

**Information to support Development Application
for a licence to extract gravel
from 148 Whim Landing Road, Manjimup**

Background

R & EB (Remo and Eileen) Pessotto wish to obtain a licence from the Shire of Manjimup to allow them to extract gravel from their property at 148 Whim Landing Road, Wilgarrup.

The Pessottos are aware of the increased demand for gravel for construction, maintenance and upgrading of roads within the district. This demand is from both State and local government agencies and private businesses.

The areas on the property from which gravel would be extracted is already cleared and used for cropping. No clearing of remnant native vegetation is involved.

After removal of gravel, topsoil would be returned, batters smoothed and cropping would resume.

Property Details (over-view of property with Lot details)

The property is located at 148 Whim Landing Road, approximately 15 km north-east of Manjimup, off Mersey Road.

Plan A is an aerial view of the property showing the two separate areas subject to this application for a licence to extract gravel. Area A is approximately 11.5 hectares in size. Area B is approximately 17 hectares, making a total of approximately 28.5 hectares.

The proposed gravel extraction area straddles three different Lots on the property, namely:

Area A: Lot 2340 on Deposited Plan 125356, Wilgarrup and Lot 2732 on Deposited Plan 129243, Wilgarrup.

Area B: Lot 2340 on Deposited Plan 125356, Wilgarrup and Lot 2339 on Deposited Plan 129244, Wilgarrup.

The property is farmed for sheep and crops. Soils are generally gravelly loams overlying clays, with laterite floaters prevalent. The depth or thickness of gravel on the proposed extraction areas is relatively small, ranging from approximately 1m to approximately 1.5m. Extraction of gravel as proposed will therefore not result in deep pits. After return of topsoil, battering of banks and return of the areas to cropping, the land from which gravel was extracted would be virtually indistinguishable from the surrounding cleared areas on the property.

Scaled site plan

Plan A is a scaled plan showing the two proposed gravel extraction areas which total approximately 28.5 hectares.

Key points are:

- At an average gravel depth or thickness of 1.25m, the volume of gravel which would be extracted is up to approximately 360,000 m³.
- The proposed gravel extraction areas are no closer than 100m from the property boundaries. Plan A shows that the setback for Area A is 100m from the western boundary of the property. It also shows that Area B is 130m from the eastern boundary and 200m from the northern boundary.
- There are no sensitive land uses within 1000m of the property.
- Access to the property, and the proposed gravel extraction areas, is via Whim Landing Road, a short distance unnamed gravel road through State-forest from Whim Landing Road to the northern boundary of the property, then internal property roads. The unnamed gravel road and the internal property roads to be used for gravel cartage are shown on Plan A.
- Plan A shows existing vegetation on the property, a major dam and a water course. The proposed gravel extraction areas do not impinge on these features, with a minimum setback distance from patches of remnant native vegetation of 10 metres.
- Topsoil will be stockpiled within the proposed gravel extraction areas then returned from whence it came as gravel extraction progresses over time.
- Gravel itself will be crushed and stockpiled within the proposed gravel extraction areas. The height of any stockpiled gravel would not exceed approximately 6 m.
- There is no intention to use pasture/cropping areas outside the proposed gravel extraction areas for stockpiling either topsoil or gravel.
- There is no intention to use any buildings or structures which do not already exist on the property.

Extraction plan

The material intended to be extracted is commonly known as “gravel” which, in Western Australia, is mostly derived from lateritic conglomerate. The gravel may be loose, in which case it can be extracted and loaded out without any further preparation. If not, it requires some crushing to produce a material of a consistency required for roadworks. A lot of the material on the property will require crushing.

The plan for extraction and rehabilitation is detailed as follows:

- The basic method of extraction on this property will involve scraping of topsoil into piles with a dozer, then pushing of the gravel material with a dozer, then crushing and screening as necessary. Loading of gravel onto trucks will be carried out with standard bucket loaders (eg Cat 966 or equivalent). This method of gravel extraction, preparation and loading out is standard operating procedure for gravel operations.
- The proposed gravel extraction operation, including cartage from the property, is intended to take place from Monday to Friday, between the hours of 8.30am and 4pm during the summer months (November to April) and between 9am and 4pm between May and October, again from Monday to Friday. Operations on Saturdays will only occur if production urgency dictates.

- Maintenance of machinery will take place as necessary in the Pessotto's workshop on the property. Fuel storage will be confined to normal tanks on the back of operators' vehicles or a trailer-mounted fuel tank on site.
- The gravel extraction operation is expected to have a life of approximately six years ending 31 December 2029. As mentioned above, rehabilitation will occur progressively during the life span of the operation, with all rehabilitation completed within 12 months of the end of the extraction phase.
- Trucks used to cart the gravel from the property will be standard road trains capable of carrying a payload of approximately 50 tonnes of product. It is anticipated that two or three trucks will be involved in cartage.
- The haulage route from the pits will be via in-property roads as shown on Plan A (see also Fig 1) then the short unnamed gravel road through State-forest to the north, joining Whim Landing Road. From there trucks would join Mersey Road and thence to the Southwest Highway. Ultimate destinations for the gravel could be anywhere within the southwest within a radius of approximately 100km.
- Truck warning signs would be placed at the junction of the unnamed forest track and Whim Landing Road, at the junction of Whim Landing Road and Mersey Road, and near the junction of Mersey Road and the Southwest Highway...see Figs 2 and 3. In addition, a 40 km speed limit would apply on the unnamed forest road and on Whim Landing Road. A two-way radio check system would also be used by truck drivers.
- It is anticipated that up to approximately 12 truck movements per day may occur to and from the property, depending on the haul distances to ultimate destinations.
- Dust suppression as necessary on the unnamed forest road, Whim Landing Road, and Mersey Road, would be carried out using water trucks.

Drainage management plan

Surface water: Plan B appended outlines the two proposed extraction areas on a contour base plan. The contour lines on this plan are at 5m intervals.

Both areas are gently undulating, with a fall from the southern edge of Area A to its northern edge of approximately 10m over a distance of approximately 300m (ie 1 in 30 slope). Area B shows a fall of approximately 5m to the north and west over a distance of between 200 and 800m (ie slopes between 1 in 40 and 1 in 160).

The proponent is cognisant of the guidelines for Water management contained in the Department of Water and Environmental Management (DWER) publication: "Water quality protection note number 15", July 2019, applicable to basic raw materials extraction. Pages 8 to 11 inclusive in this publication cover "Operations and management".

These guidelines define "gently sloping" as land with slopes between 1 in 20 and 1 in 50. The proposed extraction areas fall well within this definition of "gently sloping" land.

During normal rainfall events, water infiltrates into the gravelly soils on the property, with some runoff only occurring during very heavy rainfall events.

Once gravel extraction operations commence, all water falling inside the pits will be fully retained inside the pits. This will be assured by the construction of water detention ponds at the lower ends of the two areas proposed. Thus, a runoff collection pond would be constructed along the northern end of Area A, and along the western and northern ends of Area B.

Using the DWER guidelines, the capacity of water detention ponds will be 8,000m³ for Area A and 14,000m³ for Area B.

Temporary contour bunds will be constructed to slow water flows inside the pits, and to ensure runoff is directed to the water detention ponds.

Plan C shows the location of planned water detention ponds and temporary contour bunds or banks within the two proposed pits.

Close monitoring of the above in-pit water management measures will be undertaken throughout the life of the project, with swift action taken if/when necessary to ensure no breaches occur.

Because the proposed extraction areas are high in the landscape, runoff from land “above” the two proposed sites is likely to be negligible or non-existent.

Ground water: The water table on the proposed gravel extraction areas is currently at an average of approximately 10m below the ground and will not be used or affected by the proposed gravel extraction operation. Any water for dust control will be sourced from the existing farm dam.

No groundwater contamination is anticipated. Storage of fuels and oils and any machinery maintenance will be carried out inside the farm machinery workshop.

Site rehabilitation plan

Rehabilitation of pits will involve ripping of the pit floor as necessary, battering of banks (ie edges of the pits) and return and spreading of topsoil evenly over the surface of the used pits.

As explained above, rehabilitation would be carried out progressively during the anticipated six-year life of the pits, with ripping/battering/topsoil spreading occurring every autumn.

It is not expected that any recontouring of the pits would be necessary, given the shallow nature of the gravel resource. In other words, the original contours of the land would be retained.

After rehabilitation earthworks are completed each autumn, the sites will be returned to pasture and/or crops.



Fig 1: View from main property access road looking southwest towards Area A at top of slope. Homestead is at left of picture. Truck access to Area A would join main property access road at this point. Note gently undulating nature of the land.

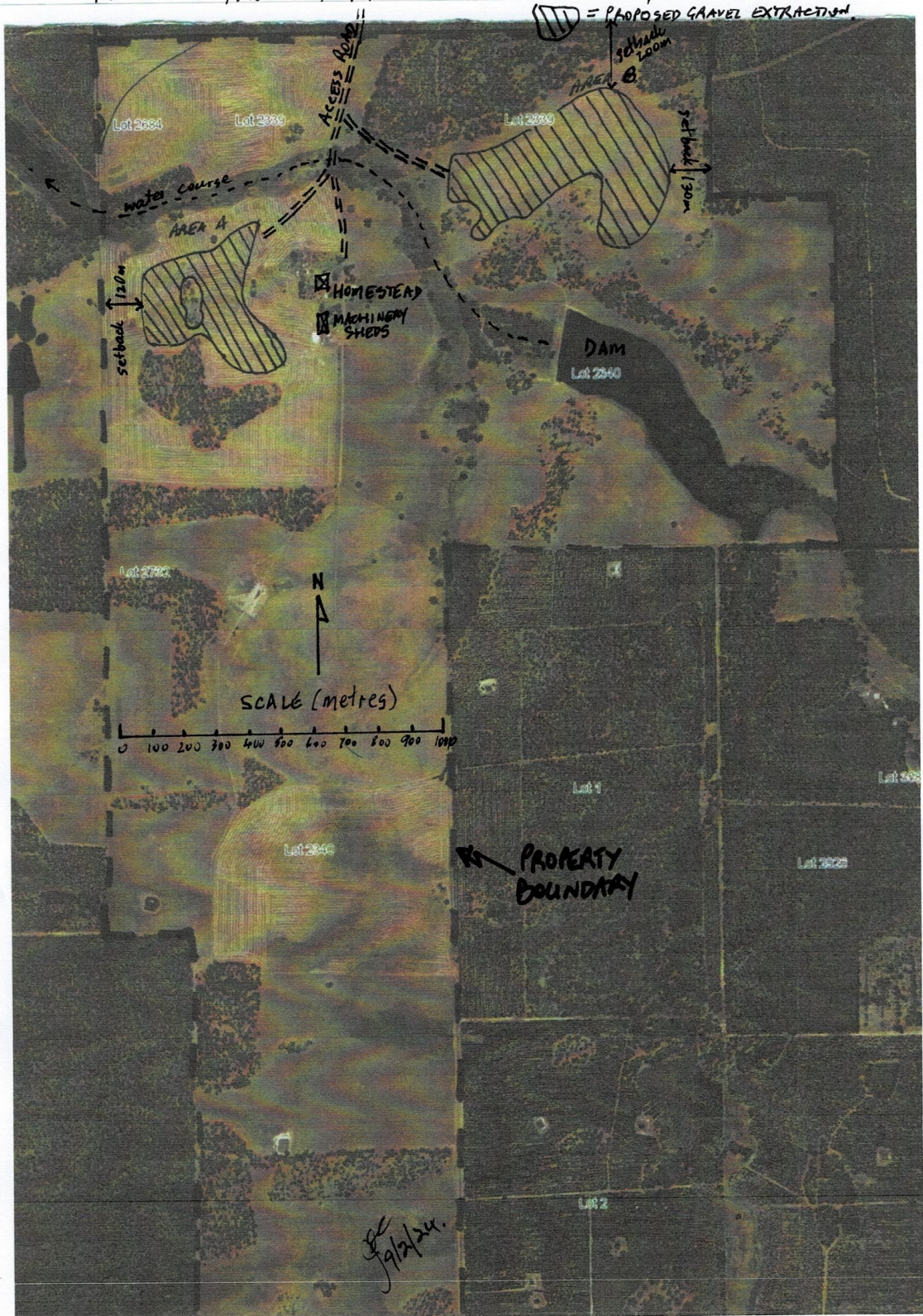


Fig 2. Junction of unnamed forest road to property (right fork) and Whim Landing Road (left fork). Truck warning signs required here.



Fig 3. Junction of Mersey Road (left fork) and Whim Landing Road (right fork). Truck warning signs required here.

PLAN A: PROPOSED GRAVEL EXTRACTION AREA, 148 WHIM LANDING RD.



PLAN B: PROPOSED GRAVEL EXTRACTION AREAS, 148 WHIM LANDING RD WITH SURFACE CONTOURS SHOWN.



Plan C: Proposed gravel extraction areas showing proposed water retention ponds and temporary contour bunds (banks) at 148 Whim Landing Road.

