NATTA 3D SEISMIC SURVEY

ENVIRONMENT PLAN SUMMARY

NAT-HSE-PLN-001-SUM

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Document Control

The Approvals Lead is the custodian of this document and is responsible for ensuring the approval and management of this document including any revisions.

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0	10/07/2024	Document issued to DEMIRS for review
1	25/11/2024	Document updated with feedback from DEMIRS

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Term Definitions and Abbreviations

Term	Definition
3D	Three-dimensional
AA 39 – 40	Petroleum Access Authorities 39 and 40
ALARP	As Low As Reasonably Practicable
Cth	Commonwealth jurisdiction
CAMBA	China Australia Migratory Bird Agreement
DBCA	Department of Biodiversity, Conservation and Attractions (WA)
DEMIRS	Department of Energy, Mines, Industry Safety and Regulation (WA), formerly DMIRS
DMIRS	The former Department of Mines, Industry Safety and Regulation (WA)
EP 469	Petroleum Exploration Permit 469
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Cth)
ERP	Emergency Response Plan
IUCN	International Union for Conservation of Nature
JAMBA	Japan-Australia Migratory Bird Agreement
km	Kilometre
L	Litre
L 25	Petroleum Production Licence L 25
m	Metre
mbgl	metres below ground level
mg	Milligrams
mm	Millimetre
OSCP	Oil Spill Contingency Plan, also referred to as an Oil Spill Response Plan
PGER Act	Petroleum and Geothermal Energy Resources Act 1967 (WA)
PGER(E)R	Petroleum and Geothermal Energy Resources (Environment) Regulations
Project	Natta 3D Seismic Survey
Receiver Lines	Indicative lines ot be traversed via light vehicles, all-terrain vehicles or walking to place wireless nodes
Source Lines	Indicative lines to be traversed by vibroseis vehicles to conduct shot points
Strike	Strike West Pty Ltd
WA	Western Australia

1 Introduction

Strike West Pty Ltd (Strike) is proposing to undertake a three-dimensional (3D) seismic acquisition survey in the Shires of Three Springs, Mingenew and Irwin, in the Mid West region of Western Australia (WA) (Natta 3D Seismic Survey; the Project).

The purpose of the Project is to map the sub-surface geology of the area, enabling the identification of petroleum reservoir rocks for potential future conventional resource extraction. The Project involves the acquisition of 3D seismic data only and does not include any drilling, hydraulic fracturing or extraction activities.

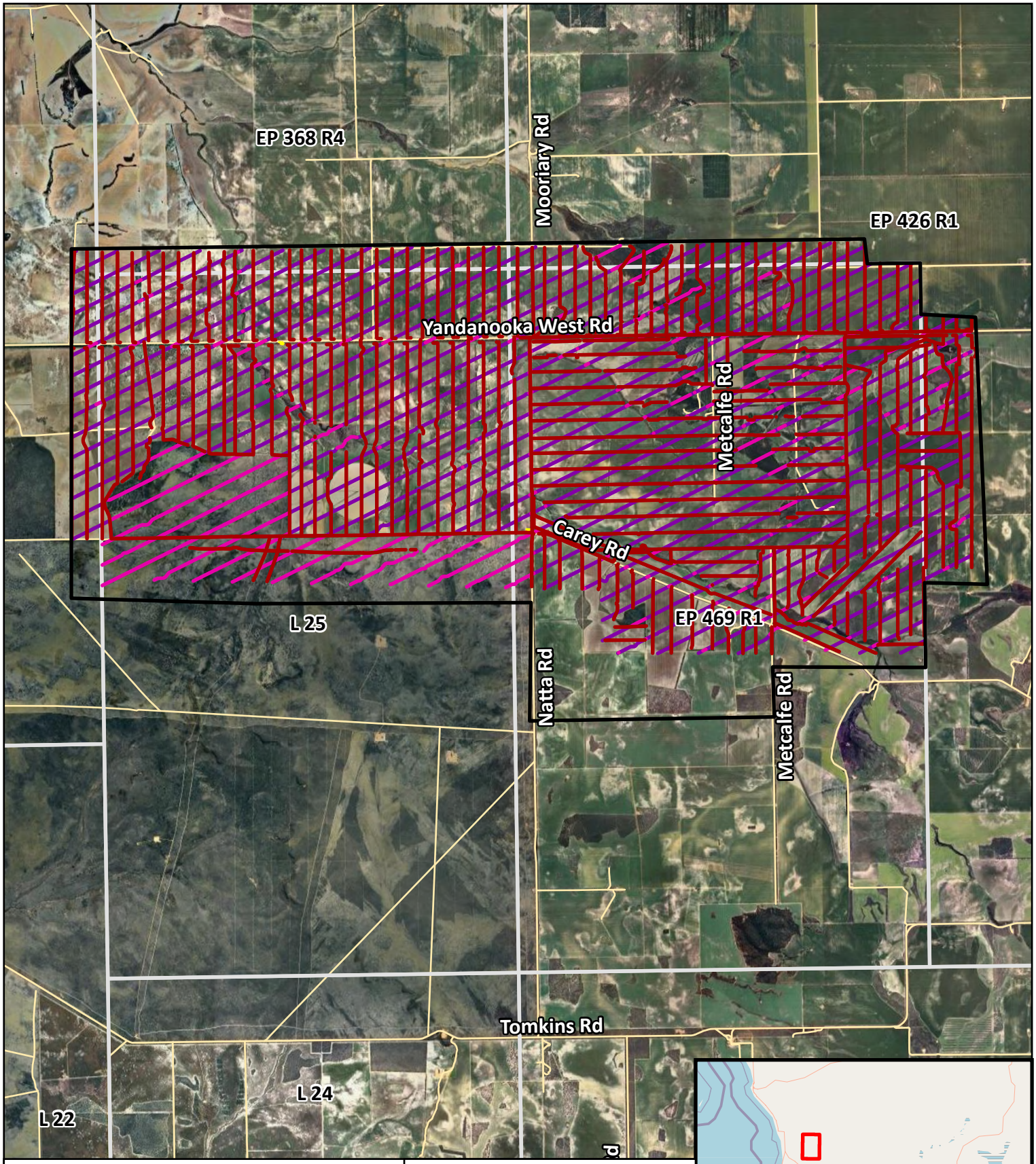
1.1 Project Summary

The seismic source lines have been aligned to utilise previously cleared areas to undertake the Project. No clearing of native vegetation is required.

The Project will be conducted within Petroleum Exploration Permit EP 469 (EP 469), Petroleum Production Licence L 25 (L35), and Petroleum Access Authorities AA 39 and 40 (AA 39 – 40).

The Project comprises approximately 124 km^2 of new 3D seismic to be obtained within EP 469, L 25 and AA 39 -40 (the Project Area) within the north Perth Basin. The Project Area is approximately 15 km south of Mingenew, 31 km south-southeast of Dongara and 36 km north-northwest of Three Springs.

The Project is proposed to be undertaken over a total activity period of 11 weeks, including mobilisation and demobilisation. No clearing of native vegetation is required to facilitate the Project.



PCS: GDA 1994 MGA Zone 50 arcgis.com, data.wa.gov.au

1.2 Purpose and Scope

The purpose of this environment plan (EP) is to provide an outline of the activities associated with the Project along with a description of environmental management controls to ensure the activities are carried out in a manner consistent with the principles of ecologically sustainable development (ESD) and mitigate any potential environmental impacts from those activities.

This EP has been prepared to meet the requirements of the following:

- *Petroleum and Geothermal Energy Resources Act 1967* (PGER Act); and
- *Petroleum and Geothermal Energy Resources (Environment) Regulations 2012* (PGER(E)R).

This EP has been prepared in accordance with the DMIRS (2022) Guideline for the Development of Petroleum, Geothermal and Pipeline Environment Plans in Western Australia.

The scope of this EP is the Natta 3D Seismic Survey.

1.3 Ecological Sustainable Development (ESD)

It is an objective of the Regulations that petroleum activities be undertaken in a manner consistent with the principles of ESD. Australia's National Strategy for Ecologically Sustainable Development (1992) defines ESD as:

> *"using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased."*

The National Strategy applies to governments, business, community organisations and individuals in Australia.

Under section 3A of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), the principles of ecologically sustainable development are:

- decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations;
- if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;
- the principle of inter-generational equity—that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;
- the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making; and
- improved valuation, pricing and incentive mechanisms should be promoted.

Strike has considered the principles of ESD, in the development of the environmental performance objectives, standards and management criteria within this EP, to ensure environmental risks and impacts are reduced to an acceptable level that is as low as is reasonably practicable (ALARP).

1.4 Operator Details

As required by Regulation 37 of PGER(E)R, the nominated operator for the Project will be responsible for the overall management and operation of the Project at all times. Table 1.1 summarises the details relevant to the notification of Strike as the operator of Natta 3D Seismic Survey.

Table 1.1: Operator Details

Petroleum Instruments	EP 469, L 25, AA 39, AA 40
Operator	Strike West Pty Ltd (ABN 91 625 161 846)
Contact Person	Stephen Lloyd
Position	Approvals Lead
Email Address	hse@strikeenergy.com.au
Telephone No.	(+61) 8 7099 7400
Postal Address	PO Box 569, West Perth, WA 6005

1.5 Environment Plan Revision

Strike will ensure the information included in this EP is current and relevant to the petroleum activity, and practical for implementation onsite. Under the regulations, a proposed revision of this EP must be submitted to DEMIRS where:

- A new petroleum activity is proposed which is not provided for in the EP.
- Any significant modification of, change in, or new stage of a petroleum activity is proposed to commence which is not provided for in the EP.
- There is a change in the instrument holder or operator of the petroleum activity.
- New or increased environmental impacts or risks associated with the petroleum activity have been identified.
- DEMIRS formally requests a revised EP from the operator.
- An EP has been in place for five years.
- An Oil Spill Contingency Plan (OSCP) has been in place for two and a half years[1]

Strike acknowledges, a petroleum activity must not continue if any significant, new or increased environmental impacts or risks are identified. In these circumstances a revised EP must be submitted to DEMIRS and approved prior to continuing the activity.

[1] A proposed OSCP revision must be submitted at least 14 days prior to the end of the 2.5-year period after approval.

2 Description of Activity

The seismic source lines have been aligned to utilise previously cleared areas to undertake the Project. No disturbance via clearing of native vegetation is required to create access tracks for vibroseis trucks and light vehicles.

Location and operational details specific to the Project are provided in Table 2.1.

Table 2.1: Project Details

Aspect	Description
Location	The Project is located within the Shires of Three Springs, Mingenew and Irwin in the Mid West region of WA, within EP 469 and AA 39-40, and is approximately 280 km north of Perth. Project Area coordinates are provided in Table 2.2. The primary land uses in the broader area are conservation, agriculture, mining and petroleum.
Total Survey Area	124 km^2
Petroleum Permits	EP 469, L 25, AA 39 and AA 40
Site Access	Existing roads and tracks will be used to access the Project Area. The Project Area will be accessed via multiple roads including Mount Adams Rd, Yandanooka West Rd, Carey Rd, Tomkins Rd, and Natta Rd. Access by vehicles within the Project Area will utilise cleared tracks and firebreaks or areas devoid of native vegetation.
Accommodation	Installation or construction of accommodation facilities will not be conducted to facilitate the project. A local accommodation provider will be utilised to support the Project.
Seismic Acquisition	The estimated number of data acquisition days will be 49 days.
Clearing	No native vegetation will be cleared
Survey Duration	The total duration of the Project will be approximately eleven (11) weeks. This duration accounts for some downtime to account for potential delays due to unforeseeable weather or operational circumstances.
Preferred Survey Timing	The preferred survey timing is December 2024 to March 2025 (subject to necessary approvals)
Aboriginal Heritage	The Project is located within the Yamatji Nation ILUA. No Registered Aboriginal heritage sites are located within the Project Area. The nearest Registered Aboriginal heritage site is the Irwin River (ID 18907) located approximately 4.5 km north.
Waste	The only planned wastes generated during the Project will be general waste, including food waste, plastics and rubber products and wastes from in-field servicing and repairs of vehicles. General wastes will be collected and retained in dedicated waste receptacles (containers and/or bags) within each vehicle used for the Project for disposal in dedicated facilities (i.e., bins) at the decided waste disposal facility or at dedicated locations approved by landowners. All wastes generated by any service and/or mechanical work conducted is to be placed in the appropriate rubbish bins or containers for disposal at the local council refuse station in accordance with the local council requirements.
Storage of chemicals and/or hazardous substances	Bulk hydrocarbon and chemical (i.e., drums and bulky containers) will be stored in accordance with AS1940 (The Storage and Handling of Flammable and Combustible Liquids).
Supporting Infrastructure	Strike will utilise a laydown area on previously cleared land.

Table 2.2: Project Area Coordinates (GDA94Z50)

Point	Longitude	Latitude	Point	Longitude	Latitude	Point	Easting	Northing
1	115.2826090°E	29.3909164°S	6	115.4180859°E	29.3321055°S	11	115.4180839°E	29.4039400°S
2	115.2451844°E	29.3894724°S	7	115.4180754°E	29.3412284°S	12	115.3870873°E	29.4034588°S
3	115.2462464°E	29.3274814°S	8	115.4291484°E	29.3418844°S	13	115.3872455°E	29.4123376°S
4	115.4068434°E	29.3277384°S	9	115.4308064°E	29.3893184°S	14	115.3376777°E	29.4124316°S
5	115.4073729°E	29.3321085°S	10	115.4180754°E	29.3888674°S	15	115.3383242°E	29.3914548°S

2.1 Project Overview

2.1.1 Equipment and Infrastructure

Existing roads and tracks will be used to access the Project Area.

The Project requires a fleet of supporting vehicles. The type and quantity of vehicles may change depending on the availability at the time of the survey. Vibroseis trucks will use balloon tyres to reduce imprint depth, therefore pressure, reducing soil compaction.

Bulk hydrocarbon and chemical (i.e., drums and bulky containers) will be stored in accordance with AS1940 (The Storage and Handling of Flammable and Combustible Liquids).

2.1.2 Mobilisation

Mobilisation to the Project Area will require the use of commercial carriers to transport the vibroseis trucks to site. All travel on public roads will be in accordance with the State Road legislation. In privately-owned areas, set driving speeds will be restricted (maximum of 40 km per hour). Information on speed limits will be included in the site induction which all personnel, including contractors, will undertake prior to attending site.

Daily mobilisation to and from the Project Area will be required. This will comprise of light vehicle movements via public roads.

2.1.3 Seismic Line Preparation

No clearing of native vegetation is required to facilitate the Project. All seismic source lines will be undertaken within existing cleared areas, roads, access tracks and firebreaks. Personnel will walk receivers into areas of vegetation.

The proposed seismic lines have been developed through a detailed process of review to ensure that impacts to the environment are mitigated to ALARP. Since no native vegetation will be cleared, or existing infrastructure will be destroyed/removed, seismic lines may deviate from the surveyed route and the nominal plan that is shown in the seismic application. This allows for changes due to operational reasons, (e.g., unanticipated access difficulties, discovery of Aboriginal artifacts, etc.).

2.1.4 Data Acquisition

The main elements of the Project involve laying out lanes of 'cable-free' receiver nodes and a seismic survey using vibroseis technologies. Receiver nodes are placed at regular

intervals along seismic lines. The nodes are planted into the ground to approximately 100 mm deep (no deeper than 200 mm). Vibroseis vehicles subsequently traverse the proposed seismic source lines, creating acoustic waves at regular intervals. The reflected acoustic waves are received by the nodes. The data is systematically processed and interpreted to create subsurface imaging. The vibroseis vehicles will not create acoustic waves close to sensitive receptors and will maintain a safe offset distance.

2.1.5 Demobilisation and Rehabilitation

Upon completion of the Project, all equipment will be removed from the Project Area. Furthermore, any infrastructure altered or removed as a result of the Project will be reinstated to pre-disturbance condition or as otherwise agreed with relevant landholders.

The clearing of native vegetation is not necessary for the completion of the Project. Areas that are disturbed by the Project may only require minor civil works in order to restore them to their condition prior to undertaking the Project. Rehabilitation works will be undertaken to establish a safe and stable, non-polluting, landform similar to that of surrounding areas.

2.1.5.1 Waste

The only planned wastes generated during the Project will be general waste, including food waste, plastics and rubber products and wastes from in-field servicing and repairs of vehicles.

General wastes will be collected and retained in dedicated waste receptacles (containers or bags) within each vehicle used for the Project for disposal in dedicated facilities (i.e., bins) at the decided waste disposal facility or at dedicated locations approved by landowners.

3 Existing Environment

3.1 Regional Context

The Project is located within the Lesueur Sandplain subregion of the Geraldton Sandplains bioregion, as defined by the Interim Biogeographic Regionalisation for Australia. The Lesueur Sandplain subregion comprises coastal Aeolian and limestones, Jurassic siltstones, and sandstones (often heavily lateritised) of central Perth Basin.

The Mid West region experiences a Mediterranean climate (i.e., dry and warm summers, and relatively wet and cool winters).

3.2 Soils and Landform

The landform is described as undulating with well-defined ridge lines (lateritic) and breakaways towards the west and southwest. Ground levels vary between 125 m above Australian Height Datum (AHD) to 300 mAHD.

The Geraldton Sandplains (including the Lesueur Sandplain subregion) are characterised by a series of old dunes which run parallel to the coast. The younger Quindalup dunes

occur near the contemporary coastline, with the Spearwood dunes occurring further inland. The soils are typically sandy with some areas of exposed limestone, and a series of wetlands occurs along the plains; toward the east lateritic rises occur.

3.3 Hydrology

The Project Area primarily exists upon two hydrographic catchment basins:

- Irwin River Catchment; and
- Arrowsmith River Catchment.

Watercourses in the primary catchments flow predominantly in an east-west direction from the upland areas in the east into large swamps or lakes in interdunal depressions on the Swan Coastal Plain to the west. The poorly defined drainage lines of the Arrowsmith River flow in a westerly direction prior to turning north-west to enter the terminal swamps and lakes of the Arrowsmith Lake area.

Surface water flows are generally considered to be low in the region due to the sandy nature of the surface soils and their corresponding high infiltration rates. Although these soils have high saturated infiltration rates and hydraulic conductivities, their permeability decreases significantly when in an unsaturated condition, therefore surface runoff is common following rapid and intense rainfall events following extended dry periods.

No geomorphic, Nationally Important (Directory) or Ramsar-listed wetlands are present within or in proximity to the Project.

3.3.1 Groundwater

The largest fresh groundwater resources within the northern Perth Basin are in the Surficial/Superficial, Leederville, Leederville-Parmelia and Yarragadee aquifers. There are also three secondary aquifers: the Mirrabooka, Cattamarra and Eneabba-Lesueur aquifers. In addition to these groundwater resources, there are minor shallow and fractured-rock aquifers that are locally significant sources of water. Hydraulic connection between aquifers is often impeded across faults and low permeability units, both within and between aquifers.

Groundwater in the Project Area is contained the Leederville-Parmelia aquifer and the Yarragadee aquifer. Groundwater is understood to range from approximately 50 to 370 m below ground level (mbgl) with salinity ranging from 500 to 1,500 mg/L across the Project Area (Dow, 2017).

3.4 Air and Noise Emissions

Ambient air quality in the vicinity of the Project is expected to be representative of surrounding dust-generating activities, being primarily pastoral and tourism activities, as well as the use of agricultural machinery and vehicular movements.

Project activities will likely give rise to atmospheric emissions as a result of vehicle movements; however, emissions are not expected to cause a reduction in local air quality and are considered comparable to emissions from existing activities in the area.

Ambient noise levels in the vicinity of the Project are expected to be similar to agricultural and tourism activities. These sources of emissions are anticipated to have a relatively low or insignificant impact on the overall noise levels in the local area.

The primary noise source associated with the Project is the movement of vehicles. The vibroseis trucks are designed to minimise noise to reduce interference with the seismic acquisition. The Project will be conducted in accordance with the Environmental Protection (Noise) Regulations 1997.

3.5 Flora and Vegetation

The Project vehicle activities are located entirely within pre-existing cleared areas used for agricultural activities. No clearing of native vegetation is required.

A database search was undertaken to generate a list of vascular flora and ecological communities previously recorded within and/or in proximity to the Project Area, with an emphasis on species and ecological communities of conservation significance and introduced species.

Beard et al. have mapped the extent of pre-European vegetation across Western Australia, which is represented in spatial dataset (DPIRD-006) maintained by DPIRD. Inspection of the spatial dataset identified four vegetation associations within the Project Area. All vegetation associations are well represented on the Lesueur Sandplain subregion (DBCA 2019) (Table 3.1). Seismic source lines will be completed using pre-existing cleared areas and receivers will be hand carried into areas of vegetation; therefore, the Project will not impact native vegetation.

Table 3.1: Beard (DPIRD-006) Vegetation System Associations within the Project Area

Vegetation System	Vegetation Association	Description
Tathra	49	Low shrubs of mixed composition.
	352	Medium woodland, York gum, salmon gum etc.
	379	Mixed heath with scattered tall shrubs *Acacia* spp. *Proteaceae* and *Myrtaceae*.
Eridoon	378	Mixed heath with scattered tall shrubs *Acacia* spp. *Proteaceae* and *Myrtaceae*.

3.5.1.1 Threatened and Priority Flora

Source lines will utilise previously cleared areas (i.e., cropland, access tracks and firebreaks) and thus will not enter into areas covered by continuous vegetation within 50 m of rare flora. No refuelling or hand carry of equipment will occur within 50 m of declared rare (threatened) flora.

3.5.1.2 Threatened and Priority Ecological Communities

Six Threatened Ecological Communities and several Priority Ecological Communities are known from the Geraldton Sandplains; given that communities occur on restricted landforms and are known to be locally restricted in their occurrence, it is not anticipated that any conservation significant ecological community occurs within the Project Area. No impacts to Threated or Priority Ecological Communities are anticipated.

3.5.1.3 Weeds

The Western Australian Organism List (WAOL) database identifies 49 Declared Pests under Section 22(2) of the *Biosecurity and Agricultural Management Act 2007* within the Shire of Three Springs with 28 of those being listed as Weeds of National Significance (WoNS). The potential introduction and/or spread of weeds will be managed via hygiene measures and in consultation with landowners.

3.5.2 Potential Impacts to Flora and Vegetation

No clearing of native vegetation is required to facilitate the Project. All Project vehicle activities will be undertaken within existing cleared areas, roads, access tracks and firebreaks. Personnel who will hand carry receivers into areas of native vegetation will be given coordinates of recorded declared rare (threatened) flora as no go zones. The overall risk of Project activities to vegetation and flora, including conservation significant flora and ecological communities, is considered to be low.

3.6 Fauna

Database searches were undertaken to generate a list of conservation significant fauna.

The *Environmental Protection and Biodiversity Conservation Act 1999* (Commonwealth) protects a range of shorebirds listed under the JAMBA and CAMBA Migratory Bird Agreements. Species may also be listed migratory or subject to international agreements including, the Convention on the Bonn, CAMBA, JAMBA, ROKAMBA and the IUCN.

The Protected Matters Search Tool identified 13 conservation significant species as having previously been recorded or have the potential to occur based on distribution and habitat within the Project Area.

Given that Project activities involving vehicles will be restricted to existing cleared areas, roads, access tracks and firebreaks, it is considered unlikely conservation significant species and/or their preferred habitat will be impacted as a result of Project activities.

3.6.1 Potential Impacts to Fauna

No clearing of native vegetation is required to facilitate the Project activities and vehicle movements other than on public roads will be limited (e.g., 40 km/h) to minimise potential for livestock or native fauna vehicle collision.

The overall risk of Project activities to conservation significant fauna and livestock is considered very low.

4 Socio-economic Environment

4.1 Local Area

The Project Area is approximately 15 km south of Mingenew, 31 km south-southeast of Dongara and 36 km north-northwest of Three Springs t within the Shires of Three Springs, Mingenew and Irwin. The Shire of Three Springs has a population of 575 (ABS, 2021).

The dominant industries within the Shire of Three Springs are farming (grain production and livestock grazing), mining, and government-based operations.

4.2 Aboriginal Cultural Heritage

Aboriginal Cultural Heritage in Western Australia in relation to petroleum activities is managed by:

- the *Aboriginal Heritage Act 1972*; and
- Indigenous Land Use Agreements (ILUAs).

For the Project:

- On 26 October 2020, the Yamatji Nation ILUA was conclusively registered.

No Registered Aboriginal heritage sites were identified as occurring within the Project Area on the Aboriginal Cultural Heritage Inquiry System (ACHIS). The nearest Registered Aboriginal heritage site is the Irwin River (ID 18907) located approximately 4.5 km north.

The Project will utilise pre-existing crossing. No refuelling or seismic source lines will be conducted within 50 m of surface water.

In the event of a discovery or the identification of an object reasonably suspected of being an Aboriginal artefact a Site Discovery Procedure will apply.

4.3 European Heritage

A place search for European heritage sites was conducted in June 2024 on the State Heritage Council database. There are no European heritage sites within the Project Area. The nearest heritage site is approximately 19.5 km east-southeast of the Project Area and will not be impacted; Arrino Townsite (Place number 5292).

4.4 Geo-Heritage

A place search for Geo-heritage sites was conducted in June 2024 on the DMIRS GeoVIEW database. There are no Geo-heritage sites within or in proximity to the Project. The nearest Geo-heritage site is located approximately 15.8 km east of the Project area, Enokurra Hill (Site No 41).

5 Stakeholder consultation

Strike maintains a stakeholder consultation program with key stakeholders in relation to its Perth Basin petroleum activities.

The key objectives of the consultation program are to:

- Identify relevant stakeholders;
- Initiate and maintain communication;
- Develop tools for ongoing communication;

- Provide for two-way communication on management/mitigation strategies to minimise impacts of the Project on the environment and potentially affected stakeholders; and
- Record consultation activity, key issues, and outcomes.

Strike continues to consult with landholders, traditional owners, local government, state and federal government agencies and other stakeholders with regards to the Project.

- Relevant person(s) for the purpose of identifying stakeholders that should be consulted were identified based on the following:
- Departments or agencies that administer the required approval(s) to implement the proposed Project;
- Landholders within the Project Area;
- Any person or organisation whose functions, interests or activities may be affected by the Project; and
- Any other person or organisation with a potential interest in the proposed Project.

Stakeholders engaged to date include:

- Department of Energy, Mines, Industry Regulation and Safety;
- Yamatji Southern Regional Corporation;
- Shire of Three Springs;
- Shire of Mingenew;
- Shire of Irwin; and
- Landowners (direct and adjacent).

Strike will continue to communicate with existing and any new identified stakeholders and consult during all phases of the Project, on a formal and informal basis, and by email, letter, face-to-face and telephone. Records of consultations activities will be presented in Strike's annual environment report to DEMIRS.

6 Environmental Management

A summary of the potential environmental impacts that may result from the Project is provided in Table 6.1. It outlines the management and mitigation measures that form part of the implementation strategy to minimise environmental risk.

Table 6.1: Summary of Performance Objectives, Standards and Measurement Criteria

Aspect	Potential Impacts	Management Measures	
Soil and Landform	Compaction of dryland agricultural soils Damage to beds or landforms as a result of vehicle movements near crossings and/or sloped banks	Hierarchy of Controls	Measure
		Elimination	Surface water bodies and areas of riparian vegetation will be avoided to minimise the risk to existing features.
		Substitution	Balloon tyres utilised on agricultural land.
		Engineering	Controls will be put in place to ensure activities are restricted to designated areas/planned survey lines.
		Administration	All personnel involved in the Project will undertake training and induction to ensure awareness of potential risk associated with damage to beds and banks and measures to be undertaken to minimise the risk.
Regional Hydrology	Localised water impacts	See Unplanned Event (Loss of Containment)	
Flora and vegetation	Loss of conservation significant flora and/or ecological communities	Hierarchy of Controls	Measure
		Elimination	No clearing of native vegetation is required for the Project
		Isolation	50 m buffer in continuous vegetation around declared rare (threatened) flora species
		Engineering	Vehicle movement will be restricted to pre-existing cleared areas
		Administration	Site Induction covers flora/vegetation
Terrestrial Fauna	Injury or loss of native fauna (excluding conservation significant species) or livestock Injury or loss of conservation significant fauna species Modification of fauna behaviour	Hierarchy of Controls	Measure
		Elimination	Activities limited to daylight hours
			No clearing of native vegetation is required for the Project
		Engineering	Vehicle movement will be restricted to pre-existing cleared areas
		Administration	Site induction includes vehicle speed limits, staying on pre-existing cleared areas and the requirement for personnel to be alert for wildlife
Greenhouse Gas Emissions	Greenhouse Gas emissions resulting in significantly reduced air quality	Hierarchy of Controls	Measure
		Engineering	Vehicles and equipment regularly maintained
		Administration	Fuel usage records are maintained
Dust Emissions	Dust impacts reduce air quality	Hierarchy of Controls	Measure
		Engineering	Speed limits for vehicle traffic imposed across Project Area
		Administration	Induction of site personnel on vehicle speed limits
			Activities to stop where excess dust generation is noticed

Aspect	Potential Impacts	Management Measures	
Noise Emissions	Noise impacts native fauna Noise impacts on rural residences	Hierarchy of Controls	Measures
		Elimination	Activities limited to daylight hours
		Engineering	Maintenance of equipment and vehicles per manufacturer recommendations
		Administration	Consultation with landholders
Light Emissions	No Potential Impacts		
Weeds and Dieback	Introduction and/or spread of weeds and/or Dieback	Hierarchy of Controls	Measure
		Elimination	Project location not in Dieback area
		Engineering	Vehicles and equipment (including nodes) are to arrive on site in a clean state including sign off on a hygiene inspection
			Land access will be in in accordance with landholder access agreement
			Vehicles restricted to existing cleared areas
			Vehicles and equipment to clean down prior to seismic activities adjacent to UCL
		Administration	Personnel are required to complete the induction which outlines weed and dieback management
			Mobile clean down equipment will be available at all times during Project activities
Socio-economic	Negative stakeholder feedback Additional traffic impacting local road users Damage to infrastructure Disruption to socioeconomic value of landholder's activities	Hierarchy of Controls	Measure
		Elimination	Adhere to vibroseis vehicle's safe offset distances.
		Substitution	Activities limited to daylight hours.
			Diversion of lines to avoid damage occurring during the Project.
		Engineering	Personnel to drive to conditions and strictly adhere to speed limits.
			Vehicle movements to be restricted to existing cleared areas, roads, access tracks and firebreaks
			All avoidance areas (including known critical infrastructure) identified and demarcated via flagging and/or and uploaded to GPS navigation system of Project vehicles.
		Administration	All personnel (i.e., employees, contractors and subcontractors) will be instructed (via inductions) on landowner/stakeholder sensitivities of the surrounding area.
			All Project activities undertaken in accordance with the landowner access agreement.

Aspect	Potential Impacts	Management Measures	
			Where possible, local accommodation facilities will be utilised to reduce transport on public roads. Ongoing consultation, including notification of activity details to relevant stakeholders, throughout the life of the Project. Rehabilitation will be undertaken in consultation with relevant landholders and in accordance with terms and conditions of a Land Access Agreement for the relevant property. Reinstate infrastructure to pre-disturbance condition, or as otherwise agreed with relevant landholders. Restore disturbance on private land as soon as practical, but no later than twelve months or as agreed with landholders. Land Access Agreements are executed prior to entry to freehold land
Aboriginal Heritage	Loss of heritage value due to disturbance of heritage site	Hierarchy of Controls	Measure
		Elimination	Vehicle movements to occur on pre-existing cleared areas such as agriculture land, existing roads, tracks and firebreaks.
		Isolation	No vehicle movements within 50 m of surface water, except on existing tracks and roads.
		Engineering	Identified sites or avoidance areas to be loaded on GPS navigation instruments.
		Administration	Induction of site personnel to identify potential risk of encountering artefacts of heritage value and required actions and reporting if items identified. Induction of site personnel on Site Discovery Procedure. Consultation with Yamatji Southern Regional Corporation
Waste	Injury or death of native fauna and livestock due to inappropriate waste management practices (e.g., from ingestion) Contamination of soil, surface water or groundwater Nuisance/amenity impacts to local landowners	Hierarchy of Controls	Measure
		Engineering	Wastes to be segregated and stored in dedicated waste bins Cigarette butts placed in vehicle ash trays or in issued personal ash tray Domestic wastes (food/lunch waste, paper) and rubbish will be contained in vehicles and disposed of at the accommodation facility in dedicated waste bins or in consultation with relevant landowner Sewage waste retained in portable toilet tanks prior to removal by a licensed waste contractor Hazardous waste bins to be stored within a bunded area, which includes the use of pallet or drum bunds
		Administration	Inductions and awareness training to cover waste management Site inspections to ensure all equipment and wastes removed from Project Area

Aspect	Potential Impacts	Management Measures	
Unplanned Event (Fire)	Degradation of the broader area Injury or loss of native fauna and/or livestock Loss of conservation significant flora, ecological communities and fauna habitat	Hierarchy of Controls	Measure
		Elimination	No hot works are permitted to be undertaken in the Project Area
			No open fires permitted in the Project Area
		Isolation	Prior to machinery maintenance, the immediate area will be cleared of flammable materials
			Ignition sources will never be left unattended
			All vehicles will be parked within the cleared area, with no parking on areas of native vegetation
			Smoking is permitted in designated areas only
		Engineering	Maintain vehicles and equipment in accordance with service schedules to minimise risk of fire
			Firefighting equipment will be made available for use.
		Administration	ERP and emergency exercises (fire drills) in place
			Appropriate personnel will be trained in fire prevention and firefighting techniques
			Fire restrictions are observed and adhered to when required
			Refuelling in accordance with the Primary Contractor's Standard Operating Procedure
			Immediate notification of stakeholders in the event of an incidence of fire associated with Project activities.
			Inductions and awareness training to cover fire prevention and management.

Aspect	Potential Impacts	Management Measures	
Unplanned Event (Loss of Containment)	Contamination of soil, surface waters and/or groundwater.	Hierarchy of Controls	Measure
		Isolation	Stationary fuel tank to be located in laydown area at least 100 m from surface water areas
		Engineering	Vehicle movements to occur on pre-existing cleared areas such as agriculture land, existing roads, tracks and firebreaks.
			No vehicle movements within 50 m of surface water, except on existing tracks and roads.
			Use of a self-bunded stationary fuel tank and mobile refuelling truck.
			Refuelling to use appropriate equipment.
			Stationary bunded fuel tank to be located 100 m from UCL
		Administration	Vehicle refuelling conducted on site will not be conducted within 50 m of surface water, national parks, or nature reserves.
			All operational machinery, vehicles and equipment to be inspected prior to commencement.
			Daily check for all vehicles and equipment for evidence of oil/fuel leaks.
			Spill kits to be available at laydown, service vehicles and refuelling vehicles at all times.
			All spills to be recorded and immediately cleaned up in accordance with the OSCP and ERP.
			Inductions and awareness training, including OSCP.

7 Implementation Strategy

Strike has an overarching environmental responsibility for the management of the Project. Strike will undertake the Project with a commitment to reduce its impact on the environment. This commitment is fundamental to its Environmental Policy.

Strike has a number of systems, practices and procedures that relate to the implementation of the Environment Plan and enables activities to be managed to ALARP. Strike's Implementation strategy includes:

- Systems, practices and procedures for implementing this Environment Plan;
- Roles and responsibilities of personnel to ensure that the Environment Plan is implemented;
- Training and competencies required of personnel;
- Oil spill response plan;
- Monitoring, auditing and management of non-conformances;
- Record keeping;
- Reporting and notification arrangements; and
- Review of the Environment Plan.

Relevant systems and procedures include:

- HSE Management System;
- Emergency Response Plan;
- Oil Spill Contingency Plan (OSCP); and
- Incident Investigation and Reporting.

The implementation strategy detailed in the Environment Plan identifies the responsibilities/roles and competency/training requirements for all personnel (Strike and its contractor(s)) in relation to implementing management controls, monitoring, auditing, and reporting requirements during the Project. The Environment Plan details the types of monitoring and auditing that will be undertaken, the reporting requirements for environmental incidents and reporting on overall compliance of the Project.