
			Length (m)	8.0
			Material:	quarts
			Size:	1.6-3.4mm
			Cement Grouting	
			From:	0.0 BGL
			To:	10.0 BGL

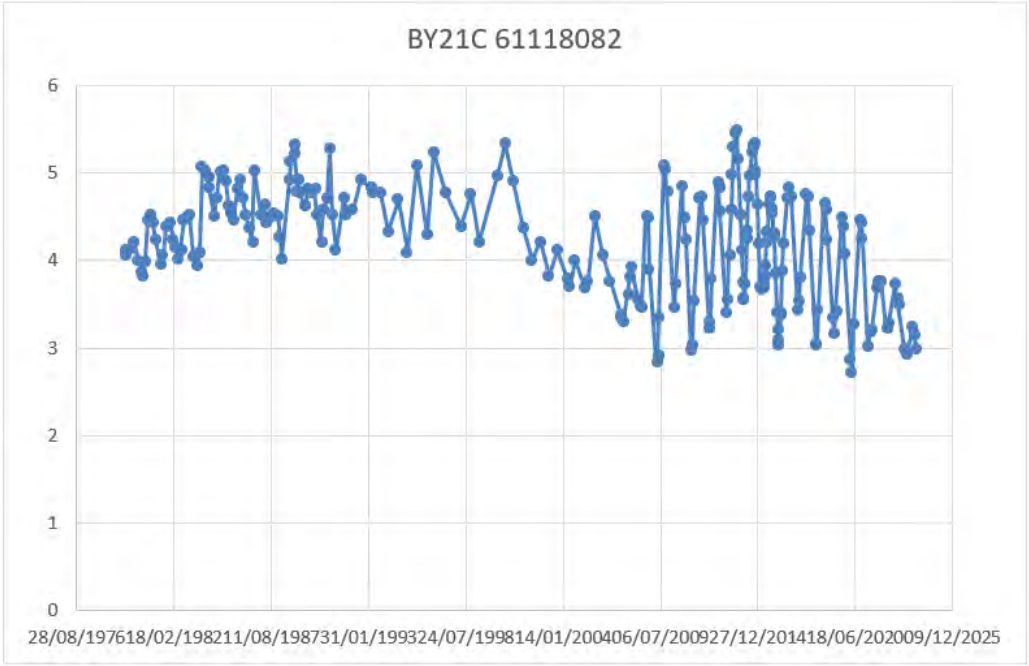
TOTAL DEPTH: 17.0m

PUMP TEST RESULTS		DEVELOPMENT HOURS	
Static from ground level	3.7m BGL	Compressed air	
Draw down from static water level	5.3m	High pressure jetting	
Pump test duration	2	Bailing	
Yield 80 lpm			
Recommended pump set from ground level	26.0m	Date commenced	17/4/23
Salinity	400 ppm	Date completed	18/4/23
GPS			

Screenshot 6: Lithology description from private bore towards the SW corner of the extraction area

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	 Screenshot 7: Location of DWER monitoring bores	

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	 Screenshot 8: DWER monitoring bore BY26B	

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	 Screenshot 9: DWER monitoring bore BY21C	



PROJECT	Lot 103 (Harris Pit), Stratham	Project Number	Drawing Number	Revision
		2311	Figure 8	A
DRAWING TITLE	Figure 8 - Final Contours	Designed PN	Checked	
		Drawn PN	Approved	
CLIENT	Leeuwin Civil Pty Ltd	Date	21/09/2023	
		Local Authority	Shire of Capel	
		Sheet 1 of 1		

accendo AUSTRALIA

This drawing has been prepared by, and remains the property of Accendo Australia Pty Ltd. This drawing shall not be used without permission. This drawing shall be preliminary only and is not for construction until signed approved.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Screenshot 10: Final site contours and suggested monitoring bore locations in red circles (Figure 8 of Operations Plan V1)	**OFFICER RECOMMENDATION:** The amended plans (October 2024) address the issues raised. DWER have been provided an opportunity to review the amended plans and have provided additional comments (see submission 10 below. Conditions and advice notes are recommended to address points raised.

6. ICR151187 Dept of Health	Government of Western Australia Department of Health *Your Ref:* PA205/2023 ICR145911 *Our Ref:* F-AA-90422-2/D-AA-23/426988 *Contact:* Vic Andrich 9222 2000 Mr Gordon MacMile Chief Executive Officer Shire of Capel PO Box 369 CAPEL WA 6271 Attention: Bob Wallin, Senior Planning Officer Via email: info@capel.wa.gov.au Dear Mr MacMile **PROPOSED EXTRACTIVE INDUSTRIAL (SAND) – LOT 103 BOYANUP WEST ROAD, STRATHAM** Thank you for your letter of 20 November 2023, requesting comments from the Department of Health (DoH) on the above proposal. The DoH provides the following comment: 1. **Wastewater Management** The proposal is required to comply with the requirements of the Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations, 1974 (the Regulations). The DoH has no objection to the proposal subject to ensuring the following are undertaken during the development stage. In particular – 1. A site-specific Site and Soil Evaluation (SSE) is to be undertaken by a qualified consultant during the wettest seasonal time of the year (mid-July/August) as specified by Australian/New Zealand Standard AS/NZS 1547:2012. 2. The proposed wastewater treatment system must be a system as approved or certified for use by the DoH. As the proposal is located within a sewage sensitive area, a secondary treatment system will be required, and the disposal location will be required to meet all minimum buffer distances. They will also require an adequate ongoing maintenance program. 3. Detailed plans showing the proposed building envelopes, all trafficable areas, parking bays and land application areas including setback distances, exclusion zones and measurements.	**APPLICANTS COMMENT:** No comments provided **OFFICER COMMENTS:** **Note** This matter is addressed through separate legislative requirements and approval processes. Advice is recommended

In accordance with the Regulations, an 'Application to Construct or Install an Apparatus for the Treatment of Sewage' is required to be submitted to the Local Government for each wastewater treatment system. As this proposal is viewed as commercial, the applications are required to be forwarded to the DoH for assessment and approval.

2. Drinking Water Management

All drinking water provided on site must meet the health-related requirements and risk management framework set out in version 3.7 of the Australian Drinking Water Quality Guidelines 2011. These are highlighted in principle in the following link: https://www.health.wa.gov.au/Articles/J_M/Mine-sites-and-exploration-camps .

Any non-drinking water (i.e., water that is not intended or suitable for drinking) must be managed to ensure it cannot be confused with or contaminate the drinking water supply. This requires satisfactory labelling of non-drinking water taps and, depending on system configuration, suitable backflow prevention arrangements.

3. Public Health Impacts

Within the respective management plans, there may still be a concern about existing and potential adverse health effects and nuisance impacts from noise and dust. A complaints register should be maintained with details of action taken to address the complaint including timeliness of response.

Should you have any queries or require further information please contact Vic Andrich and Yashvee Manrakhan-Field on 9222 2000 or eh.eSubmissions@health.wa.gov.au

Yours sincerely

Lindy Nield
A/EXECUTIVE DIRECTOR
ENVIRONMENTAL HEALTH DIRECTORATE

4 January 2023

Note.
Advice is recommended.

Note.
The updated dust and noise management plans include a complaints register.
A condition is recommended.

OFFICER RECOMMENDATION:
Note and include advice notes and conditions associated with the ongoing implementation of requirements detailed in the noise and dust management plans.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION

7. ICR 153015 DBCA	Department of Biodiversity, Conservation and Attractions PARKS AND WILDLIFE SERVICE Your ref: PA205/2023 ICR145911 Our ref: 51470 2023-003162 Enquiries: Tracy Teede Phone: 9725 4300 Email: swlanduseplanning@dbca.wa.gov.au Chief Executive Officer Shire of Capel PO Box 369 CAPEL WA 6271 ATTENTION: Bob Wallin **EXTRACTIVE INDUSTRY (SAND) –** **LOT 103 BOYANUP WEST ROAD STRATHAM** I refer to your letter dated 20 November 2023 forwarding an extractive industry application for the above property for the Department of Biodiversity, Conservation and Attractions' (DBCA) Parks and Wildlife Service comment. The following comments are provided pursuant to DBCA's responsibilities under the *Biodiversity Conservation Act 2016* (BC Act). **Advice to Shire** Biodiversity values Lot 103 is within a *Banksia woodlands* Threatened Ecological Community (TEC) buffer area and contains habitat suitable for threatened fauna adjacent to the proposed extraction area. The Lot 103 extraction area contains trees with varying extents of separation or aggregation. DBCA notes the Accendo Australia *Extractive Industry and Operations Plan* (Version 1, September 2023) (Plan) Section 5.3 refers to clearing of native vegetation and the requirement to refer the application to the Department of Water and Environmental Regulation (DWER) for assessment to determine if a clearing permit is required. The proponent should be aware of their obligations and approval requirements under section 40 of the BC Act, which requires Ministerial authorisation to take or disturb threatened species. DBCA recommends that when vegetation clearing is required, the proponent should seek advice from DBCA's Species and Communities branch at speciesandcommunities@dbca.wa.gov.au prior to clearing works, in relation to section 40 authorisation requirements. Clearing Permit The proponent should seek advice from DWER in relation to clearing permit requirements. If a clearing permit is required, DBCA expects that the environmental values that are likely to be impacted by the proposed development will be adequately considered through the assessment of the clearing permit, through which DBCA may provide advice to DWER. DBCA suggests that if **Regional and Fire Management Services Division** **South West Region** **PO Box 1693, Bunbury, Western Australia 6230** dbca.wa.gov.au	**APPLICANTS COMMENT:** No comments provided **OFFICER COMMENTS:** Note. The applicant is aware of the need for a clearing permit to remove native vegetation. An advice note is proposed. Note. Please see above. An advice note is proposed.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	development approval is provided then the approval should be subject to a clearing permit being issued. Tree buffer Application Section 4 refers to a 10 metre buffer to the drip line of all trees outside of approved extraction areas, DBCA recommends this should also include the addition of text that reads *"…or 20 metres from tree trunks, whichever is greater."* DBCA supports buffers to retained trees within Lot 103 and suggests that tree buffer areas be demarcated to prevent accidental vehicle intrusion. DBCA suggests that some additional mature trees near the eastern boundary but within the eastern portion of the current proposed extraction area should be retained as "extraction hydrology impact indicator trees" providing an alert for potential water impacts to the adjacent TEC bushland. These trees should be buffered as described above. There should be no disturbance of the ground surface, including for rehabilitation works, within the tree setback and buffer zone. Water management The Accendo Australia *Water Management Plan* (Version 2, October 2023) Figure 2 indicates a 10 metre boundary setback to the extraction site. DBCA's recommends a minimum 20 metre boundary setback, to provide for a suitable buffer between the proposed extraction site and the *Banksia woodlands* TEC vegetation located within adjacent lots. Due to the sandy soils, small setback distance to the native vegetation and the proposed deep extraction, the proposed extraction could result in indirect impacts to adjacent native vegetation due to increased soil drying via the steep exposed pit slopes, and possibly wetlands due to modified waterflow characteristics, and erosion risks. The application makes assumptions about groundwater levels across the site which may not reflect actual groundwater levels within the south-eastern/eastern portion of the proposed extraction site. DBCA recommends advice is sought from DWER in relation to maximum groundwater level contours and acceptable excavation depths, to minimise the risk of hydrological impacts upon the native vegetation TEC and to wetlands downstream. Batters Current slopes in the proposed extraction area are in the order of 1:15 and proposed batter slopes of 1:4. DBCA recommends final batter slopes to be 1:6 where possible to reduce erosion risks and impacts, in particular along the top bank adjacent to TEC bushland for the current application. Cattle grazing may exacerbate potential erosion where batter slopes are too steep. DBCA recommends advice is sought from DWER in relation to suitable rehabilitation slopes to ensure the long-term suitability and stability for proposed future land uses. Thank you for the opportunity to comment on this application. Please contact Tracy Teede at the Parks and Wildlife Service South West Region office on 9725 4300 if you have any queries regarding this advice. Yours sincerely  Aminya Ennis Regional Manager 2 February 2024	Note. The amended application (October 2024) has increased the setback distance from 10m to 20m. A condition is recommended. Note. The amended application (October 2024) has increased the setback distance from 10m to 20m. A condition is recommended. Note. Batter gradients are discussed in the Planning Assessment section of the main report. A condition is recommended. **OFFICER RECOMMENDATION:** Note and include conditions and advice.
Submissions on Amended Plans October 2024		

8 ICR172948 DEMIRS	Department of Energy, Mines, Industry Regulation and Safety Resource and Environmental Regulation Your ref PA205/2023 Our ref A8089/202201 Enquiries Steven Batty — 9222 3104 Steven.BATTY@demirs.wa.gov.au Bob Wallin Coordinator Planning Development Services Shire of Capel Sent by Email — info@capel.wa.gov.au PO Box 369, Capel, WA 6271 Dear Bob Wallin **SHIRE OF CAPEL - OCR171390 - DEVELOPMENT APPROVAL - INDUSTRY EXTRACTIVE - EIL - LOT 103 BOYANUP WEST ROAD STRATHAM - PA205/2023** Thank you for your letter dated 29/11/2024 inviting comment on the development application for an Industry Extractive License (EIL) for sand, at Lot 103 Boyanup West Road, Stratham (PA205/2023) in the Shire of Capel. Although EIL's fall outside the *Mining Act 1978*, information on mineral resources, including basic raw materials, is of importance to the Geological Survey and Resource Strategy Division, within DEMIRS. The information is used in our MINEDEX database, which is a source of information for our State-wide resource mapping system - GeoView. The locations and status of basic raw material extraction sites are also valuable inputs to our resource assessment and land use planning role. Our aim is for the database to be a comprehensive and up-to-date source of information on all mining-related activities throughout the State. It is a database that is used to inform other government agencies, as well as the general public, of the location of mines and mineral resources. You are encouraged to use it whenever researching information on mineral or petroleum resources, and including basic raw materials. Thank you for the opportunity to note this proposal. An EIL proposal for this same area was assessed and responded to on 16 January 20024. The main observations from the previous assessment remain the same: • There is a 6.55% encroachment on granted M 70/812 held by Doral Mineral Sands Pty Ltd. The tenement holder was not contacted on this occasion even though the sand extraction has the potential to significantly affect any Ti-Zr resource in this area. Previously Doral provided no response by 16/01/2024, so it was assumed there was no comment. No activity appears to have occurred in this area during the year. • Contact for the tenement holder if required: C/- McMahon Mining Title Services Pty Ltd, PO Box 6301, East Perth, WA, 6892 E: mmts@mmts.net.au T: (08) 6467 7997 • The sand resource in the proposal area is located over an area designated as a Strategic Mineral Resource Protection Area for titanium-zircon mineralization. Any removal of sand containing potentially economic grades of this type of mineralization may be illegal without authorization under the Mining Act 1978. Whilst available information indicates that there A85187893 Release Classification: : Addressee Use Only Mineral House 100 Plain Street East Perth Western Australia 6004 Postal address: Locked Bag 100 East Perth WA 6892 Telephone +61 8 9222 3333 Facsimile +61 8 9222 3862 www.demirs.wa.gov.au ABN 69 410 335 356	**APPLICANTS COMMENT:** Not provided opportunity to comment **OFFICER COMMENTS:** Note. Note. Note. Advice is recommended.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
		OFFICER RECOMMENDATION: Note and provide advice.

are no economic grades in this location, advice should be sought from the tenement holder should the company have any doubt about the presence of mineralization during extraction.

DEMIRS has determined this proposal raises no significant issues with respect to mineral and petroleum resources, geothermal energy, and basic raw materials. It would be appreciated if DEMIRS continues to be notified of all applications for EIL's in the Shire of Capel and that all future correspondence is addressed to the Executive Director of the Geological Survey and Resource Strategy Division and submitted electronically to records@dmirs.wa.gov.au

Yours sincerely



Steven Batty | Senior Geologist
Resource Security Directorate
03 December 2024

Mineral House 100 Plain Street East Perth, Western Australia 6004
Postal address: Locked Bag 100 East Perth WA 6892
Telephone +61 8 9222 3333 Facsimile +61 8 9222 3862
www.dmirs.wa.gov.au
ABN 68 410 335 356

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
9 ICR 174409 DBCA		

OFFICIAL

Department of Biodiversity, Conservation and Attractions

PARKS AND WILDLIFE SERVICES

Your ref: PA205/2023
Our ref: 51470 2023-003162
Enquiries: Tracy Teede
Phone: 9725 4300
Email: [redacted]

Chief Executive Officer
Shire of Capel
PO Box 369
CAPEL WA 6271

ATTENTION: Bob Wallin

EXTRACTIVE INDUSTRY (SAND) –
LOT 103 BOYANUP WEST ROAD STRATHAM – ADDITIONAL INFORMATION -

I refer to your letter dated 29 November 2024 forwarding additional information for the Lot 103 extractive industry application for the Department of Biodiversity, Conservation and Attractions' (DBCA) Parks and Wildlife Service comment.

The following comments are provided pursuant to DBCA's responsibilities under the *Biodiversity Conservation Act 2016* (BC Act).

Advice to Shire

DBCA provided comments dated 2 February 2024 to the original application. DBCA's comments regarding native vegetation clearing permits and approval requirements under section 40 of the BC Act remain relevant to the current application.

The proposed 20 metre boundary setback to the eastern and southern boundaries is supported by DBCA. The increased buffer areas will include mature trees, and the health of these trees during the extraction period will be important indicators for potential water impacts to the adjacent Threatened Ecological Community vegetation. The proposed 10 metre buffer to the drip line of all trees should also apply to trees within the boundary setback area.

DBCA comments that tree buffer areas be demarcated to prevent accidental vehicle intrusion and there be no ground surface disturbance, including for rehabilitation works, within the setback and buffer zones, remain applicable to the current revised application.

The application refers to additional groundwater monitoring bores being installed, with one bore being damaged. DBCA expects that DWER advice will be sought regarding maximum groundwater level contours and acceptable excavation depths, to minimize the risk of hydrological impacts upon the native vegetation TEC and to wetlands downstream.

The application indicates that proposed batter slopes remain unchanged. DBCA prefers final batter slopes to be 1:6 where possible to reduce erosion risks and impacts to the adjacent TEC bushland.

Regional and Fire Management Services Division
South West Region
PO Box 1693, Bunbury, Western Australia 6230
dbca.wa.gov.au

APPLICANTS COMMENT:
Not provided opportunity to comment

OFFICER COMMENTS:

Note. An advice note is recommended.

Note. A condition is recommended to ensure compliance.

Note. A condition is recommended to ensure site management does not accidently impact retained trees.
Note. DWER has provided advice on groundwater monitoring (see Submission 10).

OFFICER RECOMMENDATION
Note and include conditions and advice.

If cattle grazing is permitted within the 20 metre boundary setback areas, DBCA recommends the fencing is maintained in good condition to restrict straying stock impacts to the adjacent TEC vegetation..

Thank you for the opportunity to comment on this application. Please contact Tracy Teede at the Parks and Wildlife Service South West Region office on 9725 4300 if you have any queries regarding this advice.

Yours sincerely



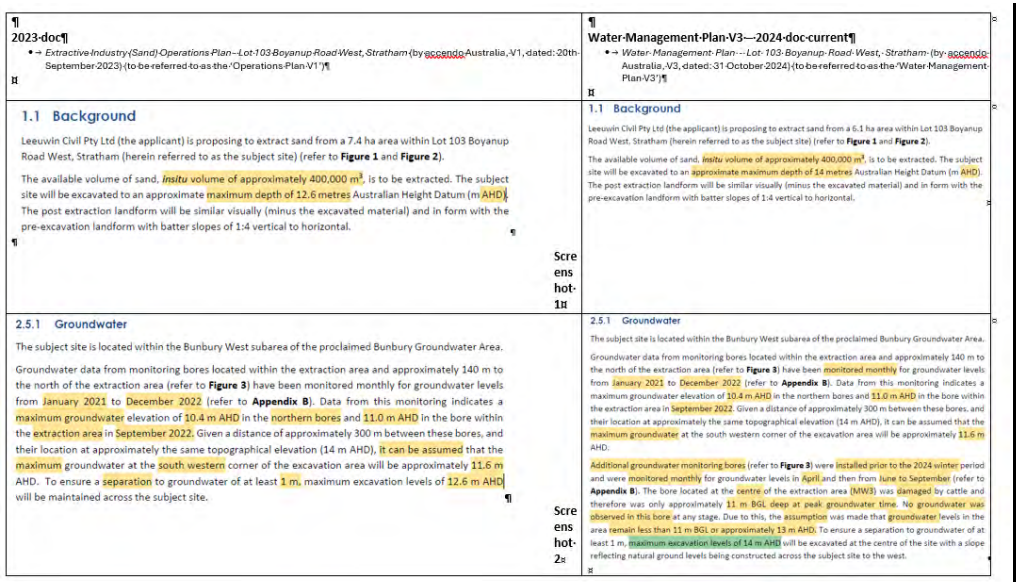
Kerstin Stender
Acting Regional Manager

17 January 2025

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
10. ICR 174107 DWER	Dear Bob, **RE: Updated documents and DAP for Sand extraction at Lot 103 on Plan 51141 Boyanup West Road Stratham** Thank you for providing the above proposal for the Department of Water and Environmental Regulation (DWER) to consider. Updated documents are now provided in this referral, which are: • *Extractive Industry (Sand) Operations Plan - Lot 103 Boyanup Road West, Stratham* (by accendo Australia, V3, dated: 31 October 2024) (to be referred to as the 'Operations Plan V3') • *Water Management Plan - Lot 103 Boyanup Road West, Stratham* (by accendo Australia, V3, dated: 31 October 2024) (to be referred to as the 'Water Management Plan V3') DWER notes that the Shire no longer requires our dust and noise advice (DWER file ref: DWERDT1061174). <u>Context of current referral with previous referral</u> This proposal has been previously assessed by us (DWER ref: PA 060282), and which has since been revised (PA 068678). DWER has reviewed this proposal and provides a 'side-to-side' comparison between the water management plans in Table 1 below (containing Screenshots 1 -8). The applicant should have provided a summary of the changes with the revised referral to enable ease of assessment for all agencies assessing this application. In summary: • the pit floor has been raised from 12.6 metres AHD to 14 metres AHD (Screenshot 1-4 & 7) • additional monitoring bores have been installed (Screenshots 2 & 8)	**APPLICANTS COMMENT:** Not provided opportunity to comment **OFFICER COMMENTS:** Note. Note.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	• the area of extraction has been reduced from 7.4 ha to 6.1 ha (Screenshot 3) <u>Hydrogeological advice</u> Based on the information provided in the Water Management Plan V3, the following is noted: • (a) The report states that as no groundwater was encountered in the bore at the centre of the extraction area at 11 metres deep or 13 metres AHD (Screenshot 2). As such, the assumption was made that the maximum groundwater level to be at 13 metres AHD – and a 14 metre extraction depth has been proposed by the applicant to establish a 1 metre groundwater separation. • (b) Based on the above, DWER can assume that groundwater could be at 13 m AHD as the seasonal maximum for the year. • (c) As no historical long term data has been provided (Screenshot 9), it is therefore possible for groundwater to be higher in the future, but is currently unknown • (d) Although additional bores have been constructed (with additional data provided – Screenshot 10), DWER is unable to use this data since: o these bores have not been labelled (Screenshot 8), and we therefore cannot confirm which data point belongs to which bore o there was no conversion to metres AHD for the new bores • (e) In view of the above situation, DWER makes the following recommendations: o **The maximum pit floor depth be set to 15 metres AHD to account for long term historical variation** o In the event a pit floor level is proposed to be lower than 15 metres AHD in future: ▪ Long term historical data be provided supporting the lower pit floor level, with an appropriate level of detail, with groundwater levels in metres AHD ▪ Updated data be provided, with groundwater levels in metres AHD for the bores in Screenshots 9 & 10 ▪ The above data is to be provided, to the satisfaction of the Shire, in consultation with DWER	Note. DWER's advice on this matter is supported and a condition can be imposed to set a extraction to a floor depth of 15m AHD while allowing a review of this level depending on further data being provided.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	In view of the higher pit floor level (14 m AHD), and reduced extraction area (6.1 ha), DWER notes that the ~400,000 m^3 resource estimation remains. DWER advises that its previous advice remains where relevant (attached for your convenience). <u>General</u> Where the Department has a statutory role, planning applications should be considered prior to the Department issuing any relevant permits, licenses and/or approvals. In the event that the applicant determines that a works approval or licence application is required under Part V of the *Environmental Protection Act 1986* (EP Act), the advice provided in this communication <u>does not prejudice</u> and must not be considered to infer the outcome of the EP Act licence and works approval process. In the event there are modifications to the proposal that may have implications on aspects of environment and/or water management, the Department should be notified to enable the implications to be assessed. Should you require any further information on the comments please contact the undersigned. Thank you. Yours sincerely, *Daniel Wong* Environmental Officer Department of Water and Environmental Regulation Planning Advice South West Region Email: daniel.wong@dwer.wa.gov.au Phone: 08 9726 4113 Fax: 08 9726 4100	Note. Note. **OFFICER RECOMMENDATION** Note and include conditions and advice, including the setting for pit floor level to 15m AHD.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	Postal: PO Box 261, Bunbury, WA 6231 Location: 71 McCombe Road, Bunbury, WA 6230 **Table 1** 	

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION

3 EXTRACTION ACTIVITIES

The sand quarry will cover an area of approximately 7.4 ha, with a current maximum elevation ranging from 13 m AHD to 30 m AHD. It will be excavated to a maximum depth of approximately 12.6 m AHD commencing in the north east and moving initially in a southerly direction in stages less than 2 ha in size (refer to **Figure 2**). The proposal does not include any crushing or screening of material.

It is estimated that the total maximum volume of sand to be removed will be approximately 400,000 m^3 with a maximum of approximately 200,000 m^3 excavated each year, depending on supply and demand.

The planned end use of the quarry is to restore a natural soil profile and return the area to pasture, ensuring that there is no net loss of agricultural land.

Screenshot-3

3 EXTRACTION ACTIVITIES

The sand quarry will cover an area of approximately 6.1 ha, with a current maximum elevation ranging from 14 m AHD to 30 m AHD. It will be excavated to a maximum depth of approximately 14 m AHD commencing in the north east and moving initially in a southerly direction in stages less than 2 ha in size (refer to **Figure 2**). The proposal does not include any crushing or screening of material.

It is estimated that the total maximum volume of sand to be removed will be approximately 400,000 m^3 with a maximum of approximately 200,000 m^3 excavated each year, depending on supply and demand.

The planned end use of the quarry is to restore a natural soil profile and return the area to pasture, ensuring that there is no net loss of agricultural land.

3.1.2 Final Contours

The slope of the final contours of the quarry will be an undulating surface at approximately 12.6 m AHD which is consistent with the adjoining land.

Slopes of the batters at the end of excavation will be retained at 1:4 vertical to horizontal.

Screenshot-4

3.1.2 Final Contours

The slope of the final contours of the quarry will reflect the current contours of the site and will slope from approximately 30 m Australian Height Datum (AHD) in the south western corner down to 14.0 m AHD in the centre of the extraction area sloping to join the current surface level of the adjoining land to the west at approximately 14 m AHD.

Slopes of the batters at the end of excavation will be retained at 1:4 vertical to horizontal.

3.1.4 Water Usage

Water is only required for dust suppression within the quarry and the access road. Water will be sourced from an offsite source and tankered to the site for dust suppression purposes, as required.

Screenshot-5

3.1.4 Water Usage

Water is only required for dust suppression within the quarry and the access road. Water will be sourced from an offsite standpipe located on Queen Elizabeth Avenue in Busselton and tankered to the site for dust suppression purposes, as required.

A total holding area of at least 132,000 m^3 for Stage 3 and 17,500 m^3 for Stage 4 is achieved when these stages are excavated to a depth of 1 m. Excavation depths within Stages 3 ad 4 will range between approximately 1 – 5.5 m BGL, ensuring the required holding volume can be readily achieved within the excavated pit.

However, given the lower topographical elevation on the western boundary a small bund will be required to contain surface water within the pit when excavation is occurring adjacent to the western boundary.

During excavation activities, the surface will be internally drained, with the gradients in the cells being constructed to ensure that no surface water runoff occurs.

A risk assessment relating to surface water and stormwater runoff in consideration of the proposed management measures is provided below. The residual risk associated with sedimentation and erosion from stormwater runoff during the operation of the extractive industry is considered low.

Table 4. Risk assessment associated with surface water and stormwater.

Screenshot-6

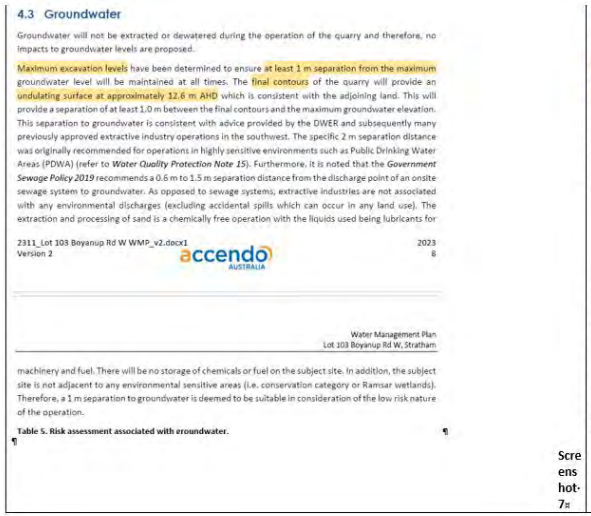
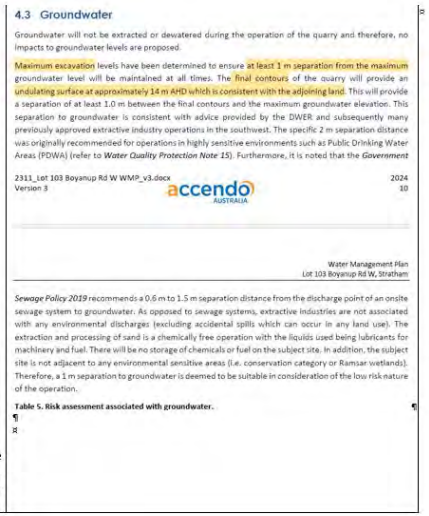
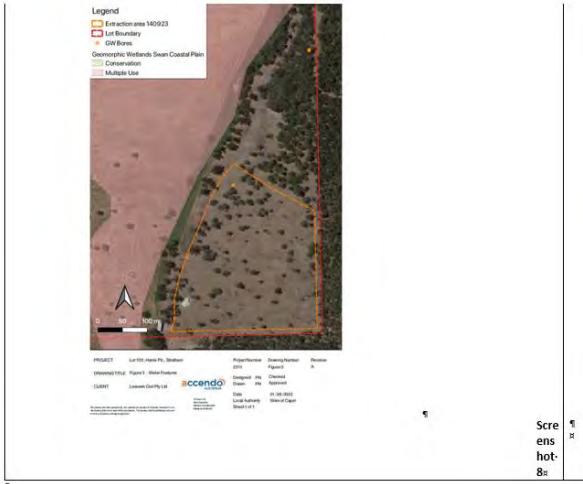
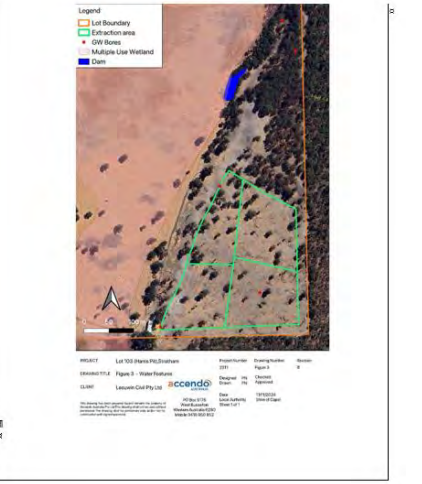
A total holding area of at least 13,200 m^3 for Stage 3 and 17,500 m^3 for Stage 4 is achieved when these stages are excavated to a depth of 1 m. Excavation depths within Stages 3 and 4 will range between approximately 1 – 5.5 m BGL, ensuring the required holding volume can be readily achieved within the excavated pit.

However, given the lower topographical elevation on the western boundary a small bund will be required to contain surface water within the pit when excavation is occurring adjacent to the western boundary (refer to **Figure 4**). This bund will be constructed from the topsoil stripped from the stage and will be maintained at a height of at least 1 m at all times. Monitoring of these bunds will occur on a daily basis and after substantial rainfall events to ensure the integrity of the bund is maintained and no erosion or sedimentation resulting in poor surface water quality outside of the extraction area occurs.

During excavation activities, the surface will be internally drained, with the gradients in the cells being constructed to ensure that no surface water runoff occurs.

A risk assessment relating to surface water and stormwater runoff in consideration of the proposed management measures is provided below. The residual risk associated with sedimentation and erosion from stormwater runoff during the operation of the extractive industry is considered low.

Table 4. Risk assessment associated with surface water and stormwater.

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	 4.3 Groundwater Groundwater will not be extracted or dewatered during the operation of the quarry and therefore, no impacts to groundwater levels are proposed. Maximum excavation levels have been determined to ensure at least 1 m separation from the maximum groundwater level will be maintained at all times. The final contours of the quarry will provide an undulating surface at approximately 12.6 m AHD which is consistent with the adjoining land. This will provide a separation of at least 1.0 m between the final contours and the maximum groundwater elevation. This separation to groundwater is consistent with advice provided by the DWER and subsequently many previously approved extractive industry operations in the southwest. The specific 2 m separation distance was originally recommended for operations in highly sensitive environments such as Public Drinking Water Areas (PDWA) (refer to *Water Quality Protection Note 15*). Furthermore, it is noted that the *Government Sewage Policy 2019* recommends a 0.6 m to 1.5 m separation distance from the discharge point of an onsite sewage system to groundwater. As opposed to sewage systems, extractive industries are not associated with any environmental discharges (excluding accidental spills which can occur in any land use). The extraction and processing of sand is a chemically free operation with the liquids used being lubricants for 2311_Lot 103 Boyanup Rd W WMP_v2.docx1 2023 Version 2 8 Water Management Plan Lot 103 Boyanup Rd W, Stratham machinery and fuel. There will be no storage of chemicals or fuel on the subject site. In addition, the subject site is not adjacent to any environmental sensitive areas (i.e. conservation category or Ramsar wetlands). Therefore, a 1 m separation to groundwater is deemed to be suitable in consideration of the low risk nature of the operation. **Table 5. Risk assessment associated with groundwater.** Screenshot 7  4.3 Groundwater Groundwater will not be extracted or dewatered during the operation of the quarry and therefore, no impacts to groundwater levels are proposed. Maximum excavation levels have been determined to ensure at least 1 m separation from the maximum groundwater level will be maintained at all times. The final contours of the quarry will provide an undulating surface at approximately 14 m AHD which is consistent with the adjoining land. This will provide a separation of at least 1.0 m between the final contours and the maximum groundwater elevation. This separation to groundwater is consistent with advice provided by the DWER and subsequently many previously approved extractive industry operations in the southwest. The specific 2 m separation distance was originally recommended for operations in highly sensitive environments such as Public Drinking Water Areas (PDWA) (refer to *Water Quality Protection Note 15*). Furthermore, it is noted that the *Government* 2311_Lot 103 Boyanup Rd W WMP_v3.docx 2024 Version 3 10 Water Management Plan Lot 103 Boyanup Rd W, Stratham *Sewage Policy 2019* recommends a 0.6 m to 1.5 m separation distance from the discharge point of an onsite sewage system to groundwater. As opposed to sewage systems, extractive industries are not associated with any environmental discharges (excluding accidental spills which can occur in any land use). The extraction and processing of sand is a chemically free operation with the liquids used being lubricants for machinery and fuel. There will be no storage of chemicals or fuel on the subject site. In addition, the subject site is not adjacent to any environmental sensitive areas (i.e. conservation category or Ramsar wetlands). Therefore, a 1 m separation to groundwater is deemed to be suitable in consideration of the low risk nature of the operation. **Table 5. Risk assessment associated with groundwater.**  Screenshot 8  	

SUBMITTER	SUMMARY OF SUBMISSION	COMMENTS / RECOMMENDATION
	 **Screenshot 9** **Lot 103 Boyanup Road - Groundwater Level Monitoring 2022 and 2024** 3-Apr-24 / 16-Jun-24 / 22-Jul-27 / 30-Aug-24 / 27-Sep-24 Level from Top of Collar (mTOC) / Level (mBGL) MW1: 4.6 / 4.6 / 4.33 / 4.33 / 4.22 / 4.22 / 3.34 / 3.34 / 3.68 / 3.68 MW2: 2.88 / 2.88 / 2.56 / 2.56 / 2.5 / 2.5 / 2.31 / 2.31 / 2.45 / 2.45 MW3: 12.44 / 12.44 / 12.44 / 12.44 / 12.44 / 12.44 / 11.04 / 11.04 / 11.04 / 11.04 SMB008: / / / / 3.72 / 3.72 / 3.43 / 3.43 / 3.505 / 3.505 **Screenshot 10**	

SYRINX

SHORT REPORT

Date	23 January 2024
To	Bob Wallin
From	Rada Tomanovic
Copy	Scott Price, Dr Kathy Meney
Project	Lot 103 Boyanup Road West, Stratham
Subject	Rehabilitation Management Plan Review
Doc. No	23013MEM03
Version	V1

Re: Lot 103 Boyanup Road West, Stratham Review of Extractive Industry (Sand) Operations and Water Management Plans Review

INTRODUCTION

The following memo outlines review notes for the Extractive Industry (Sand) Operations Plan (Accendo Australia, 2023a) and the Water Management Plan (Accendo Australia 2023b) produced for Lot 103 Boyanup Road West, Stratham Sand Extraction Development Application. The reports were produced on behalf of the applicant Leeuwin Civil Pty Ltd who is proposing to extract sand from a 7.4 ha area within Lot 103 Boyanup Road West, Stratham (herein referred to as the project area, refer to Figure 1).

Approximately 400,000 m^3 of sand are expected to be extracted from the site to a maximum depth of 12.6 metres Australian Height Datum (m AHD). Extraction would occur in stages dependent on demand and start in the northeast corner of the site.

The review of the documents was requested by the Shire of Capel (the "Shire") to determine whether the proposed post mining landform and the management actions outlined in the plans are suitable for the proposed post mining land use (grazing). More specifically Shire has requested commentary on the following:

a) The suitability and long-term sustainability of a 1 in 4 slope for grazing. The Shire's policy recommends a 1 in 10 to 1 in 6 slopes. Will it be reasonable from an agricultural perspective (excluding aesthetic considerations) or likely result in erosion etc? and

b) The suitability of the groundwater separation (1m proposed), noting that the Shire's policy recommends a 2m separation unless it achieves a "*high level of surface and groundwater resource protection to provide soil depth for rehabilitation to native vegetation, future landuse and a buffer against groundwater contamination and exposing groundwater*".

Given the specific request for commentary on the two items listed above, these are outlined first, followed by general comments on each of the plans. Please note that Syrinx has used figures provided in the plans to provide context to the responses.

SUITABILITY AND LONG-TERM SUSTAINABILITY OF A 1 IN 4 SLOPE FOR GRAZING

When comparing the pre and post extraction contour images (Figure 1) provided in Accendo Austalia 2023a, it appears that the post mining slope is slightly steeper than 1:4 in sections and the steepness varies between the upper and lower slope. It is not clear why the final contours extend outside the extraction area to the northeast when they should match the current topography (as surveyed) if the area is not proposed for clearing / sand extraction.

The statement provided in (Accendo Australia, 2023b) : "*The post extraction landform will be similar visually (minus the excavated material) and in form with the pre-excavation landform with batter slopes of 1:4 vertical to horizontal"* does not hold true when we look at comparative images in Figure 1. Rather than a hillslope, the landform will now resemble an excavated depression breaking continuity of the existing landform and lowering elevation by two to 11 metres. It is accurate that the flat part of the excavation will be almost level with the wetland landform to the west.

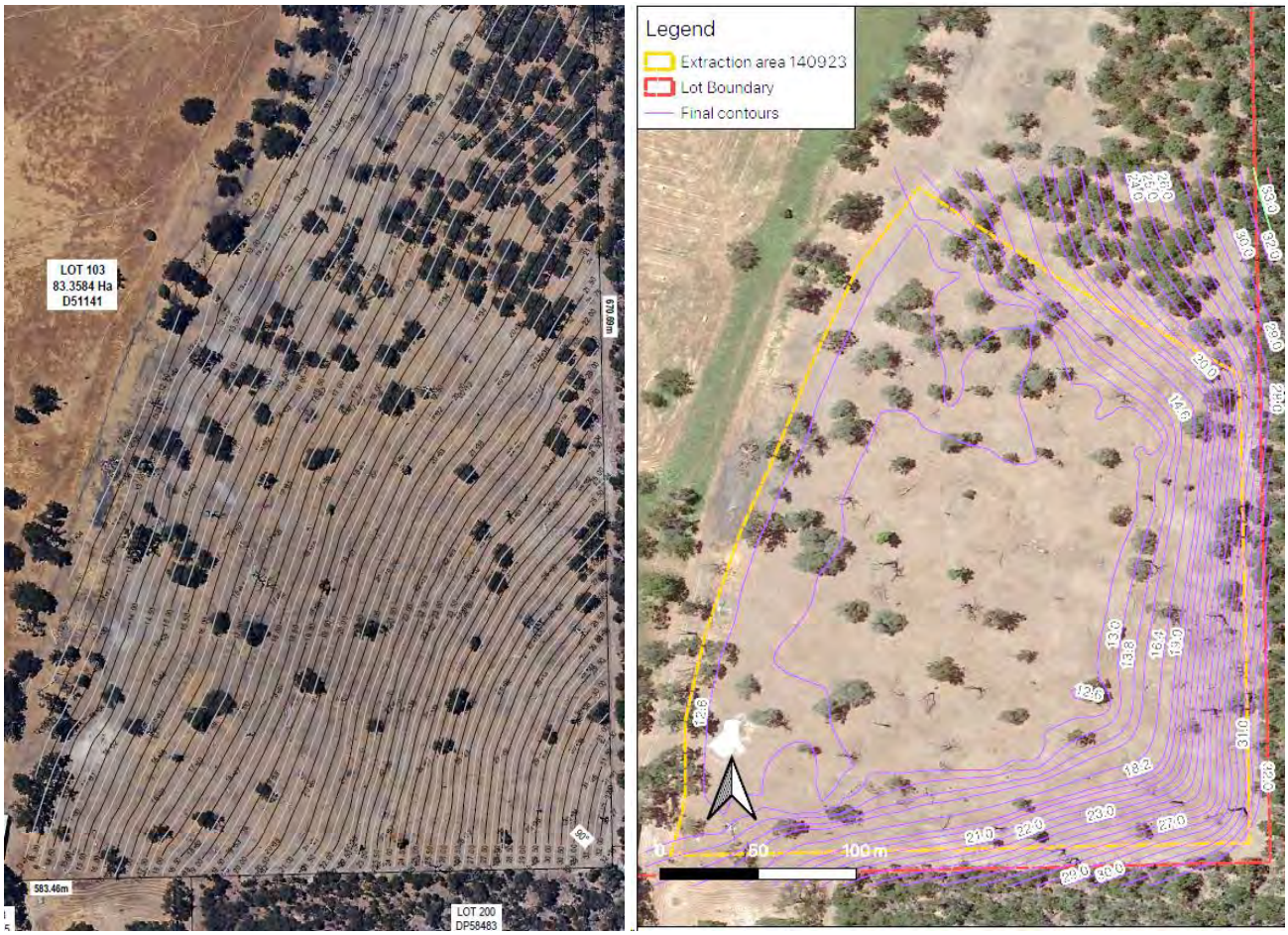


Figure 1. Comparison of pre and post sand extraction landform and elevation (Source: Accendo Australia, 2023a). Note Extraction area is outlined in orange on the right image.

When assessing the stability of slope for grazing activities, there are many factors to consider. It is a well-known fact that steeper sandy slopes can increase the risk of erosion as they are more prone to gravitational forces that can lead to soil and sand movement. Syrinx has already covered a number of factors affecting 1:4 slope stability in the previous reviews conducted for the Shire, and these can be accessed from the Lot 2 Calinup Road Gelorup - Rehabilitation of 1:4 Slopes Advice (Syrinx, March 2022). The overall conclusion from the review was that 1:4 grade slopes could be stable, provided they are appropriately treated and revegetated with suitable native species. Other factors discussed included moisture, particle size and shape, cohesion and friction, vegetation and organic matter. Given previous reviews (Syrinx, 2022) did not involve grazing activities as a future landuse, this is elaborated on below.

EFFECT OF SLOPE STEEPNESS AND GRAZING ON SLOPE STABILITY

Livestock can affect soil stability in two ways: directly by eroding and shifting soil materials on the surface of the slope as a result of their movement and indirectly by the destruction of vegetation which can then further increase soil movement by animals or other erosive agents such as water, wind or human traffic.

Understanding how different grazing animals interact with different slope gradients is essential. For example, smaller animals like sheep can easily access and forage on 70% slope (Forest Service British Columbia, 2002), whereas larger, heavier animals like cattle generally prefer to use flat ground and lower slopes. Although, in general, cattle utilise foraging areas up to 30% slope (i.e. 1 in 3.3), observations show that they can move to steeper slopes up to 60% or 1 in 0.5 if preferred forage is located on steeper slopes (Patton, 1971). This means that overall, all grazing animals can access 1:4 slope for forage or for movement, and the proposed slope will be subject to erosive pressures by livestock.

When standing on the flat ground the weight of the animal is distributed over four hooves; however, when moving, generally only two hooves are in contact with the ground. This causes more pressure on the ground due to more weight being distributed over a small surface area which is further exacerbated by the steepness of the slope (Bilotta et. al., 2007).

The amount of pressure exerted on the soil is dependent on the species and the weight of the grazing animal, which increases with age. A summary of the pressure exerted by different animals that could use the area for grazing post extraction is provided in Table 1. In comparison, a person weighing 84 kg, with a foot area (one foot) of 214 cm^2, when walking on the entire foot's surface, will exert a pressure of 0.39 kg per cm^2 (Stephenson, 1981 cited in Apollo, 2018) which is four to six times less than that of cattle and two to five times less than sheep.

Table 1. Different livestock mean adult body mass (kg), hoof size (cm^2), and static pressure (kg cm^2) (Adapted from Apollo et al, 2018).

Average Weight (kg) (A)		Average Hoof Size; One Side Only (B)	Hoof Size (cm^2)	Static Pressure (kg cm^{-2})	
				Literature	One Side Only (A÷B)
Sheep	41–80	43	21.5	0.7–0.9	0.95–1.86
Goat	27–140	39.2	19.6	0.43	0.68–3.57
Cattle	350–600	216	93–103	1.3–2.8	1.62–2.78
			108	1.5–1.7	

While investigating impact of grazing animals on slopes of different steepness in the Indian Himalayas, Apollo et. al., (2018) have recorded incremental soil losses for both impacted (grazed) and control (non-grazed) slopes (Figure 2). Although the soils in this study (loamy sands with a higher clay content) are different to those present on site, the results can be used as an indicator of the rate of soil erosion on different angle slopes.

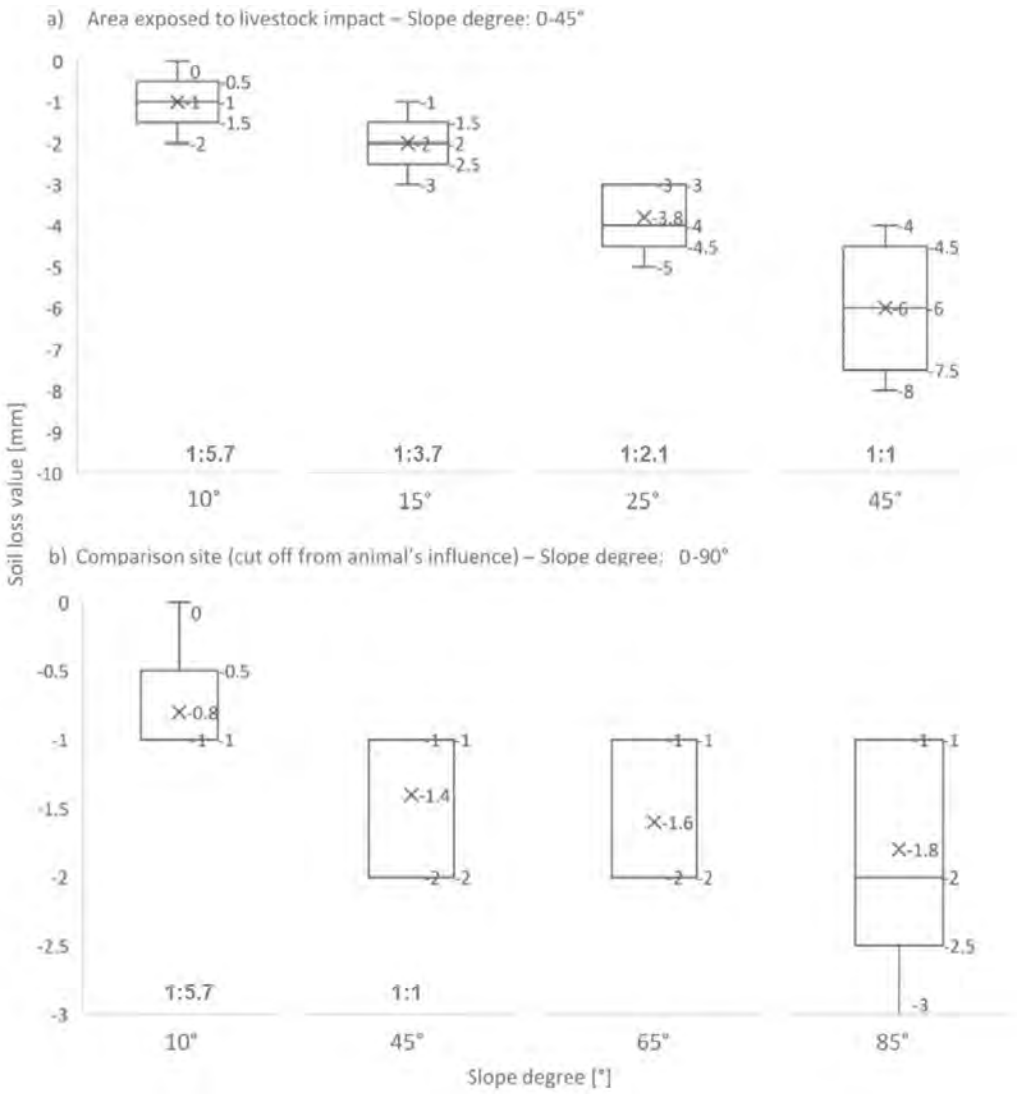


Figure 2. A boxplot of the data from the soil loss experiment according to the slope's degree of inclination for the exposed (livestock impacted, a) and control sites b) (Adapted from Apollo et. al., 2018).

Results show a difference of -0.2 mm in soil loss between impacted (by grazing) and control sites (not impacted) for a slope with a 10 degree inclination (approximately 1:5.7). This indicates that if appropriately prepared and vegetated 1:6 slope can be stable even with some grazing pressure.

No data is available between the control and impacted site for the 15° slope (1:3.7 or ~ 1:4 ratio, which is a 14° slope). However, if we compare data for the impacted sites, the mean soil loss for 1:4 slope is double that of the 1:6 slope (~0.4 mm). This indicates that the stock can have a negative effect on soil stability on a steeper slope which is also confirmed by looking at other slope values provided in Figure 2.

Slope length is unlikely to have a significant effect on sheet erosion because the speed of sheet runoff is kept down by the roughness and permeability of sandy soils, whereas it may have a significant effect on rill erosion, particularly if grazing is impacting the slope.

A high stocking rate can have further negative effects as well as frequent and prolonged use of the slope (e.g. for animal resting or movement from north to south).

A steeper slope (in the context of this project) can also result in:

Changes in water drainage – steeper slope sheds water more easily potentially leading to increased soil erosion and loss of nutrients from the slope to lower catchment areas. The ability of vegetation to slow down water flow and direct water to the root zone is compromised on the steeper slopes resulting in lower recharge upslope and higher recharge in the lower sections of the slope. This may cause upper slopes to be devoid of vegetation, particularly if grazed.

Reduction of vegetation cover – due to faster runoff and poor infiltration on the steeper slope, vegetation cover is generally reduced, particularly in the upper slope areas, which are generally drier. To graze on slopes prone to erosion (i.e. slopes greater than 10% or ~1:6), 90 – 100% ground cover is required with a herbage mass minimum of 1,500kg DM/ha (MLA, 2023).

Change in groundwater and surface water levels and distribution – A steeper slope may lead to changes in flow paths / direction of water within the vadose zone affecting the availability of groundwater in specific areas. Plants and ecosystems adapted to specific groundwater levels, such as native vegetation at the eastern boundary, may be affected.

The increased hydraulic gradient may lead to a decline in groundwater levels in upslope areas and potentially an increase in downslope areas affecting adjacent native vegetation to the east. If flat areas become waterlogged, animals may prefer to move via slope, which can exacerbate erosion. Shallow groundwater can also influence the types of vegetation that thrive in an area, affecting the overall ecological balance and supporting weeds that are difficult to control (e.g. Arum Lilly), thus reducing pasture value.

Grazing is highly likely to increase erosion loss and may compromise the stability of the 1:4 slope. The extent of probable erosion will be dependent on the stocking rate, the type of animal and the frequency that the animals use the slope.

THE SUITABILITY OF THE GROUNDWATER SEPARATION – 1 M FROM THE HIGH GROUNDWATER LEVEL

Information on the existing groundwater quality for the site and the surrounds is not provided in the supplied Plans. The soil profiles and any changes in particle size (with depth) for the project area are also not outlined. In addition, the extent of remnant riparian vegetation (e.g. sedges and rushes) within the wetland buffer and the soil properties of the wetland and the surrounding bushland are not known. The past, current and likely future stocking of the paddocks are not outlined. As such, the full risk assessment on the potential nutrient, sediment and pesticide contamination of the groundwater is not possible. However, the regional catchment analysis for nutrients in particular, as well as the literature on the processes of nutrient mobilisation in sandy soils, can be used to derive conclusions about the suitability of the 1 m separation from the groundwater within the surrounding landscape context.

While some attempt was made to provide a rationale for the risks to the environment, both documents fail to appropriately address this topic in the landscape context and fail to address the management of land after operations have ceased. Given the above, Syrinx has provided commentary based on the available literature with the focus on future use of the site. Syrinx has not covered hydrocarbon spill management actions, for these were provided in the plans.

Nutrients

Livestock can produce large quantities of waste (urine and faeces) which can impact the environment. Dairy cattle are one of the highest waste producers, with each adult cow producing an average of approximately 20 tons of slurry (a mix of urine and faeces) each year (Smith and Frost, 2000). Beef cattle and sheep produce ~9.5 tonnes per year and 0.7 tonnes per year respectively (Landline Consulting, 2023). On an annual basis, ~50% of this excreta is voided in the field while grazing and can impact surface and groundwater quality.

The long-term monitoring of the water quality of Gynudup Brook and Tren Creek (south of the project site) by the Department of Water and Environmental Regulation (DWER, 2021) shows that total nitrogen and phosphorus concentrations are exceeding water quality targets and this is contributing to the overall Capel River nutrient loads. The combination of Spearwood sands, which do not retain nutrients (Salama et al, 2005), and the large proportion of agricultural land use in the catchment are listed as the cause of the high nutrient levels.

The results from the regional water samples by Salama et. al, (2005) on Gnangarra mound show that nitrate distribution is high in agricultural areas with shallow water table where, due to the excessive application of fertilisers, NH_4 and NO_3 were leaching into the groundwater at high rates. While nitrogen leaches rapidly, through most soil profiles, phosphorous is shown to be adsorbed strongly in the topsoil that have higher clays and organic matter. (Lantzke, 1997).

While investigating the processes of nutrient removal in riparian zones in sandy soils O'Toole et. al, (2014) have noted that the application of superphosphate fertiliser on paddock soils results in rapid mobilisation of phosphorus following rainfall. In addition, the input of fertiliser and cow manure has a priming effect in riparian soils (e.g. wetland to the west of the project area) increasing microbial respiration. This contributes to the reduction and loss of nitrogen and the mobilisation of soluble phosphorus therefore increasing the overall nutrient load in the catchment.

Reducing nutrients entering the catchment waterways in the Capel River catchment is the overall objective of the *Revitalising Geographe Waterways* program. Implementation of best practice agricultural fertiliser management and dairy effluent management are a key focus for this program, and several publications focus heavily on fertiliser application management, which is not discussed as a risk for post-mining land use in the Plans for Lot103.

Protection of groundwater is generally achieved via buffers, vegetated filter strips, and other measures (e.g. reduction in fertiliser input, reducing stocking rate, timing and frequency of grazing, different grazers etc) that are essential for water quality protection. Given the lack of suitable riparian vegetation and the historic disturbance of the wetland to the west, the ability of the wetland to attenuate nutrient inputs is reduced. This is significant particularly when considering the sensitive receptor (an ESA located 400 m to the south (Clay Pans of the Swan Coastal Plain TEC at the Roselands Nature Reserve). While claypans generally do not have the hydrological connection between the surface water in the clay pan and groundwater, it is possible that variations in clay depth may provide groundwater connections to isolated pockets of the wetland possibly affecting the overall nutrient balance. Also, increased volumes of nutrient-enriched water may enter the

claypan via surface water during high rainfall events, however the likelihood of this would need to be investigated.

Given that the project area will be devoid of organic matter beyond a thin layer of topsoil retained for revegetation), and the distance to groundwater reduced to 1 m, the likelihood of nutrients entering groundwater is high. A possible increase in the stormwater runoff from the slope and lower infiltration within the pit base may result in added nutrients to the wetland, increasing risks of further nutrient release into the catchment.

Pathogens

By reducing the distance to groundwater the extent to which pathogens contained in livestock manure are transported into groundwater and or surface water can be increased (Billington et al. 2011). This can be magnified via high rainfall events, increasing the slope of the land, reducing vegetation cover (which includes trees) and the grazing regime.

Infiltration

The following statement is extracted from WMP Page 4: *"The current water cycle within the subject site consists of inputs from rainwater being infiltrated on site or flowing through the drainage lines into the wider drainage system. The development is not proposing to alter this process, with all water being retained within the excavated areas to enable infiltration through stormwater pits to ensure water quality is maintained."*

The soil characteristics of the Spearwood Sands (which are listed as soils on site) have been examined by Salama et al., (2005) and compared to Bassendean Sands, focusing on recharge rates, water level patterns, and solutes within the superficial aquifer. Spearwood sands were found to be highly permeable, with only a slight difference from Bassendean sands due to the presence of smaller amounts of coarser material, lower hydraulic conductivities and higher retentivity values, which is reflected in a gentle rise and fall in seasonal groundwater levels. This indicates that potentially the site may not be able to contain all the rainfall within the project area during and especially after mining due to reduced soil volume, higher slope and likely finer soil particles being more common closer to the groundwater table. Unseasonable conditions (e.g. high rainfall) can further exacerbate the issue and thus risk of flooding is a possibility which is not adequately addressed in the Plans.

Basic raw materials extraction notes by DWER (2021) stipulate that sufficient distance must be maintained to prevent direct evaporation losses during sand extraction activities. Where groundwater levels are kept at 2 m below ground, direct evaporation loss of 1 mm/day was recorded (Bouwer, 1996). The evaporation losses increase exponentially for shallower groundwater, which is the main reason for the original recommendation to use 2 m as a minimum vertical distance from the high groundwater level to the pit floor. This evaporation may give rise to salinisation in the drought conditions.

Reducing distance to a high groundwater level of 1 m carries an increased risk for nutrient enrichment, flooding in winter and possibly salinisation in summer / dry periods. This, in turn, has a negative groundwater recharge effect on the surrounding landscape, affecting both flora and fauna species.

OPERATIONS MANAGEMENT PLAN REVIEW (OMP)

2.5.1 Threatened Ecological Communities (Page 4)

This section needs a figure explaining where the TECs are and their relationship with the project area and the risk assessment and management actions outlined in the document to ensure no impacts to these communities (form the distance to groundwater and changes in slope perspectives).

2.5.2 Environmentally Sensitive Areas (Page 4-5)

"*Approximately 2 ha in the south west of the subject site is mapped within an ESA associated with a TEC situated approximately 400 m to the south of the subject site. As discussed within Section 2.5.1, no TECs are present within the subject site."*

This point needs to be elaborated on and a figure shown. Which community is ESA associated with? What are the risks to this ESA? What are the management measures to prevent or reduce these risks (e.g. potential changes in groundwater, surface water (e.g. nutrients or weeds?).

2.7.3 Wetlands Last paragraph on (Page 8)

The management objective for MU wetlands is to preserve the hydrological functions in the context of the proposed development (EPA 2008). The current water cycle within the subject site consists of inputs from rainwater being infiltrated on site or flowing through the drainage lines into the wider drainage system. The development is not proposing to alter this process, with all water being retained within the excavated areas to enable infiltration through stormwater pits to ensure water quality is maintained

Infiltration of water via stormwater pits may not be possible during high rainfall events or when groundwater table is high. Current sand resource provides this function as does the dam to the northwest. Management measures for high rainfall events need to be in place, especially toward the end of sand extraction activities, and this needs to be outlined in the report.

Only the operations phase is covered and not the proposed future land use. Furthermore, no mention is made of water quality.

2.10 Aboriginal Heritage (Page 8)

Authors should appropriately reference studies and acknowledge conclusions from such. While legally, there is no preclusion to sand extraction for the site modification of landforms such as this one carries with its impacts on storylines. The landform that the project area is part of is forming a boundary between the Capel River (to the west and south) and the Five Mile Brook Catchments to the east/northeast.

Syrinx has extracted the following from the *Final report of an Aboriginal Heritage survey of the BORR North and Central Project (Brad Goode & Associates, 2020)*

McDonald, Hales & Associates 1992, Bunbury-Wellington Regional Planning Study: Working Paper no. 6, prepared for Department of Planning & Urban Development, October 1990, released for public comment in July 1992 : Archival and ethnographic research for this planning study revealed sites to be grouped in clusters in areas around waterways/wetlands associated with Waugal mythology, burial sites and along trails where population movement occurred (McDonald, Hales 1992: 14).

4.2.1 Sand Extraction (Page 13)

Point 1. A 1 m contour plan is suggested. This can carry errors when excavating close to groundwater table and 0.2 contour increments are suggested.

Point 2. Where will the topsoil and overburden be stockpiled?

Preparation works such as tree removal are not outlined and how this will occur (in stages or entirely)? Will some of the material be saved to provide habitat?

Second last point: *…" the section will be reformed and back filled, where subgrade material is available, to achieve the proposed final contours*… This suggests that soil might be imported from elsewhere to complete the grade and needs to be clarified. Only *in situ* soils should be used unless the authors are suggesting external sources to improve soils to reduce leaching of nutrients and improve stability etc.

4.1.3 Final Contours (Page 14 second paragraph)

Regarding 1:4 slope this was outlined: "*This is consistent with other sand extraction operations approved by the Shire of Capel (Lot 2 Calinup Road) and other organisations such as Main Roads WA who undertake rehabilitation of slopes steeper than 1:6."*

Approval for Lot 2 Calinup Road was based on native revegetation completion not grazing. Regarding MRWA road batters – again utilised for native vegetation and not grazing. Also, in most instances, MRWA rehabilitates slopes immediately after the cut is made. 1:4 slopes are done due to necessity in the narrow road corridors rather than a preference. The question was not whether it can be done but how it will be done, maintained and what the final use is.

Section 5.2.1 Surface water (Page 16)

Given that 2 – 11 m of sand profile will be removed from the area at the end of extraction, the surface flows (rainfall contribution) WILL be changed. With appropriate management actions this can be managed which should be outlined in the WMP (as stated). Mention needs to be made of the likely fines at the bottom of the pit which can preclude infiltration).

Section 5.2.2 Groundwater (Page 16 – 17)

"Accordingly, no impacts to groundwater are expected as a result of this proposal."

This section does not cover changes to water quality in surface run-off or to groundwater and should be addressed for operations and post-mining land use to give background to the above statement (or change it to 'minimised'/ 'reduced').

…"Furthermore, it is noted that the Government Sewage Policy 2019 recommends a 0.6 m to 1.5 m separation distance from the discharge point of an onsite sewage system to groundwater..".

Syrinx notes the argument regarding the proposed 1m separation based on the sewage policy and the fact that operations for sand extraction do not produce similar contaminants. As noted by the proponent, this policy does not apply to the site. Furthermore, if used for comparison, it states the distance for groundwater as: "*for sands, at least 1.5 metres. Where a nutrient retentive secondary treatment system is used, at least 0.6 metres".* Therefore, unless nutrient input is managed after mine closure, the distance to groundwater should be at 1.5

m and greater. The policy also states that: *"Where slope exceeds one in five (1:5), the land application area should be engineered to prevent run-off from the land application area".*

5.3 Vegetation and Fauna (Page 17)

Reference was made to Figure 9 (last paragraph) which outlines vegetation to be retained well outside the Extraction Area (check blue polygon). Trees between this area and the Extraction area are in 'limbo', and it is not clear if the proponent had other plans that have changed, and this is a remnant of this process (which would also explain the post-mine topographic contours). If this is the case the Plan and especially the post mine topographical map need to be amended.

5.4 Dieback (*Phytophthora cinnamomi*) (Page 17)

Improvement should be made to access roads to limit contact of vehicles with boggy ground/ water to minimise potential dieback and weed spread. Use of crushed limestone is a possibility, removal of which post mining should be addressed.

Line 3 in Table 6. If weeds are cleaned on site how and where would they be disposed of?

Section 6 Rehabilitation Management Plan

6.1 Objectives (Page 20)

"Rehabilitation of pasture is more successful at steeper batters (i.e. 1:4) as opposed to revegetation with native species."

Please provide evidence of this. Is this for grazed or non-grazed slopes? On Spearwood sands? Westerly aspect? What species of pasture and what range of slopes? Irrigated or not irrigated? If anecdotal and local examples are available, provide location / details.

Completion Criteria – Completion criteria for sediment, water quality of run-off need to be stated. The timeframe within which this will be achieved should also be stated or refer to section 6.8.1Completion Criteria.

6.2 Topsoil and Overburden Removal

Provide the location of where topsoils will be located so it is clear that they will not be outside the excavation footprint.

6.3 Landform Reconstruction and Contouring

To what depth will the ripping of the floor be done?

Will only in situ material be used for reprofiling? If not, this needs to be explained.

6.4 Site Preparation

Will any soil amelioration be considered? Mulching perhaps using the timber harvested during clearing?? Section 6.6. mentions "*no specific soil preparation will be anticipated*"…

6.5.1 Weed Control (Page 21)

Table 9. Target species column: *Zantedeschia aethiopica* (Arum Lily) is not a woody weed. Incidentally if this is on site this should be sprayed prior to commencement of works and soil managed in a way to minimise its spread.

6.5.2 Weed Hygiene (Page 21)

This section only mentions checking vehicles but does not specify what happens if weeds are found – looks obsolete when the next section 6.5.3 Weed Management Plan outlines hygiene in Table 10 in more detail. Review and consolidate.

6.6 Rehabilitation (Page 22)

How long is stock going to be excluded from the area? What other measures will be undertaken to ensure the success of pasture establishment?

6.7 Maintenance

More detail is required –annual/biannual fertilising of pasture? Exclusion of stock? Fencing?

6.8 Monitoring and Reporting

6.8.1 Completion Criteria

- *Rehabilitation surface remains flat and stable, with no evidence of surface erosion.*

What about the slopes? Review and change.

What about boggy nature of soils? Who will monitor adjacent vegetation effects?

6.9 Scheduling

This overlaps with rehabilitation steps so perhaps best to review and include steps to section 6.6 and provide a simple calendar in this section. Minor adjustment.

WATER MANAGEMENT PLAN (WMP)

Given that the content of WMP is replicated in the OMP same comments already covered above apply. Below are additional comments relevant to WMP.

Section 3 Extraction activities (Page 5)

The planned end use of the quarry is to restore a natural soil profile and return the area to pasture, ensuring that there is no net loss of agricultural land.

What about the replacement of trees destroyed during mining - does shire have an offset strategy for this?

Section 3.1.3 – Final contours (Page 5)

Slopes of the batters at the end of excavation will be retained at 1:4 vertical to horizontal.

Will this batter be maintained during excavation also? i.e. will the removal of cand be done in such a way as to form the batter as sand is removed? This would assist with maintaining vegetation health to the east. And north.

Section 4.1 Surface Water (Page 7)

Delete 3rd paragraph as it is repeated in Section 2.5.2. This section should talk about impacts and management only.

Section 4.3 Groundwater (Page 8)

It is not clear if the Shire has received evidence of the advice from DWER. On what basis was this advice given – for operations only? or for operations and future land use? If previous approvals were provided to a lower distance to groundwater, what were the conditions of the future land use – native restoration or grazing? (generally, it is for native revegetation). Unfortunately, Syrinx is not privy to the conditions and approvals from the past approved mines to be able to comment.

The intended land use post-mining needs to be adequately addressed, not just operations, and the water source protection addressed from that perspective and in the landscape context. A precautionary principle is recommended where a 2 m buffer offers better protection than 1 m in terms of reducing the leaching of nutrients. Given that most sand extraction work will be based on 1 m contours, the plan needs to detail how digging into the groundwater table would be prevented.

Figures:

Figure 3 – Groundwater monitoring bores are not labelled on the map it is difficult to correlate which bore is which.

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PART C – OTHER BUSINESS

1. State Administrative Tribunal Applications and Supreme Court Appeals

2. Meeting Closure