

LOCKYER CONVENTIONAL GAS DEVELOPMENT

ENVIRONMENTAL IMPACT ASSESSMENT OVERVIEW

Introduction

The Lockyer Conventional Gas Development (**the Project**) is proposed to be developed by Mineral Resources Limited (MinRes), in the mid-west region of Western Australia, approximately 25 km east of Dongara. The Lockyer gas field was discovered by MinRes in October 2021 through the exploration drilling of Lockyer Deep-1 in Exploration Permit 368 (EP 368), shown in **Figure 1**.

Exploration drilling at North Erregulla Deep-1, adjacent to the Lockyer structure, resulted in the discovery of additional prospective conventional gas resources, which will be tied back to the Lockyer Gas Development.

MinRes continues to explore and appraise the gas reservoirs and are proposing to construct a 250 TJ/day gas processing facility. As this is a conventional gas development, no fracking is required.

This Briefing Note provides an overview of the environmental impact assessment approach being undertaken by MinRes to facilitate the Project. MinRes will refer the Project to the Environmental Protection Authority (EPA) under Part IV of the *Environmental Protection Act 1986*.

It should be noted that all environment risks are being assessed and managed via the Environmental Impact Assessment process as part of the Project Part IV submission to the Environmental Protection Authority. The Part IV environmental impact assessment for the Project will commence in early 2024.

Detailed environmental studies have been prepared by external consultants to assess all relevant EPA factors. A summary assessment table has been provided overleaf to give the reader an understanding of the possible environmental impacts of the Project against the relevant EPA environmental factors.

Proposal Overview

The Lockyer Conventional Gas Development is intended to be progressed via a fast-track project aimed at producing pipeline quality gas for MinRes' mining operations and gas markets in Q4 2025. The Project has the potential to contribute to mitigating a forecasted shortfall in the WA domestic gas market beyond 2026.

The Project area is located predominantly within Exploration Permit 368, with potential to expand activities in Exploration Permit 426. The Project will be located on land previously cleared of native vegetation currently used for broad acre farming activities.

The Project will consist of:

- Production wells – indicatively six conventional gas wells as part of the initial development, with successful exploration and appraisal wells completed to enable their use as future producers.
- An upstream gas gathering network connecting the wells to hubs via underground flowlines in a hub-and-spoke arrangement. Flow from the individual wells (via flowlines) will be aggregated at hubs prior to being directed into larger hub flowlines.
- A Central Processing Facility (CPF) to treat the raw gas to the specification required for export to the Dampier to Bunbury Natural Gas Pipeline (DBNGP), inclusive of all utilities to support the field operations.
- An underground gas export pipeline connecting the CPF to the DBNGP.
- A condensate stabilisation and offloading system to support road transport of liquid product for sale.
- On-site infrastructure to support the operations phase including power generation, warehouse and workshop, control, equipment and switch room infrastructure, offices and accommodation.

Near-site infrastructure will also be developed, secured, or upgraded to support the project execution and operations phases. This will include:

- Road access and railway crossing upgrades (between the primary access road and the CPF site).
- Utilities infrastructure including telecommunications, water bore and groundwater quality monitoring bores and a sewage system.
- Permanent operations camp (within the CPF land area).

Environmental Factors

The following table summarises the Project environmental impact assessment approach against the EPA environmental factors:

Study / Factors	Impact summary (subject to ongoing studies)
Marine Factors	Not applicable - on-shore development.
Flora and vegetation	Minimal clearing of native vegetation, no significant impact to local or regional biological diversity and ecological integrity. Detailed flora and vegetation surveys completed in 2022 and further surveys were completed in September and October 2023 to include the revised CPF location, with final report pending.
Landforms	Not applicable - no material change to landforms.
Subterranean fauna	Not applicable - Minimal excavations for pipelines (<1.5m deep), no dewatering, no pits or voids.
Terrestrial fauna	Fauna surveys were completed in 2022. The revised pipeline alignment and CPF location was surveyed in August 2023, with final report pending.
Terrestrial environmental quality	Not applicable - conventional gas project therefore no fracking. Negligible localised impacts managed through planning, engineering and management measures. Standard waste management practices included in project design and operations.
Inland waters	No dewatering required, minimal groundwater extraction for construction (~0.3 GL 18-24 month), operations (~0.025 GL pa). Groundwater extraction license(s) pending. Inland Waters Impact Assessment completed. No unacceptable risks to surface water. Erosion management during construction and ongoing monitoring during operations will be undertaken.
Air quality	Air quality modelling indicates predicted ground level concentrations for all pollutants are below corresponding ambient air quality criteria.
Greenhouse gas emissions	Significant investment and low reservoir gas CO ₂ concentrations indicate annual CO ₂ -e emissions for the 250TJ/day facility are well below 100,000 t/CO ₂ -e.
Social surroundings	Visual Impact Assessment indicates that visual impact is generally restricted to the flare tower and thermal oxidiser. The region (Shire of Irwin, Mingenew) has been subject to oil and gas exploration and development for ~60 years. Shire of Irwin and Shire of Mingenew supportive. Positive ongoing engagement with Yamatji Southern Regional Corporation. Environmental noise assessment indicates compliance with regulated noise limits at all sensitive receptors.
Human health	Not applicable – no radiation emissions

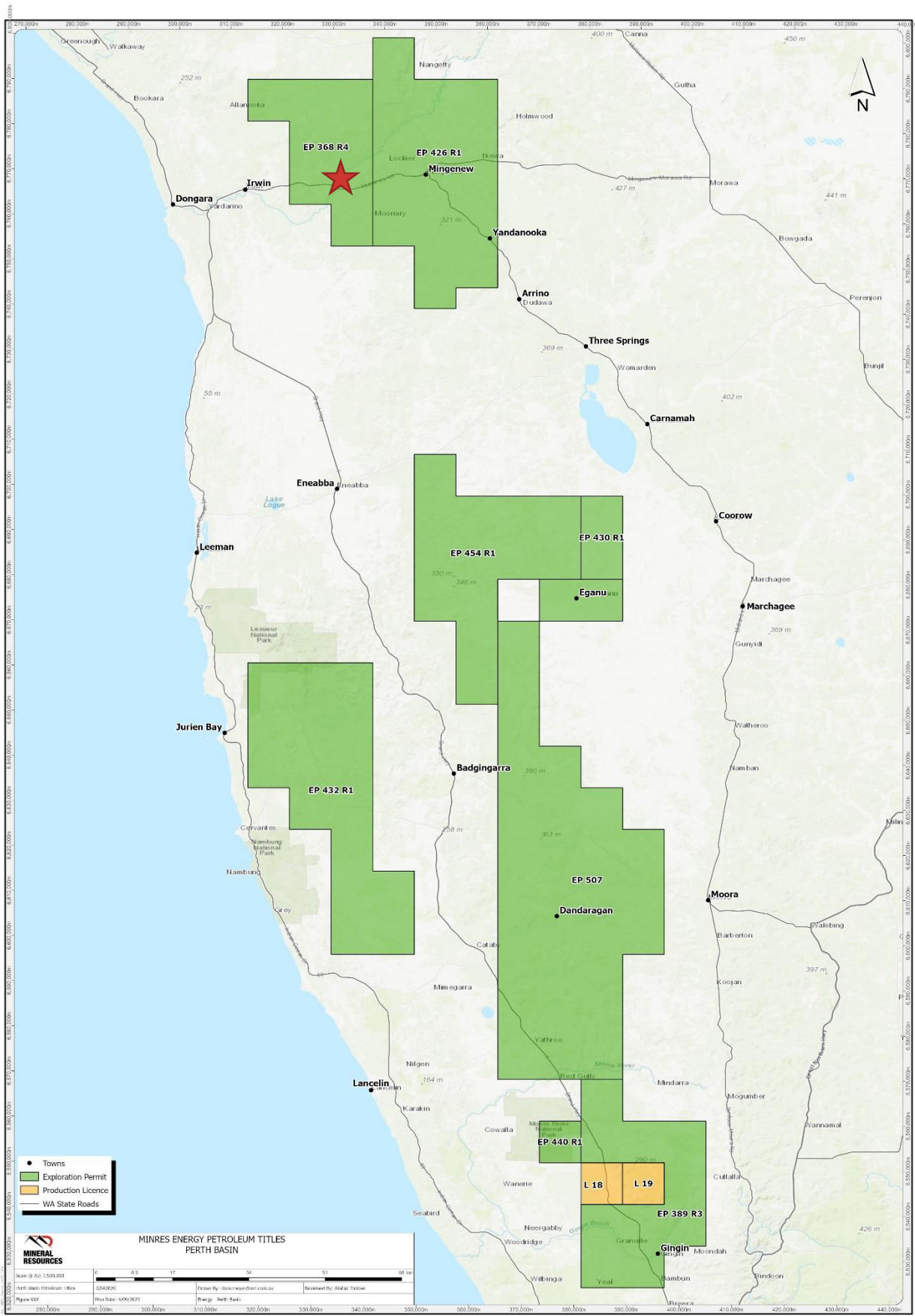


Figure 1: Perth Basin Exploration Permits and Production Licences