Extractive Industry Application
and
Management Plans

Lot 1144 Cundinup-Dudinyillup Road and Lot 1075 Cundinup-Dudinyillup Road, Shire of Nannup

Prepared for
A.L.Harris and H. L Harris

By

Abrus CONSULTING

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January 2026

Table of Contents

1. Introduction

Abrus Consulting Pty Ltd (Abrus) has been engaged by A. L Harris and H. L. Harris to prepare a Development Application for an extractive industry on their properties at 320 f (also referred to as Lot 1144 Nelson Location) and on Lot 1075, in the Shire of Nannup, which the proponent will lodge. The Shire of Nannup Local Planning Strategy supports the sustainable extraction of minerals and basic raw materials provided the proposal suitably addresses environmental, land use compatibility, access, landscape and other relevant planning considerations. The aim of this document is to address these components and provide the Shire of Nannup with relevant information to approve this proposal.

The proposed extractive industry consists of 3 new shale pits. Resource capacity (estimated) considers the total capacity of the combined pits as approximately 423, 936 T. The resource does however extend further. Although the potentially available resource material is considerable, it is not proposed that any of the proposed areas will be fully extracted. For the proposed 10 year lifespan extraction will depend on the market demand for the resource.
A permit time of 10 years is proposed for operation, however, extraction will be over short periods (ie 2-3 months) with the shale stockpiled for use as required. This will be an owner managed operation.

Extraction will be to supply wash rock, which is primarily used for landscaping purposes, and sand to be used as clean fill, both will be sold from site as needed. The proposed sites are located on areas currently under pasture. The proposed extraction on Lot 1075 may not occur, but approval is sought at this stage.

There will be no clearing of native vegetation. Road access is well established and maintained.

Supporting documentation with this Report include:

- Drainage Management Plan
- Site Rehabilitation Plan

1.1 Proponent

The Proponent is A. L. Harris and H. L. Harris.

Postal Address:
PO Box 47, NANNUP WA. 6275

Primary Contact
Andrew Harris
Owner
Phone: 0427301795
Email: harrisruralcontracting@outlook.com

1.2 Consultant

Abrus Consulting Pty Ltd is an Environmental Management Consultancy, specialising in environmental approvals, project management, environmental management plans associated environmental documentation and Aboriginal liaison.

Postal Address:
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Primary Contact
Rachael Wedd
Director
Phone: 0429137757
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2. Property Description and Locality

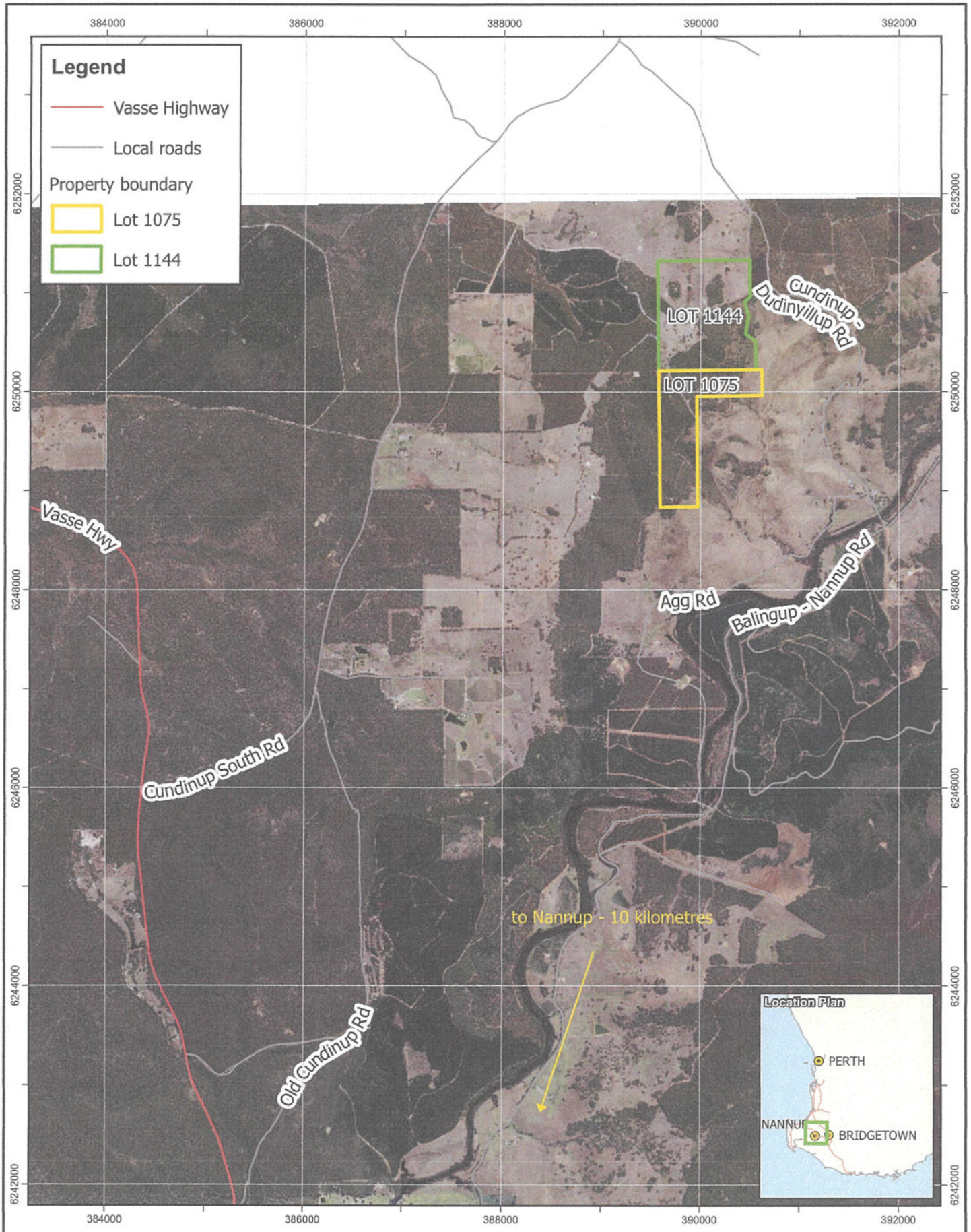
2.1 Background

Lot 1144 was acquired by the proponent's family in 1995 and has been previously been used for beef grazing and sheep grazing, and hay production. Lot 1075 was purchased in 2015.
The properties are currently used for general farming. The pit areas are located on areas currently under pasture. Some shale extraction has occurred onsite for general use around the farm.

The Cundinup–Dudinyinup Road is classified as a RAV network 4 route, which allows multi-combination vehicles up to 27.5 m in length with a maximum mass of 88.5 tonnes. If multiple trips with the vehicles are anticipated within a short time period (ie 2 weeks), an application to the Shire will be made.

2.2 Site Location

The farm is 20km north west of Nannup township, on the Cundinup-Dudinyillup via Cundinup South Road. Both properties have a combined area of approximately 400 ac (or 162 Ha) and are primarily used for general farming.
Shale pits (three stages, with a total area of 11.04 ha) is proposed. The proposed extraction areas are all currently under pasture and are being grazed by cattle and sheep. The owners reside on the property. Access to the farm is directly off the Cundinup-Dudinyillup Road, which then connects with the Cundinup South Road. Access is at the eastern end of Lot 1144. See locality Figure 1.



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Notes:
1. Coordinate System: GDA2020 MGA50.
2. Topo data courtesy of Landgate SLIP.

Lots 1144 and 1075 Cundinup-Dudinyillup Rd

Shale Extraction Development Application

Location Plan

DRAWN	CNH	DATE	30/12/2025
CHECKED	RW	DATE	30/12/2025
SCALE	1:50,000	FIGURE No.	1 A3
PROJECT No.			

2.3 Zoning

The site and surrounding areas are zoned as "Priority Agriculture". The operation of an Industry Extractive means cannot be permitted in this zoning unless Council has granted the planning approval in accordance with Section 4.6 in the Shire of Nannup Local Planning Strategy.

2.4 Surrounding Land Uses

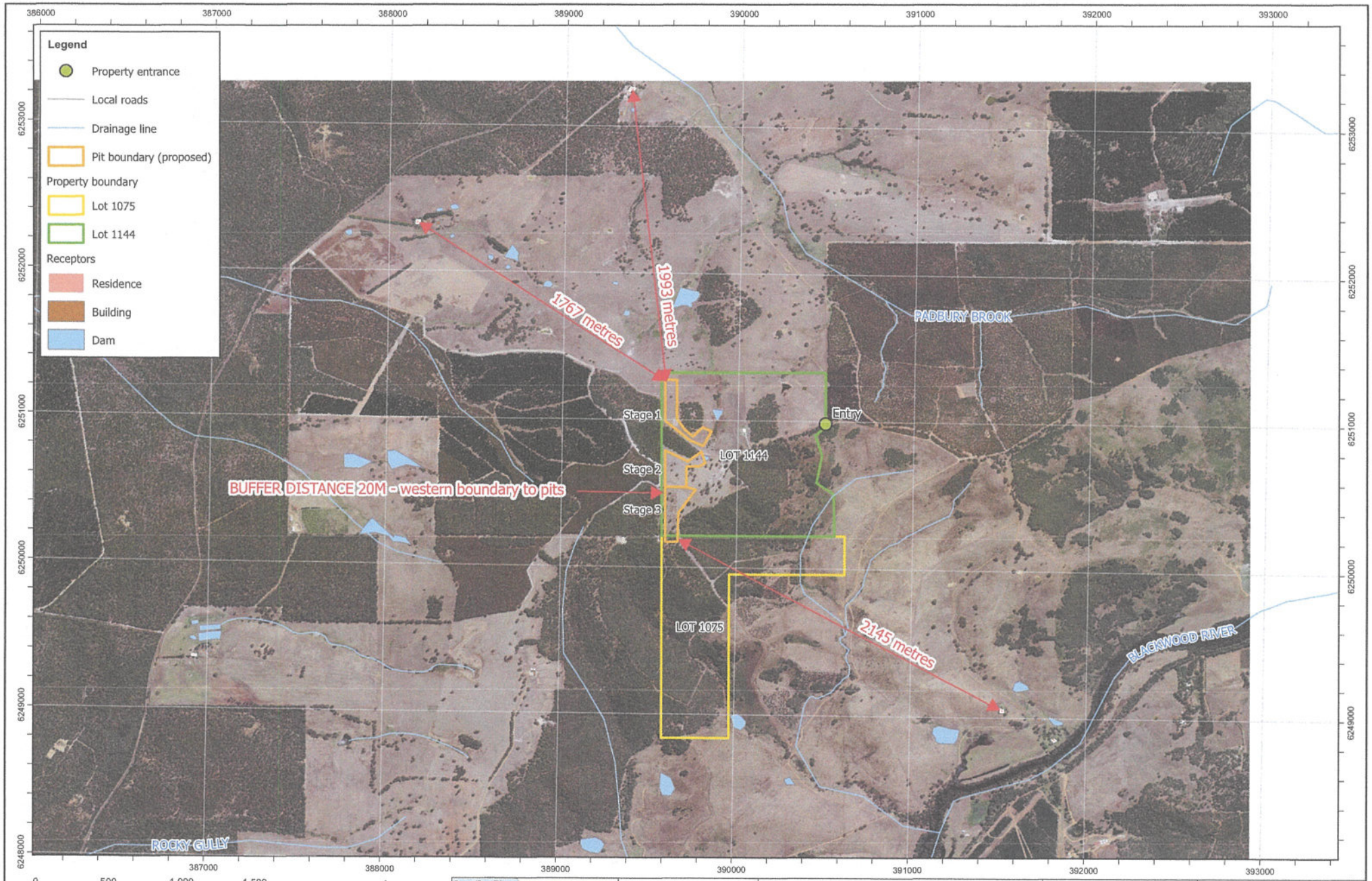
The proposed extraction areas are surrounded by agricultural land (mixed), rural lifestyle and tree plantations. The 3 stages are all located in paddocks that are being used for general livestock grazing and farming.

2.5 Nearest Residences

The EPA Guideline Separation Distances between Industrial and Sensitive Land Uses (No. 3, June 2005) requires a minimum separation of 1000m between sensitive land use and extraction/screening works.
The nearest residence (owned by Jared Dickie and Ava Irani) is located approximately 1,767m to the north west of the proposed Stage 1 pit area (which includes a 20m buffer between the pit and the property boundary). The Brown's residence is approximately 1,993m from the northern edge of the proposed pit. Another residence to the southeast of the pit in Stage 3 (owned by the Brockman family) is over 2km from the southern edge of the pit.

All residences are outside of the EPA separation distance requirement for the proposed shale extractive activities.

Please refer to Figure 2.



Notes:
1. Coordinate System: GDA2020 MGA Zone 50.
2. Background imagery courtesy of Landgate SLIP.

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Lots 1144 and 1075 Cundinup-Dudinyillup Rd

Shale Extraction Development Application

Site Plan of Pits & Receptors

DRAWN	CNH	DATE	07/08/2024
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SCALE	1:24,000	FIGURE No.	2
PROJECT No.			A3

2.6 Services and Infrastructure

Lot 1144 has services connected. Dams are onsite in each of the proposed extraction areas to provide water for dust suppression, fire suppression and associated works requirements.
This property is fully fenced externally comprising standard sheep fence, metal posts and netting with barbed wire. The main internal road on the property runs from the farm entrance, westwards through the centre of the property and is maintained to a good standard. Lot 1075 is also similarly fenced and access is from Lot 1144.

An additional new shed and bag filling facility may be required for operations dependent on product demand from the landscaping market on Lot 1144. If required, this will be located with the other farm sheds already present. No impact or disruption of existing neighbouring services (such as power, telephone) from extraction or transportation of material from the pit areas or property are anticipated.

2.7 Mobile Plant and Vehicles

Plant and vehicles which will be used for the excavation operations and access construction/maintenance (if required) include:

- 30 T excavator
- Trailer mounted fire unit
- Semi-trailers (24T)
- Road Trains (40T)
- 4wd (owner transport)
- Loader
- Grader
- Mobile screen

Mobile Screening Unit

3. Environmental Background

3.1 Climate

The Lots are located approximately 20km north east of Nannup township (from the Nannup town sign on the Vasse Highway). The climate of Nannup is classed as warm and temperate, with warm dry summers and cool wet winters. The average annual temperature is 15.8°C, with most rain in the winter and drier summers. The average annual rainfall of Nannup is 923mm with most rainfall occurring between May and September. The warmest months are January and February, with the coldest months being July and August.

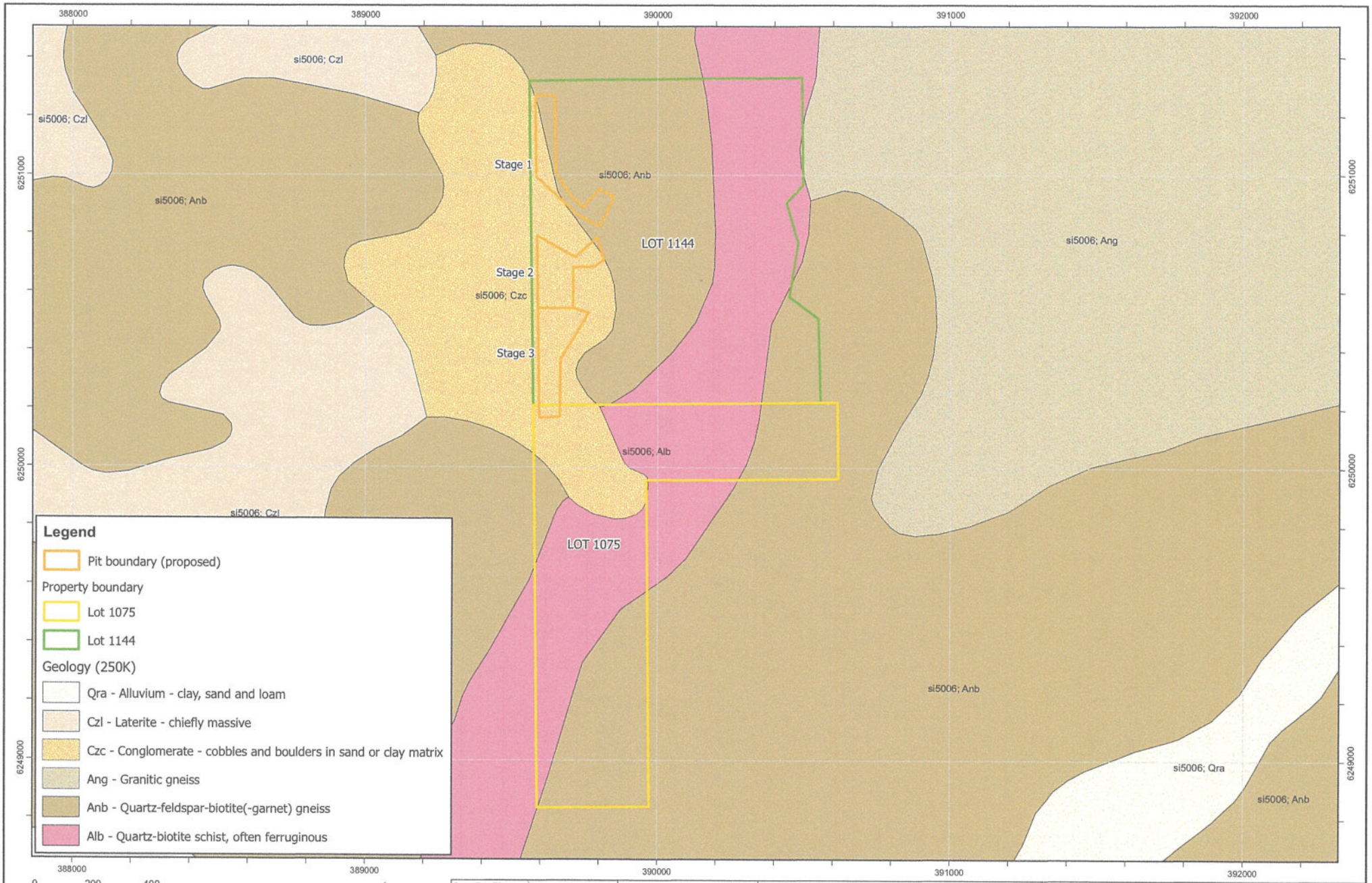
3.2 Vegetation and Fauna

The area under application is predominately pasture for grazing. As such, it is of little value for native fauna, so no impacts to native fauna area anticipated. Surrounding land use is Agricultural and forestry. There is some mixed open forest (primarily marri and jarrah) in the paddocks. Trees which are present will be retained, no clearing will take place. It is proposed to have a 20m buffer at the boundary fence adjoining neighbouring properties. However, as the resource shallows out in some areas this buffer may be increased.

View from Stage 1 towards sheds and boundary vegetation

3.3 Geology and Soils

The proposed shale extraction areas are primarily Conglomerate, cobbles and boulders in sand or clay matrix with part of Stage 1 also comprising Quartz feldspar-biotite (garnet) gneiss, (Figure 3).



Notes:
1. Coordinate System: GDA2020 MGA Zone 50.
2. Background imagery courtesy of Landgate SLIP service.
3. Geology and topo sourced from DMIRS and Geoscience Australia.

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Lots 1144 and 1075 Cundinup-Dudinyillup Rd

Shale Extraction Development Application

Geological Mapping

DRAWN	CNH	DATE	7/8/2024
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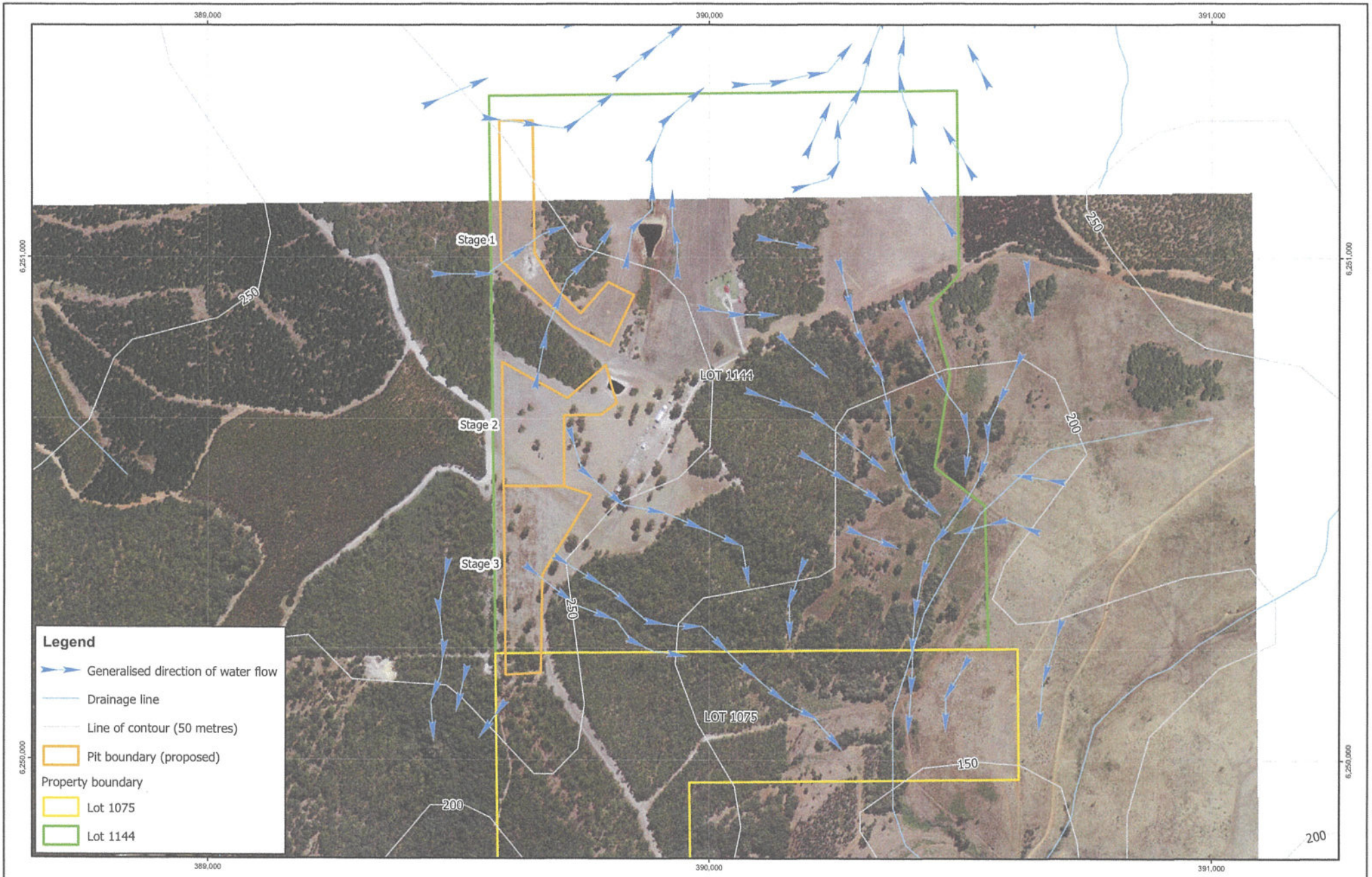
PROJECT No.			A3

3.4 Topography and Surface Water

The proposed extraction sites are located in an area that ranges from 150m above sea level to approximately 250m (see Figure 4). There is a gentle slope to these extractive areas, although there is a significant slope from the vegetative areas towards the creek. Storm water from the pit area in Stage 1 will flow primarily to the north west, across paddocks and to a dam. Stages 2 and 3 will flow across paddocks, through an extensive treed area and eventually to the creek. Contours in the proposed extractive areas are widely spaced, meaning there is no excessive or extreme slopes in that area.
Due to the drainage directions, soil type and paddock areas for Stages 1 and 2, no sediment traps are proposed as any storm water will drain naturally into the soil or evaporate. No pumping will be required. Stage 3 (if required) may have a sediment trap towards the lower south eastern corner.

Given the topography of the area and the nature of the ground material, it is unlikely that there will be any impacts from expression of surface water within the proposed extraction areas.



Notes:
1. Coordinate System: GDA2020 MGA Zone 50.
2. Background imagery courtesy of Landgate SLIP.
3. Hydrology model developed from contour and spot elevations.

Location Plan

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Lots 1144 and 1075 Cundinup-Dudinyillup Rd

Shale Extraction Development Application

Contour and Drainage Plan

DRAWN	CNH	DATE	7/8/2024	
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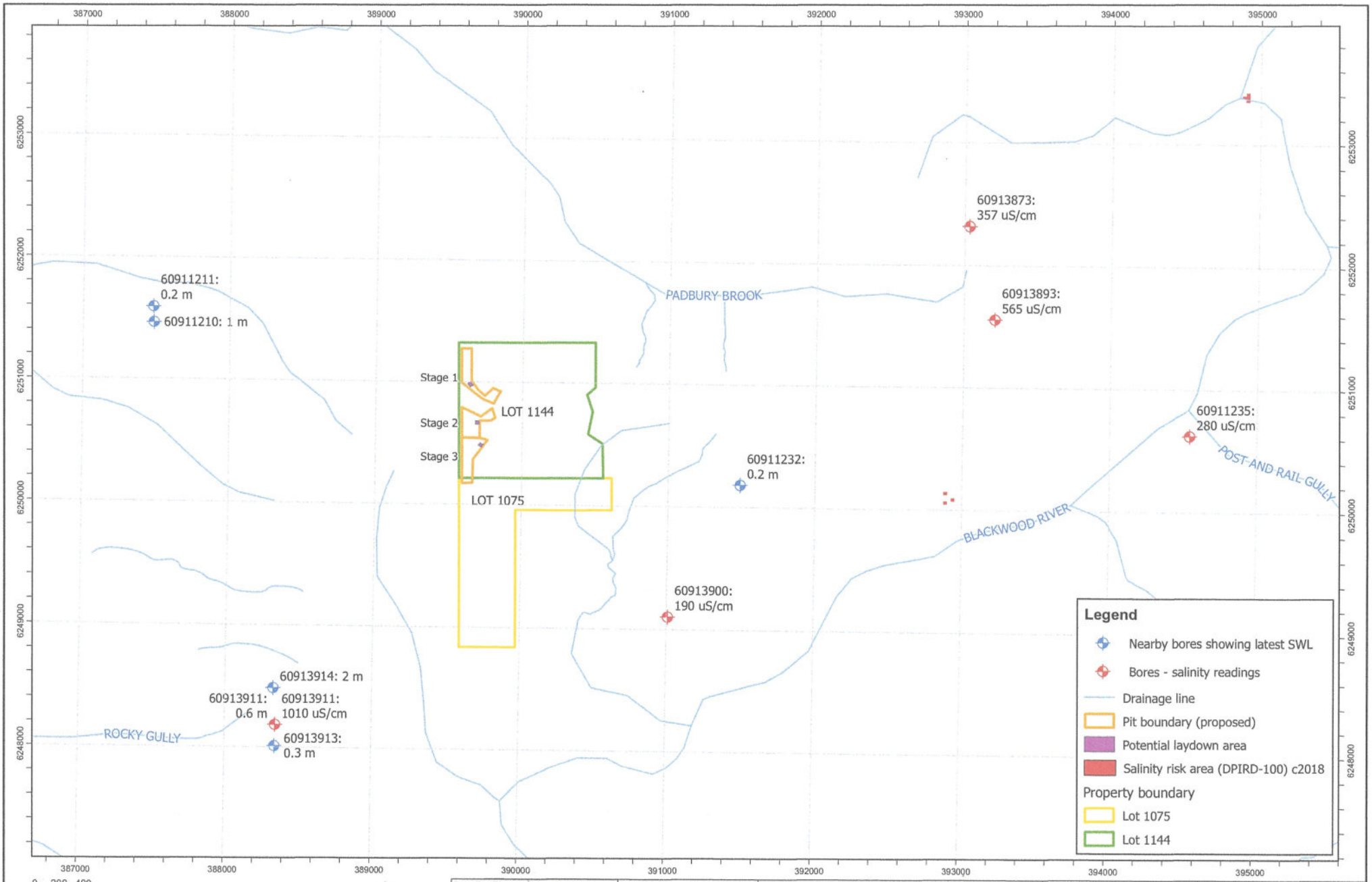
SCALE	1:7,000	FIGURE No.	4	A3
PROJECT No.				

3.5 Hydrogeology

This property is located entirely within the Western Darling Range hydrological zone (as shown on the interactive groundwater and salinity map for the south-west agricultural region (www.agric.wa.gov.au). The aquifers in this area are small, and generally of low productivity, and composed of fractionated rock.

Very little bore or salinity data is available for this area (see Figure 5). Although the minimal data present does show relatively high salinity readings in the area, there is a very low risk of impacts to the regional salinity from the proposed operations due to the topography, minimal groundwater in the pit areas and the nature of the operations as described in this document. Due to the elevation of the proposed pit areas, the potential for any contamination from surrounding land uses is considered negligible. No groundwater exposure or contamination from the proposed extractive activities is anticipated. Please also refer to Section 3.3.



Notes:
1. Coordinate System: GDA2020 MGA Zone 50.
2. Background imagery courtesy of Landgate SLIP service.
3. Geology and topo sourced from DMIRS and Geoscience Australia.

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Lots 1144 and 1075 Cundinup-Dudinyillup Rd

Shale Extraction Development Application

Groundwater and Salinity

DRAWN	CNH	DATE	7/8/2024
CHECKED	RW	DATE	7/8/2024
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PROJECT No.			A3

3.6 Aboriginal Heritage

A search of the Aboriginal Heritage Enquiry system (December 2025) indicated that the enquiry area does intersect with the boundary of a known Aboriginal Sites or Aboriginal Heritage Places. This site number is 20434, the Blackwood River which in this instance applies to a creek which is a tributary of the Blackwood River, located near the south eastern section of Lot 1144 and north eastern portion of Lot 1075 (See Appendix A). The heritage enquiry is on land within or adjacent to the following Indigenous Land Use Agreement(s): South West Boojarah #2 Indigenous Land Use Agreement. The proposed extraction areas are a significant distance from their closest point to the creek and no impacts to this creek area are proposed. Distances are shown below:

- Stage 1 to creek approximately 736m
- Stage 2 to creek approximately 714m
- Stage 3 to creek approximately 757m

3.7 Other Heritage

A search of the inHerit database (a portal for information about heritage places and listings in Western Australia for the Government of Western Australia – Heritage Council) in December 2025 showed no search results for this location.

3.8 Dust

Dust may be generated from a range of activities, including:

- Topsoil removal;
- Shale excavation;
- Screening;
- Loading of haulage trucks; and
- Machinery use/vehicles on the unsealed road surfaces/access tracks.

To mitigate any potential impacts on the nearest neighbours (as mentioned in Section 2.5), to reduce dust during normal operations, water will be sprayed on access roads as required. To reduce potential dust and therefore also topsoil loss, no extractive operations will occur on high wind days and the total area of open pits will be kept to the industry standard of no more that 2 ha being exposed at any one time. No crushing or blasting is proposed.

There is a wide and variable range of wind directions throughout the year. The nearest data monitoring point for this area is the Nannup 1 (NU001) weather station. Data from this weather station has been recorded from 2012 to the present and is taken at 3m). The highest winds (gusts up to 90km/hr) generally come from a ENE, N and NNW direction, although the property owners note most of the wind direction as southerly. Dust generated under these conditions may be noticed but is not anticipated to have any significant impact on any of the nearest receptors/residences in the area due to the distance between sites and vegetation acting as a buffer zone.

The western side of most of Stage 1, all of Stage 2 and Stage 3 adjoin the boundary between neighbouring properties and is well vegetated (distances re: maps). There is a good vegetation buffer between Stage 1 and the owner's residence and paddocks to the NW, N and NW. There is a further belt of trees to the NW that will block any visibility from the road. Stages 2 and 3 have extensive vegetation buffers to the west and the southern section of Stage 3 (if required) also has a

substantial vegetation buffer at the boundary. All the vegetation includes mature trees which include jarrah and marri trees.

3.9 Visual Amenity

Being located on a rural property, with the property front gate approximately 3km from the Cundinup South Road and topography, the extractive areas are not considered to be in a visually sensitive area. The area between Lot 1144 and the highway contains other agricultural land and a tree farm. The extractive areas will not be visible from the Cundinup-Dudinyillup Road and a 20m buffer from the edge of the extractive areas to any neighbouring boundary will still ensure minimal visual impact potential to neighbouring residences due to the distances involved.

Once rehabilitation has taken place there will be little evidence that extractive activities have occurred.

View from property entrance

3.10 Noise

The majority of noise generating activities on site will be from:

- Excavation of material;
- Loading of haulage trucks; and
- Movement of haulage trucks.

The site is located on a large rural property and is surrounded by other rural properties. Due to the separation distances provided by the EPA guidelines, the nearest residences are outside of the 1,000m mark (refer to Section 2.5) for sand and rock extraction, with the third optional pit at a further distance again from any potential sensitive receptors.

Vehicle access and the haulage route are to the south of the two other properties who use this road and no traffic noise issues are anticipated. There is one residence where the access road intersects with the Cundinup South Road (see Figure 2). Given that the number of truck movements anticipated will be low and sporadic (ie, at much of the year there may be little to no movements, and during times of peak demand there will be more truck movements). Other large vehicle movements regularly occur on this road due to general farming needs and tree harvesting operations. Although no noise management issues are anticipated for the proposed operations, industry standards for managing noise levels will continue to be implemented. Such measures include:

- All plant/machinery to be kept well maintained; and
- Complaints register to be maintained. Details for lodging complaints will be advertised on signage at the entrance to the property.

3.11 Dieback

Dieback (*Phtytopthera cinnamomi* and other species) occurs throughout the South West. No presence of dieback has been observed in the area where material is to be extracted or transported through on site. The proposed shale extraction areas do not require any removal/clearing of native vegetation. All vehicles transporting the shale rock and sand will only use the access roads or lay-down area within the property.

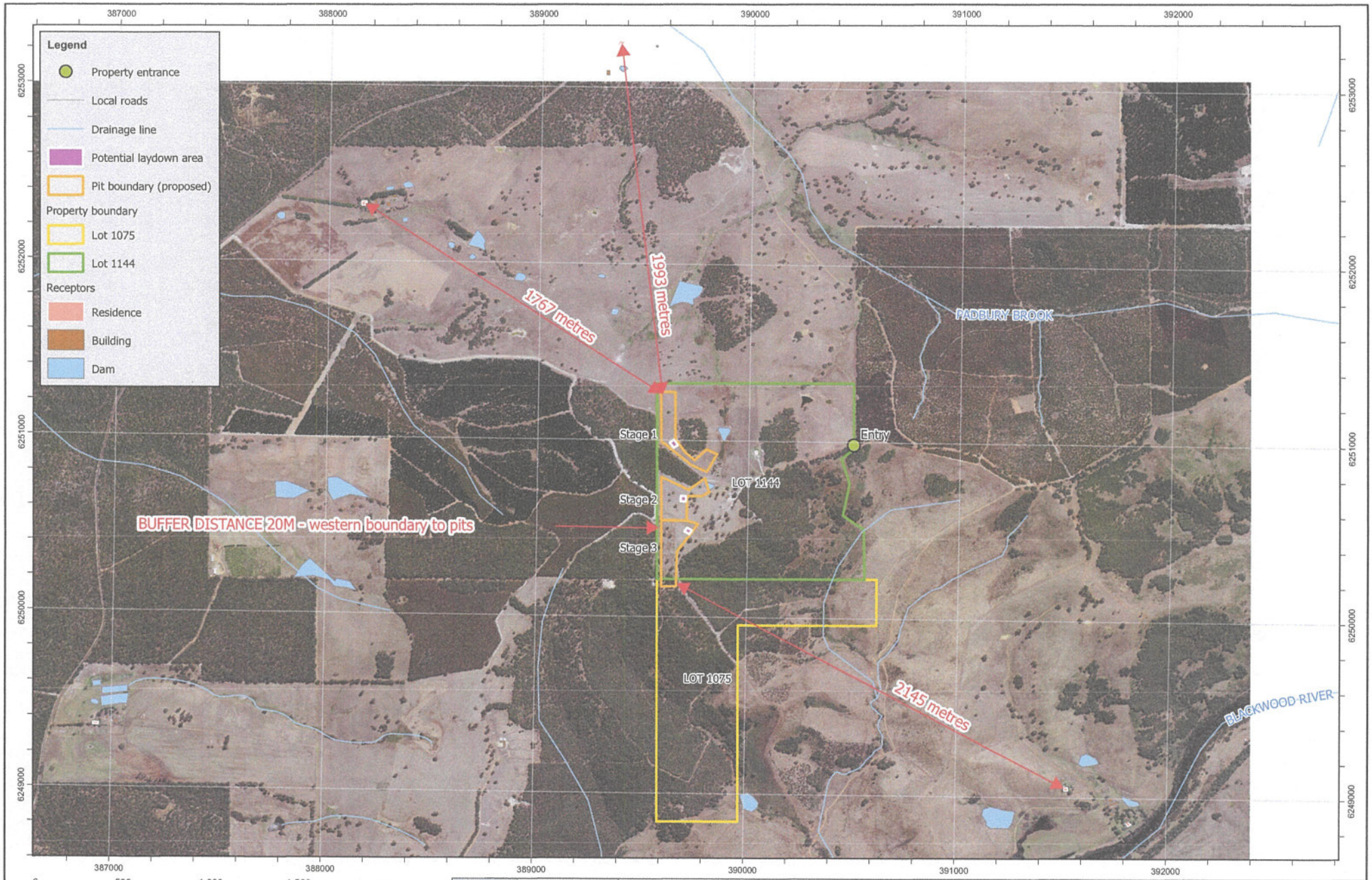
4. Operational Activities

4.1 Proposed Extraction

It is proposed to extract shale from the excavation areas in a staged manner, dependent on contractor requirements and materials demand. Extraction will begin in Stage 1. Depending on market requirements, extraction may then progress to Stage 3, which has a larger rock size component, suitable for landscaping suppliers. Extraction may alternate between these two pits as well. Excavation activities at this scale are considered to be low. The owner will undertake extraction and some transport of material. Other material will be transported by contractors. Extraction of the shale will be done in short bursts (eg 6-8 weeks) with sand and rock then stockpiled for transport as needed.

Active extraction areas will be a minimum 20m from the property boundaries (see Figure 6). Figure 6 also provides an indicative site plan for lay-down areas for both pits. Due to the contours, drainage and soil types for Stages 1 and 2, no sediment traps are proposed. Stage 3 (if required) may have a sediment trap constructed towards the southern end.

Deep excavation is not required due to the shale being in the upper levels of the soil profile. A depth of 2m is estimated to be required for the pits. Each active area will be stripped of topsoil and this will be stockpiled and used for rehabilitation. These soil stockpiles will be no greater than 2m in height. The soil will be excavated with a front-end loader. Shale is extracted via ripping of the surface and excavated with earthmoving plant (ie excavator). Rocks and sand are then stockpiled and loaded into haulage trucks to transport the product off-site as required.



Notes:
1. Coordinate System: GDA2020 MGA Zone 50.
2. Background imagery courtesy of Landgate SLIP.

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Lots 1144 and 1075 Cundinup-Dudinyillup Rd

Shale Extraction Development Application

Site Plan - location of proposed laydown areas

DRAWN	CNH	DATE	07/08/2024	
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PROJECT No.				

4.1.1 Depths and Extent of Excavation

The depths of extraction will vary very little across the proposed pit location. The average depth of excavation is 2m and this is expected to continue throughout the lifespan of the pits. Resources are anticipated to be shallower as the pit(s) progress towards the boundaries and tree buffer areas. The total area of open pits will be kept to the industry standard of no more that 2 ha being exposed at any one time. No blasting or crushing are proposed.

4.2 Operating Times

Market demand for both sand and gravel will have an influence on the operation of the pits. It is proposed that the quarry will operate Monday to Friday from 7am – 5pm for extraction and processing. There will be no extractive activities or haulage on Sundays or public holidays. Haulage of material will be dependent on demand for the material from potential buyers. Stones and sand will be extracted over an intermittent period throughout the licence term, with extraction anticipated to occur in bursts of approximately 6-8 weeks/year, with stones and sand stockpiled and extracted as market demands require.

4.3 Public Access and Safety

The site is located on privately owned rural property and is surrounded by rural land. No access to the public access is authorised. There will be a sign on the front gate with contact details for any visitors to site. All visitors will be required to report to the office on arrival.
Approved warning signs for trucks entering and using the road will be placed in strategic locations to ensure awareness for other road users about truck activity.

In case of fire starting from localised events near the pits or by operational activity, the owner has trailer mounted fire units on-site as well as the water onsite via dams. Normal procedures such as calling 000 and grading breaks around the fire will be implemented in the event of a fire.

4.4 Surrounding Road Network and Transport Movements

The site will be accessed directly off Cundinup-Dudinyillup Road which is an unsealed gravel road.

The main farm entry is at the front of the property and is a well compacted gravel road. The internal road network provides all weather access to all operational vehicles. Extracted rock and sand will be removed and transported via a variety of vehicle types, dependent on whomever is purchasing it. Truck movements will be dependent on demand, however, it is reasonable to expect 4-6 truck movements (semi-trailers or road trains dependent on material demand) per day during peak demand periods It is anticipated that whomever purchases and removes the gravel will be accredited with Mainroads Western Australia under WA Heavy Vehicle Accreditation (WAHVA).

As a relatively remote rural area, is it assumed that numbers will not represent high vehicle movement so the potential associated with collision of general vehicles with operational vehicles would be considered low.

The proposed haulage route from site will be dependent on the market requirements. Sand may be used locally for building pads or potentially may be transported to Busselton via the Vasse Highway. Sand and wash rock may be transported elsewhere via the Vasse Highway or the South western Highway.

4.5 Hydrocarbon Management

There is an existing fuel and oil storage shed which is located at the farm shed workshop, which is onsite. Vehicles will be taken from the pit for fuelling as required. Appropriate measures will be undertaken to ensure no potential contamination of the soil can occur. Such measures (for refuelling or vehicle breakdown) will include hydrocarbon management kits such as drip trays, plastic liners/sheets, which are kept in the operator's site vehicle and in the storage shed. In the event of a spill, any contaminated soil will be contained and removed to an appropriate disposal site and any old oils will be collected and recycled offsite at the nearest licensed facility.

4.6 Benefits of the Proposal

The extraction of material from this site is necessary for providing material needed within the Shire of Nannup and other Shires for ongoing building and landscaping requirements, which then provides for local and regional employment and reduces transportation distance of materials in the Shire. The removal of the wash rock and sand will also allow for future pasture improvement on the farm and increased agricultural productivity.

5. Rehabilitation

5.1 Proposed Rehabilitation

Rehabilitation of the completed areas will be progressive, with the areas returned to pasture. Due to the size of the extractive areas and that the intent is to return the area to pasture, a detailed Site Rehabilitation Plan is not considered feasible at this stage, however, an indicative one is provided with this document as Appendix C.

A general methodology, undertaking a staged approach is proposed, with rehabilitation beginning once an area has been extracted. The owner will redistribute the topsoil and re-contour the landscape, and will reseed the areas and do any other maintenance and management (ie weed management).

Some areas will need to be left for loading of product by purchasers and to leave a safe turn around area for trucks and loading machinery. The final areas will be rehabilitated once no longer required.

As a general rule, the following steps will be implemented:

- Stockpiled topsoil will be retained during extraction and spread back over the completed areas;
- The pit floor will be ripped along the contour;
- Area will be prepared for planting, which may require weed management.
- Seeding of pasture species.

The restoration/rehabilitation goal for this site is to return the area post-extraction to a stable and erosion resistant landform, all returned to improved areas for pasture for future farming. It will blend with the surrounding landscape.

APPENDIX A

Aboriginal Heritage Search Report

Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Register

Search Criteria

1 Aboriginal Cultural Heritage (ACH) Register in Custom search area - Polygon - 115.816379936953°E, 33.875708311462°S (GDA94) : 115.815457257052°E, 33.8763674714609°S (GDA94) : 115.81584349515°E, 33.87786392391°S (GDA94) : 115.815543087741°E, 33.8790575040748°S (GDA94) : 115.81715241315°E, 33.8804470241308°S (GDA94) : 115.815049561282°E, 33.8835466411783°S (GDA94) : 115.810350331088°E, 33.884294807733°S (GDA94) : 115.809942635317°E, 33.8851142207174°S (GDA94) : 115.808526428957°E, 33.8852032868719°S (GDA94) : 115.80753937604°E, 33.8850964074753°S (GDA94) : 115.806230458041°E, 33.8847223285329°S (GDA94) : 115.805908592959°E, 33.8836357089693°S (GDA94) : 115.805908592959°E, 33.8726262255364°S (GDA94) : 115.816058071871°E, 33.8726084096872°S (GDA94) : 115.816379936953°E, 33.8756904962563°S (GDA94) : 115.816379936953°E, 33.875708311462°S (GDA94)

Disclaimer

Aboriginal heritage holds significant value to Aboriginal people for their social, spiritual, historical, scientific, or aesthetic importance within Aboriginal traditions, and provides an essential link for Aboriginal people to their past, present and future. In Western Australia Aboriginal heritage is protected under the *Aboriginal Heritage Act 1972*.

All Aboriginal cultural heritage in Western Australia is protected, whether or not the ACH has been reported or exists on the Register.

The information provided is made available in good faith and is predominately based on the information provided to the Department of Planning, Lands and Heritage by third parties. The information is provided solely on the basis that readers will be responsible for making their own assessment as to the accuracy of the information. If you find any errors or omissions in our records, including our maps, it would be appreciated if you provide the details to the Department via https://achknowledge.dplh.wa.gov.au/ach-enquiry-form and we will make every effort to rectify it as soon as possible.

South West Settlement ILUA Disclaimer

Your heritage enquiry is on land **within or adjacent to** the following Indigenous Land Use Agreement(s): South West Boojarah #2 Indigenous Land Use Agreement.

On 8 June 2015, six identical Indigenous Land Use Agreements (ILUAs) were executed across the South West by the Western Australian Government and, respectively, the Yued, Whadjuk People, Gnaala Karla Booja, Ballardong People, South West Boojarah #2 and Wagyl Kaip & Southern Noongar groups, and the South West Aboriginal Land and Sea Council (SWALSC).

The ILUAs bind the parties (including 'the State', which encompasses all State Government Departments and certain State Government agencies) to enter into a Noongar Standard Heritage Agreement (NSHA) when conducting Aboriginal Heritage Surveys in the ILUA areas, unless they have an existing heritage agreement. It is also intended that other State agencies and instrumentalities enter into the NSHA when conducting Aboriginal Heritage Surveys in the ILUA areas. It is recommended a NSHA is entered into, and an 'Activity Notice' issued under the NSHA, if there is a risk that an activity will 'impact' (i.e. by excavating, damaging, destroying or altering in any way) an Aboriginal heritage site. The Aboriginal Heritage Due Diligence Guidelines, which are referenced by the NSHA, provide guidance on how to assess the potential risk to Aboriginal heritage.

Likewise, from 8 June 2015 the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) in granting Mineral, Petroleum and related Access Authority tenures within the South West Settlement ILUA areas, will place a condition on these tenures requiring a heritage agreement or a NSHA before any rights can be exercised.

If you are a State Government Department, Agency or Instrumentality, or have a heritage condition placed on your mineral or petroleum title by DEMIRS, you should seek advice as to the requirement to use the NSHA for your proposed activity. The full ILUA documents, maps of the ILUA areas and the NSHA template can be found at https://www.wa.gov.au/organisation/department-of-the-premier-and-cabinet/south-west-native-title-settlement.

Further advice can also be sought from the Department of Planning, Lands and Heritage via https://achknowledge.dplh.wa.gov.au/ach-enquiry-form.

Copyright

Terminology

ID: ACH on the Register is assigned a unique ID by the Department of Planning, Lands and Heritage using the format: ACH-00000001. For ACH on the former Register the ID numbers remain unchanged and use the new format. For example the ACH ID of the place Swan River was previously '3536' and is now 'ACH-00003536'.

Access and Restrictions:

- **Boundary Reliable (Yes/No):** Indicates whether to the best knowledge of the Department, the location and extent of the ACH boundary is considered reliable.
- **Boundary Restricted = No:** Represents the actual location of the ACH as understood by the Department..
- **Boundary Restricted = Yes:** To preserve confidentiality the exact location and extent of the place is not displayed on the map. However, the shaded region (generally with an area of at least 4km²) provides a general indication of where the ACH is located. If you are a landowner and wish to find out more about the exact location of the place, please contact the Department of Planning, Lands and Heritage.
- **Culturally Sensitive = No:** Availability of information that the Department of Planning, Lands and Heritage holds in relation to the ACH is not restricted in any way.
- **Culturally Sensitive = Yes:** Some of the information that the Department of Planning, Lands and Heritage holds in relation to the ACH is restricted if it is considered culturally sensitive information. This information will only be made available if the Department of Planning, Lands and Heritage receives written approval from the people who provided the information. To request access please contact via https://achknowledge.dplh.wa.gov.au/ach-enquiry-form.
- **Culturally Sensitive Nature:**
  - **No Gender / Initiation Restrictions:** *Anyone* can view the information.
  - **Men only:** Only *males* can view restricted information.
  - **Women only:** Only *females* can view restricted information.

Status:

- **Register:** Aboriginal cultural heritage places that are assessed as meeting Section 5 of the *Aboriginal Heritage Act 1972*.
- **Lodged:** Information which has been received in relation to an Aboriginal cultural heritage place, but is yet to be assessed under Section 5 of the *Aboriginal Heritage Act 1972*.
- **Historic:** Aboriginal heritage places assessed as not meeting the criteria of Section 5 of the *Aboriginal Heritage Act 1972*. Includes places that no longer exist as a result of land use activities with existing approvals.

Place Type: The type of Aboriginal cultural heritage place. For example an artefact scatter place or engravings place.
Legacy ID: This is the former unique number that the former Department of Aboriginal Sites assigned to the place.

Coordinates

Map coordinates are based on the GDA 2020 Datum.

Basemap Copyright

Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Register

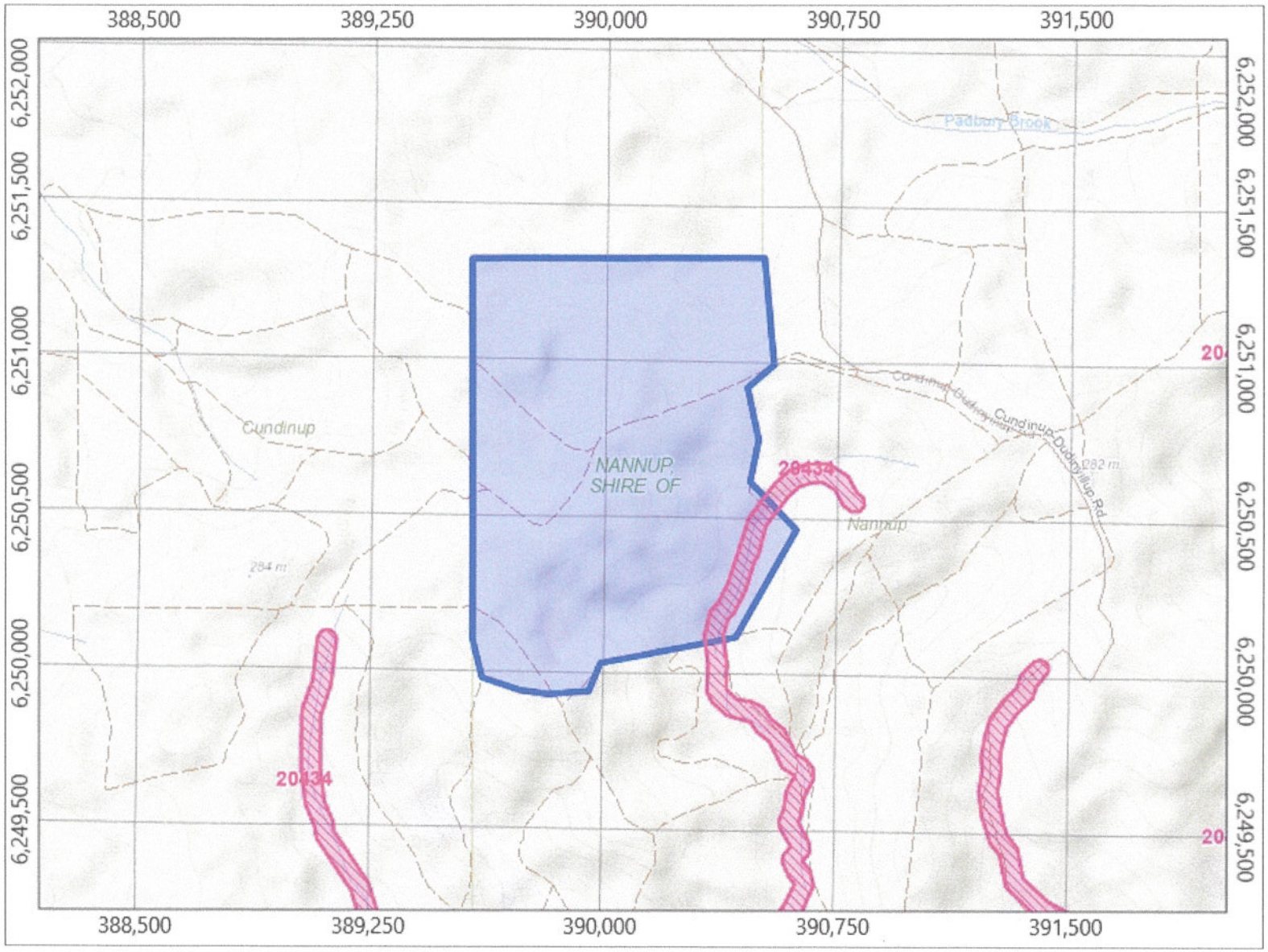
ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
20434	Blackwood River	No	Yes	No	No Gender / Initiation Restrictions	Register	Creation / Dreaming Narrative	*Registered Knowledge Holder names available from DPLH	

Department of Planning, Lands and Heritage

GOVERNMENT OF WESTERN AUSTRALIA

Aboriginal Cultural Heritage Inquiry System

Map of Aboriginal Cultural Heritage (ACH) Register



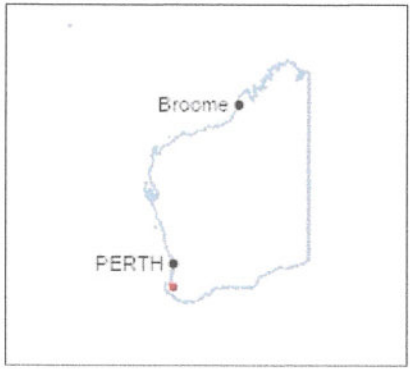
Legend

- Aboriginal Cultural Heritage (ACH) Register
- Search Area
- Aboriginal Community
  - *Permanent*
  - *Seasonal*
  - *Town Based*
- Town
- Road
- River
- Local Government Authority

0.74 kilometres

Map Scale 1 : 22,300

MGA Zone 50 (GDA2020)



Map created: 08/12/2025 1:07:13 PM by: GIS_NET_USER

Identifier: 1071005

APPENDIX B

Drainage Management Plan

Drainage Management Plan

Lot 1144 Cundinup-Dudinyillup Road and Lot 1075 Cundinup-Dudinyillup Road, Shire of Nannup

Prepared for

A.L.Harris and H. L Harris

By

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Date: January 2026
Report Version: 1

Table of Contents

Drainage Management Plan
Lot 1144 Cundinup-Dudinyillup Road and Lot 1075 Cundinup-Dudinyillup Road, Shire of Nannup

1 Introduction

Drainage management is a primary issue for all extractive industry operators. Although it is accepted that some water movement is unavoidable during extractive activities, it cannot adversely affect health, have a negative impact on amenity of local residents or on the environment. This Drainage Management Plan (DMP) has been prepared in accordance with guidelines as provided by the Department of Environment and Conservation. This Plan should be read in conjunction with the Development Application "Extractive Industry Application and Management Plans, "Lot 1144 Cundinup-Dudinyillup Road and Lot 1075 Cundinup-Dudinyillup Road, Shire of Nannup" prepared by Abrus Consulting Pty Ltd.

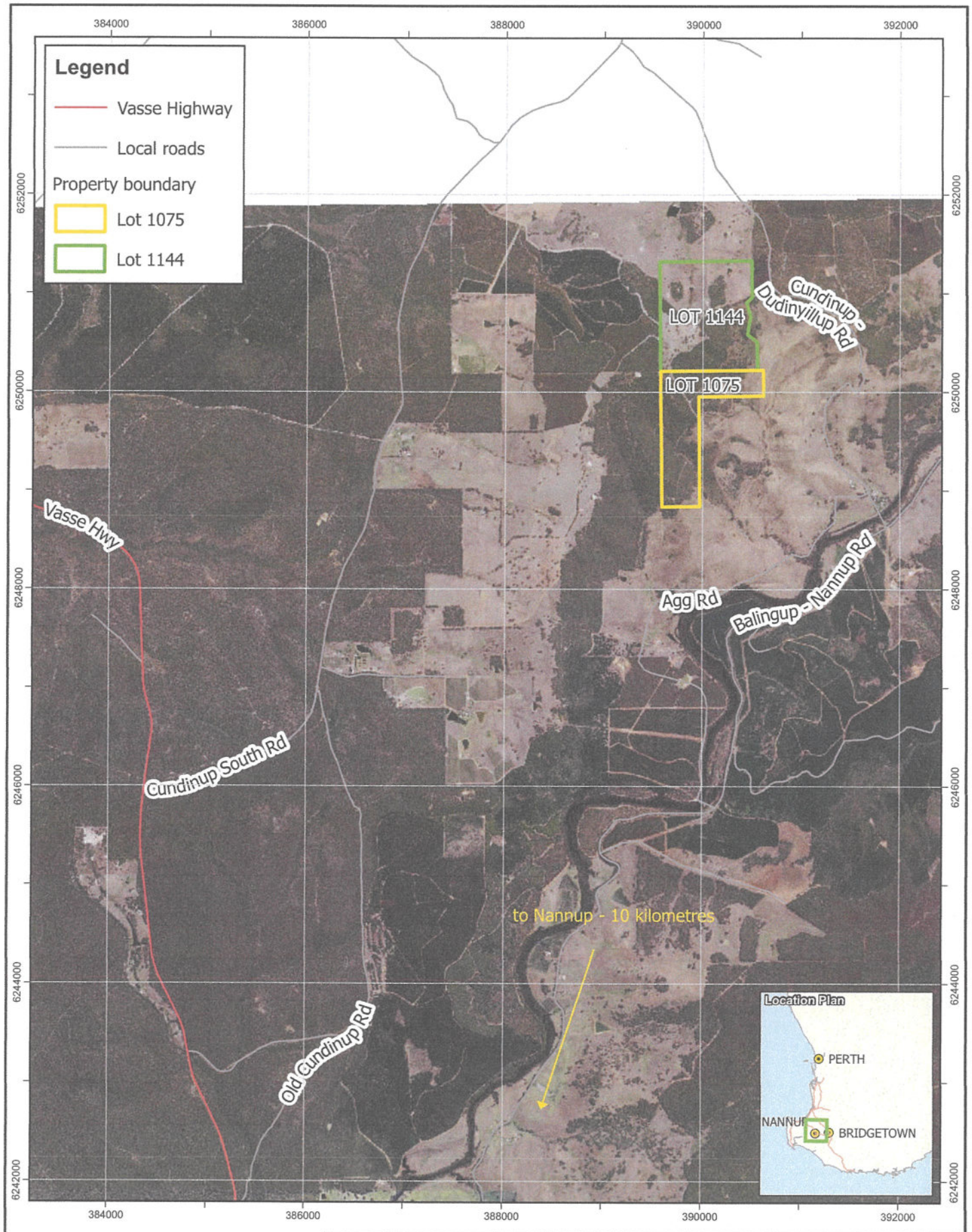
The objectives of this DMP include:

- To describe the nature of the proposed extraction activities;
- To identify potential storm water/drainage issues from operations;
- To identify any sensitive receptors and their proximity to operational areas; and
- To identify and describe measures to limit water movement and its impacts on receptors.

1.1 Land Use and Location

This farm is owned by A.L.Harris and H. L Harris and is located 20km north west of Nannup township, on the Cundinup-Dudinyillup via Cundinup South Road. Both properties have a combined area of approximately 400 ac (or 162 Ha) and are primarily used for general farming.

Shale pits (three stages, with a total area of 11.04 ha) is proposed. The proposed extraction areas are all currently under pasture and are being grazed by cattle and sheep. The owners reside on the property. Access to the farm is directly off the Cundinup-Dudinyillup Road, which then connects with the Cundinup South Road. Access is at the eastern end of Lot 1144. See locality Figure 1.



Abrus CONSULTING

Notes:
1. Coordinate System: GDA2020 MGA50.
2. Topo data courtesy of Landgate SLIP.

Lots 1144 and 1075 Cundinup-Dudinyillup Rd

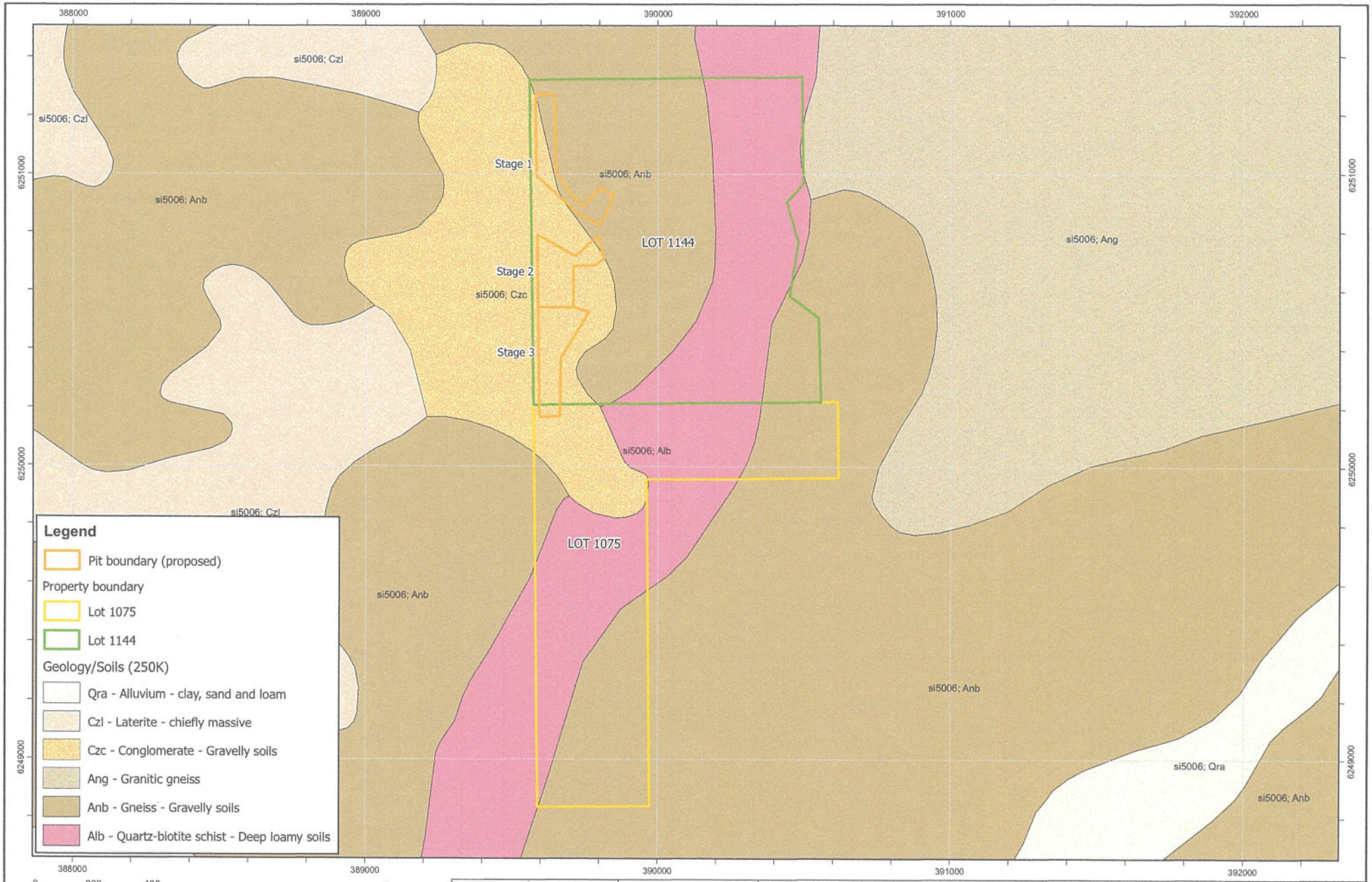
Shale Extraction Development Application

Location Plan

DRAWN	CNH	DATE	30/12/2025
CHECKED	RW	DATE	30/12/2025
SCALE	1:50,000	FIGURE No.	1 A3
PROJECT No.			

1.2 Geology and Soils

The proposed shale extraction areas are primarily Conglomerate, cobbles and boulders in sand or clay matrix with part of Stage 1 also comprising Quartz feldspar-biotite (garnet) gneiss, (Figure 2).



Notes:
1. Coordinate System: GDA2020 MGA Zone 50.
2. Background imagery courtesy of Landgate SLIP service.
3. Geology/soils and topo sourced from DMIRS/GA/SLIP.

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Lots 1144 and 1075 Cundinup-Dudinyillup Rd

Shale Extraction Development Application

Geological Mapping

DRAWN	CNH	DATE	7/8/2024
CHECKED	RW	DATE	7/8/2024
SCALE	1:12,000	FIGURE No.	2
PROJECT No.			A3

3 Operations and Potential Impacts

3.1 Dust Generating Activities

The following operations have the potential to generate dust, which can impact on sediment loads in surface water:

- Removal of topsoil;
- Excavation of gravel;
- Screening of gravel (materials processing);
- Material movement (loading of gravel) into haul trucks; and
- Vehicle movement onsite (unsealed ground).

3.2 Stormwater and Drainage

Overland flow of stormwater can occur from stripping the topsoil and extractive operations and transport sediment downstream. Management of this potential impact is vital to maintain the active working area of the pits and to reduce scouring and potential sediment transport to waterways.

There is a gentle slope to these extractive areas, although there is a significant slope from the vegetative areas towards the creek. Contours in the proposed extractive areas are widely spaced, meaning there is no excessive or extreme slopes in that area.

Due to the drainage directions, soil type and paddock areas for Stages 1 and 2, no sediment traps are proposed as any storm water will drain naturally into the soil or evaporate. No pumping will be required. Stage 3 (if required) may have a sediment trap towards the lower south eastern corner.

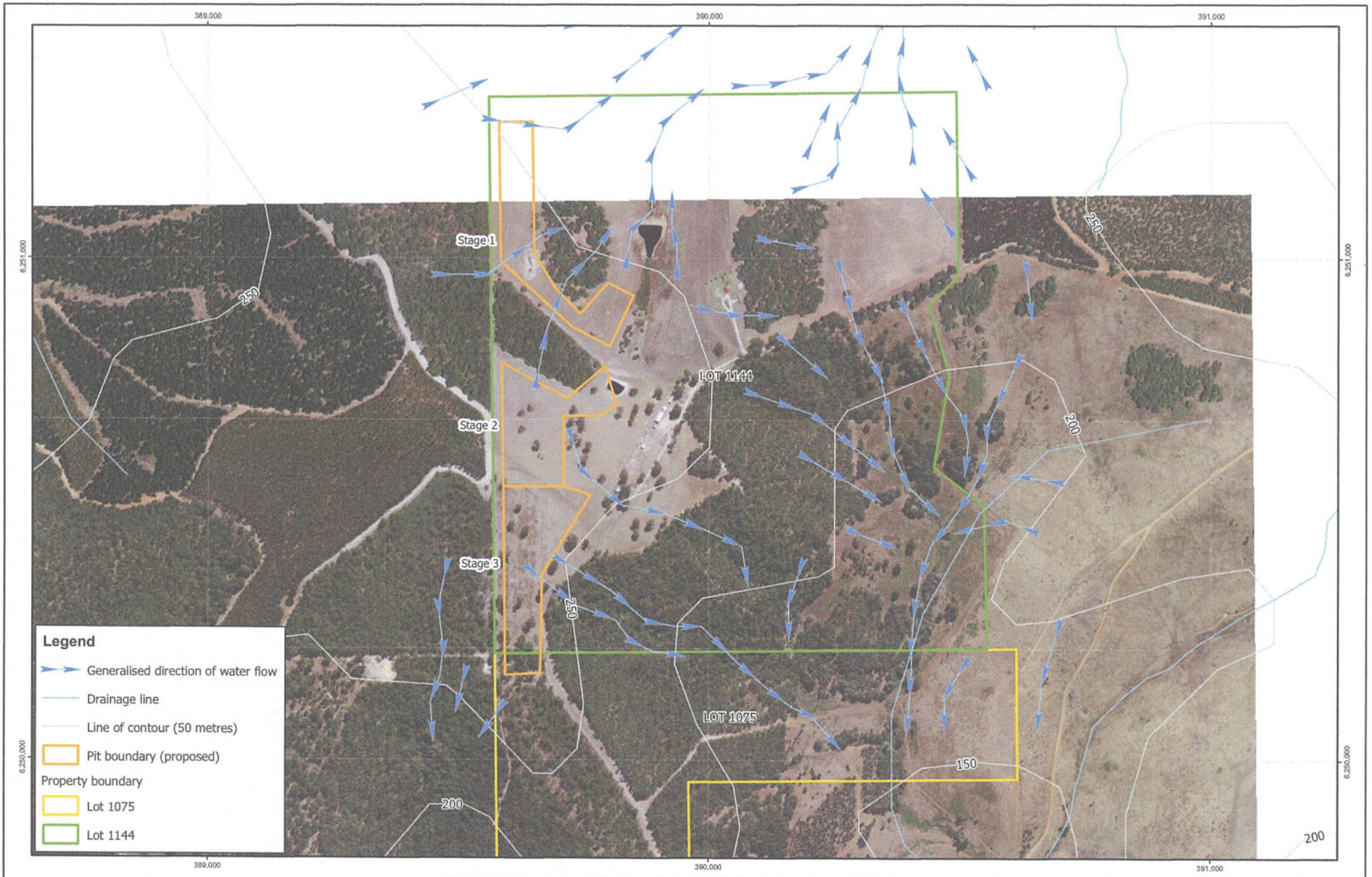
3.3 Receiving Environment

The proposed extraction sites are located in an area that ranges from 150m above sea level to approximately 250m. There is a gentle slope to these extractive areas, although there is a significant slope from the vegetative areas towards the creek (see Figure 3).

Storm water from the pit area in Stage 1 will flow primarily to the north west, across paddocks and to a dam. Stages 2 and 3 will flow across paddocks, through an extensive treed area and eventually to the creek. Contours in the proposed extractive areas are widely spaced, meaning there is no excessive or extreme slopes in that area. Due to the drainage directions, soil type and paddock areas for Stages 1 and 2, no sediment traps are proposed as any storm water will drain naturally into the soil or evaporate.

Given the topography of the area and the nature of the ground material, it is unlikely that there will be any impacts from expression of surface water within the current or proposed extraction areas. If any potentially damaging overflow is observed moving towards other locations, traps and/or bunds will be created. Any sediment trapped that remains in the traps will be infilled during the rehabilitation phase.

Given the topography of the area and the nature of the ground material, it is unlikely that there will be any impacts from expression of surface water from the proposed extraction areas. No groundwater exposure or contamination from the proposed extractive activities is anticipated. There is a very low risk of impacts to the regional salinity from the proposed operations.



Notes:
1. Coordinate System: GDA2020 MGA Zone 50.
2. Background imagery courtesy of Landgate SLIP.
3. Hydrology model developed from contour and spot elevations.

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Lots 1144 and 1075 Cundinup-Dudinyillup Rd

Shale Extraction Development Application

Contour and Drainage Plan

DRAWN	CNH	DATE	7/8/2024	
CHECKED	RW	DATE	7/8/2024	
SCALE	1:7,000	FIGURE No.	3	A3
PROJECT No.				

4 Actions

Management actions for identified risks are provided in Table 1 below.

Monitoring	Risk	Action
Visual erosion from stormwater	Erosion to the surrounding landscape	• Additional traps/bunds to be created if required
Visual stormwater/sediment collection in sediment trap	Overflow of water/sediment from trap	• Silt will be trapped in the sediment trap and allowed to settle • The water collection point (trap) will prevent the outflow of sediment from the pit • Additional traps/bunds to be created if required
Complaints register	Complaint	• Manager to assess stormwater levels/sediment burden and notify complainant of outcome of conditions and actions taken (if any)

Table 1. Drainage Management Actions

5 Drainage Post-Rehabilitation

Drainage of the rehabilitated pits will consist of re-establishment of the contours to allow for water movement to freely drain over the surrounding environment and to the riparian zones. The area will not be compacted.

6 Document Review

The owners will review all site management documentation on an annual basis. Any alterations/improvements to reflect the operational activities at the site will be updated in future documents.

APPENDIX C

Site Rehabilitation Plan

Site Rehabilitation Plan

Lot 1144 Cundinup-Dudinyillup Road and Lot 1075 Cundinup-Dudinyillup Road, Shire of Nannup

Prepared for
A.L.Harris and H. L Harris

By

rachael@abrus.com.au
MOBILE: 0429137757

Date: January 2026
Report Version: 1

Table of Contents

Site Rehabilitation Plan
Lot 1144 Cundinup-Dudinyillup Road and Lot 1075 Cundinup-Dudinyillup Road, Shire of Nannup

1 Introduction

This Site Rehabilitation Plan (SRP) has been prepared in accordance with guidelines as provided by the Department of Environment and Conservation and the Western Australia Department of Mines, Industry Regulation and Safety. This Plan should be read in conjunction with the Development Application "Lot 1144 Cundinup-Dudinyillup Road and Lot 1075 Cundinup-Dudinyillup Road, Shire of Nannup" prepared by Abrus Consulting Pty Ltd.

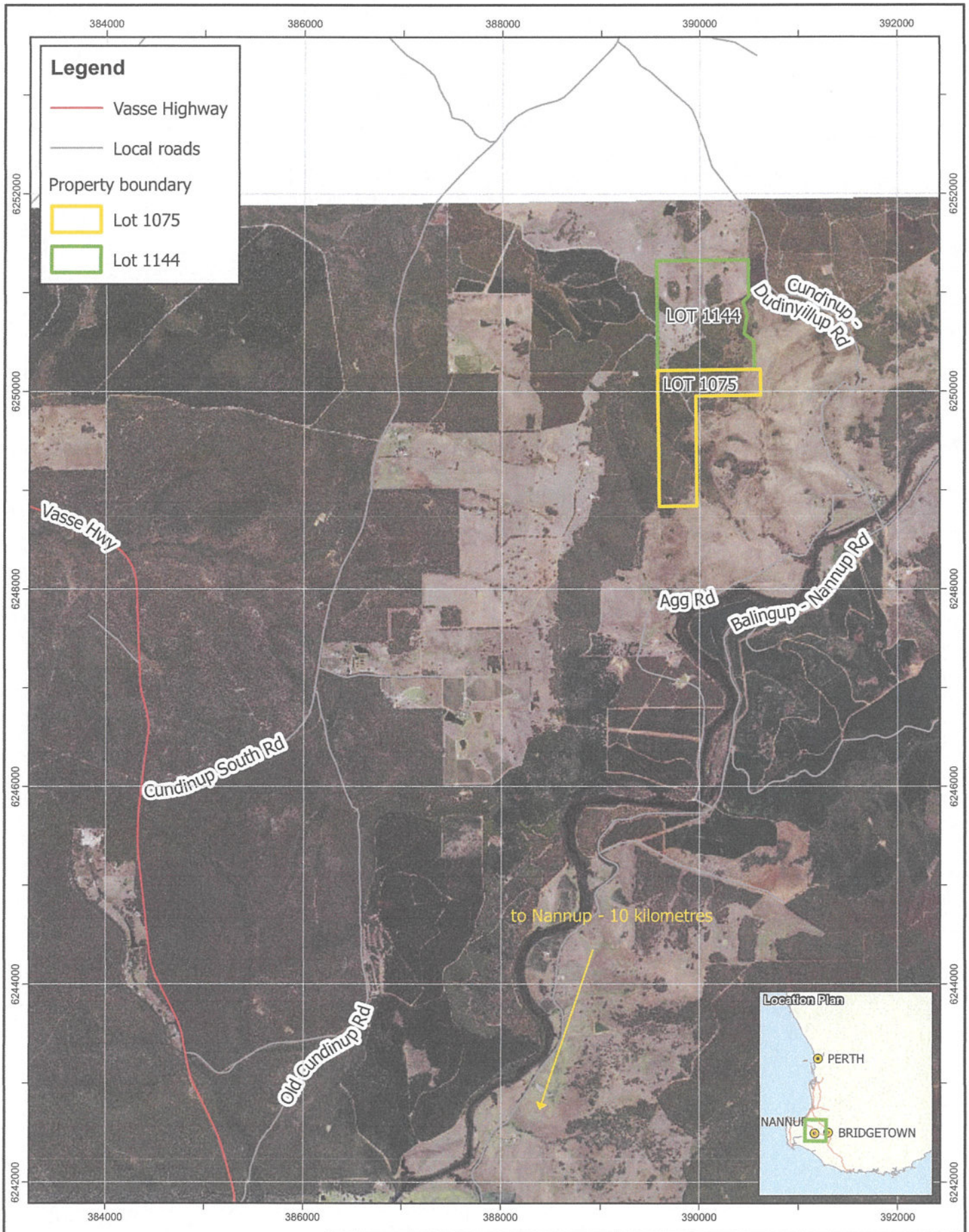
The objectives of this SRP include:

- To identify potential impacts from the proposed extraction activities;
- To identify any sensitive receptors and their proximity to operational areas;
- To describe rehabilitation activities; and
- To identify rehabilitation completion criteria, targets and actions.

1.1 Land Use and Location

This farm is owned by A.L.Harris and H. L Harris and is located 20km north west of Nannup township, on the Cundinup-Dudinyillup via Cundinup South Road. Both properties have a combined area of approximately 400 ac (or 162 Ha) and are primarily used for general farming.

Shale pits (three stages, with a total area of 11.04 ha) are proposed. The proposed extraction areas are all currently under pasture and are being grazed by cattle and sheep. The owners reside on the property. Access to the farm is directly off the Cundinup-Dudinyillup Road, which then connects with the Cundinup South Road. Access is at the eastern end of Lot 1144. See locality Figure 1.



Abrus CONSULTING

Notes:
1. Coordinate System: GDA2020 MGA50.
2. Topo data courtesy of Landgate SLIP.

Lots 1144 and 1075 Cundinup-Dudinyillup Rd

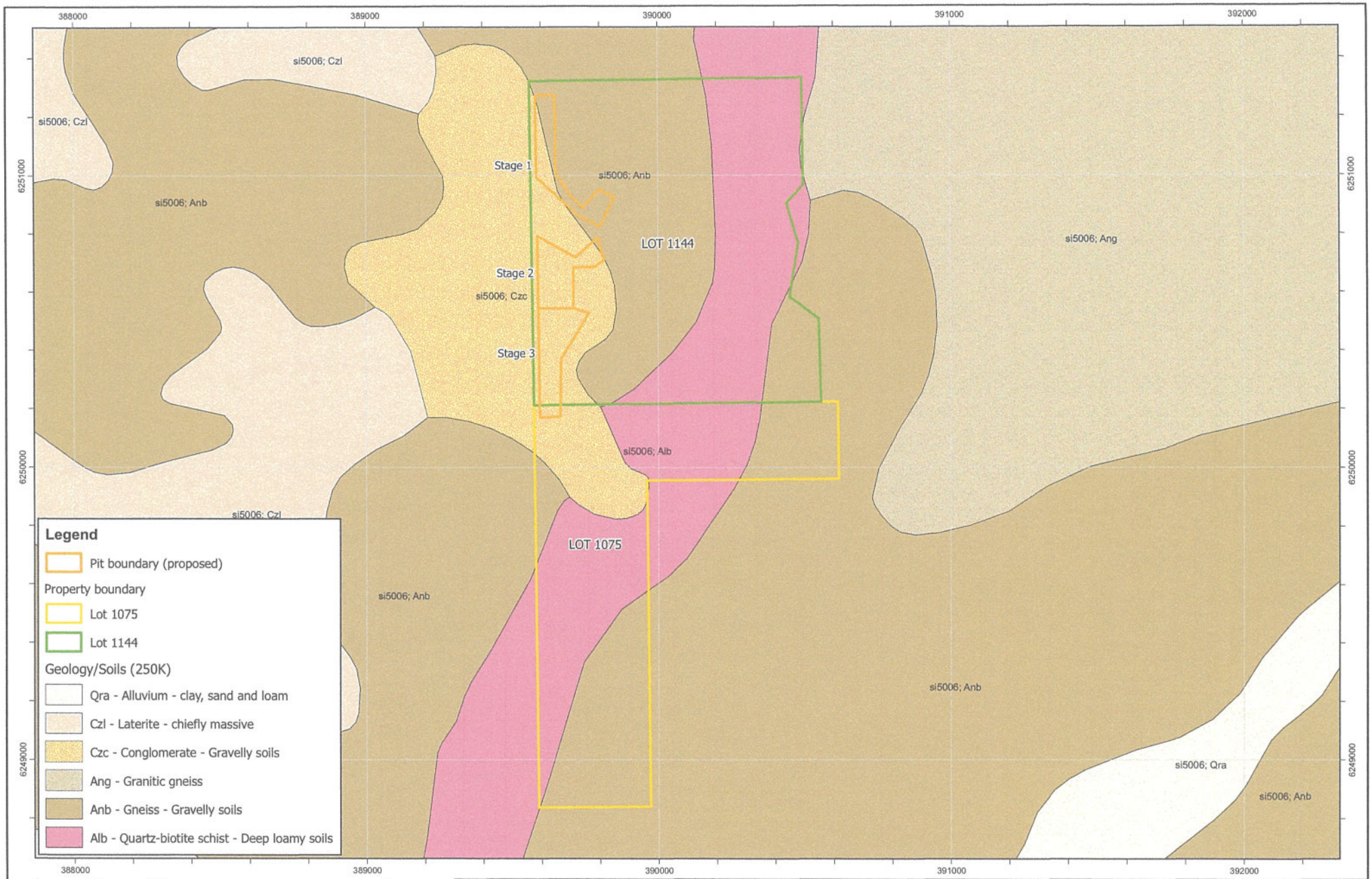
Shale Extraction Development Application

Location Plan

DRAWN	CNH	DATE	30/12/2025
CHECKED	RW	DATE	30/12/2025
SCALE	1:50,000	FIGURE No.	1 A3
PROJECT No.			

1.2 Geology and Soils

The proposed shale extraction areas are primarily Conglomerate, cobbles and boulders in sand or clay matrix with part of Stage 1 also comprising Quartz feldspar-biotite (garnet) gneiss. (Figure 2).



Notes:
1. Coordinate System: GDA2020 MGA Zone 50.
2. Background imagery courtesy of Landgate SLIP service.
3. Geology/soils and topo sourced from DMIRS/GA/SLIP.

Location Plan

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Lots 1144 and 1075 Cundinup-Dudinyillup Rd

Shale Extraction Development Application

Geological Mapping

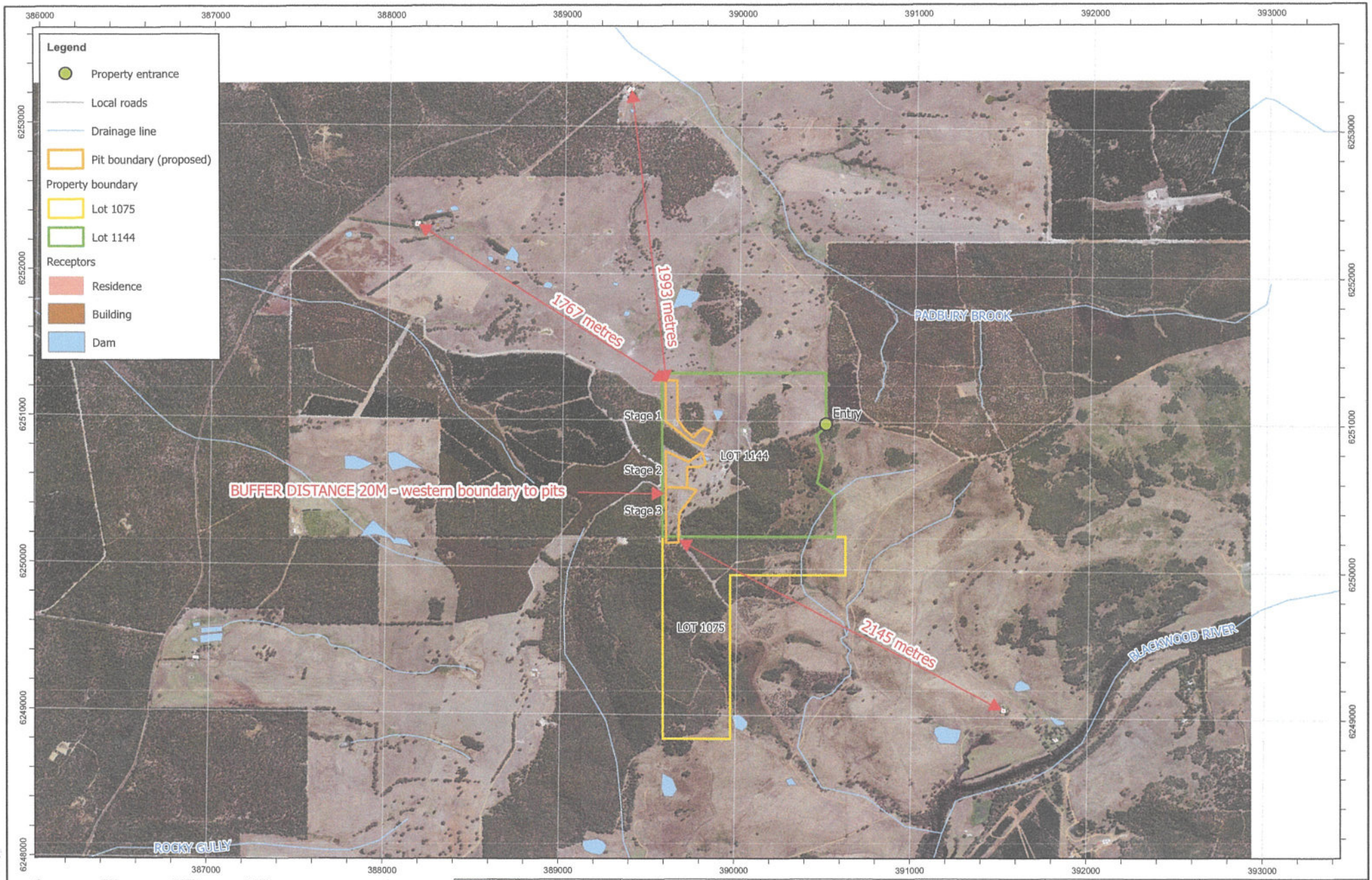
DRAWN	CNH	DATE	7/8/2024	
CHECKED	RW	DATE	7/8/2024	
SCALE	1:12,000	FIGURE No.	2	A3
PROJECT No.				

1.3 Surrounding Land Uses

The proposed extraction areas are surrounded by agricultural land (mixed), rural lifestyle and tree plantations. The 3 stages are all located in paddocks that are being used for general livestock grazing and farming.

The EPA Guideline Separation Distances between Industrial and Sensitive Land Uses (No. 3, June 2005) requires a minimum separation of 1000m between sensitive land use and extraction/screening works.
The nearest residence (owned by Jared Dickie and Ava Irani) is located approximately 1,767m to the north west of the proposed Stage 1 pit area (which includes a 20m buffer between the pit and the property boundary). The Brown's residence is approximately 1,993m from the northern edge of the proposed pit. Another residence to the southeast of the pit in Stage 3 (owned by the Brockman family) is over 2km from the southern edge of the pit.

All residences are outside of the EPA separation distance requirement for the proposed shale extractive activities (see Figure 3).



Notes:
1. Coordinate System: GDA2020 MGA Zone 50.
2. Background imagery courtesy of Landgate SLIP.

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Lots 1144 and 1075 Cundinup-Dudinyillup Rd

Shale Extraction Development Application

Site Plan of Pits & Receptors

DRAWN	CNH	DATE	07/08/2024	
CHECKED	RW	DATE	07/08/2024	
SCALE	1:24,000	FIGURE No.	3	A3
PROJECT No.				

2 Operations and Potential Impacts

2.1 Potential Impacts

Potential impacts from extractive operations include:

1. Dust from operations (extraction and transportation) may affect nearby residents;
2. That erosion may occur creating an unstable landform;
3. Lack of vegetation regrowth/reduced health from disease;
4. That weeds may impact the area (growth or introduction of new species);
5. That the area may not blend visually with the surrounding environment;
6. That local fauna may be negatively impacted; and
7. Local hydrology may be impacted.

These are discussed in the completion criteria table (Table 1).

2.2 Rehabilitation Activities

Due to the small scale of the extractive area and activities, and that the intent is to return the area to pasture, a detailed Site Rehabilitation Plan is not considered feasible at this stage.
A general methodology, undertaking a staged approach is proposed, with rehabilitation beginning once an area has been extracted. The selected contractor will redistribute the topsoil and re-contour the landscape, with the owner reseeding the areas. The extracted areas will be re-contoured to suit the topography and rehabilitated back to pasture. Rehabilitation of the completed areas will be progressive.
Some areas will need to be left for loading of stone and sand by purchasers and to leave a safe turn around area for trucks and loading machinery. The final areas will be rehabilitated once no longer required.
As a general rule, the following steps will be implemented:

- Stockpiled topsoil will be retained during extraction and spread back over the completed areas;
- The pit floor will be ripped along the contour;
- Erosion control implemented if required;
- Area will be prepared for planting, which may require weed management;
- Seeding of pasture species.

The restoration/rehabilitation goal for this site is to return the area post-extraction to a stable and erosion resistant landform. It will blend with the surrounding landscape.

2.3 Completion Criteria

Completion criteria are necessary to ensure that the objectives of rehabilitation have been met. Table 1 below provides a summary of the criteria, objectives and targets.

Criteria	Target	Actions
1. Off-site impacts	That off-site impacts (ie dust) that could affect nearby residents do not occur	• Successful re-establishment of pasture, progressive rehabilitation • Maintaining existing tree and vegetation belts
2. Landform stability	1. That the final landform is stable 2. No erosion occurs	• Identification of potential erosion areas are identified and managed during rehabilitation
3. Vegetation	1. That the area will be returned to pasture 2. No dieback will be introduced	• Successful re-establishment of pasture • Implementation of vehicle hygiene procedures
4. Weeds	1. That declared weeds will not be present 2. That declared weeds will not be introduced	• Declared weeds if present will be removed/managed • Implementation of vehicle hygiene procedures
5. Visual amenity	The rehabilitated area will be returned to pasture and blend with the surrounding environment	• Successful re-establishment of pasture
6. Fauna	Fauna will return to the site area	• Successful re-establishment of pasture • Maintaining existing tree and vegetation belts and riparian zones
7. Hydrology	1. That the final landform will not be affected by site hydrology 2. Stormwater will not negatively impact the site	• Stormwater will be managed during rehabilitation allowing water movement to freely drain over the surrounding environment and into the riparian zones • The area will not be compacted

Table 1: Completion Criteria

3 Document Review

The owners will review all site management documentation on an annual basis. Any alterations/improvements to reflect the operational activities at the site will be updated in future documents.