

6. EXTRACTION PROCESS

EXTRACTION METHOD

The resource is to be extracted in small sections across the excavation area starting from western corner of the excavation site. As this is not a primary resource site for the company, excavation at the site will occur on an intermittent and as required basis.

Excavation of each cell will involve the topsoil and overburden being removed by loader (approximately 1m in depth) and stored in in dumps and bunds at the locations indicated on the proposed site plan or at the edge of the current cell being excavated. The storage areas have been chosen to be provided for along the front of the excavation site to assist in providing visual screening and noise suppression from Hampton Road and adjoining properties.

The resource will be removed with a loader and loaded directly onto a truck for transportation to the required work site. Stockpiles of the resource are unlikely to be retained on site, but if required will be located on the floor of the pit or within the areas indicated as 'Excavated Material Storage' on the proposed site plan. No processing of the resource is proposed onsite.

At the end of excavation, the floor of the quarry will be deep ripped, covered by a layer of overburden and top soil, and stabilised with either the previously removed vegetation or should the landowner wish will be seeded with pasture species.

To break up larger piece of rock the company uses a drill and expanding gel which creates cracks in the rock which can then be pulled apart by an excavator. The company also utilises a rock breaker attached to an excavator for further assistance should it be required.

DEPTH OF EXTRACTIONS

The contour information contained within the proposed site plan for this proposal demonstrates that the land rises from a 42m AHD at the south-western extent to a 58m AHD at the north eastern extent of the excavation area.

It is anticipated that there will be a 1m depth of overburden removed and stored before the excavation of the resource to a maximum depth of 8m with no excavation below 47AHD.

The 1m of overburden that is removed will be replaced during the rehabilitation of each cell and contoured to a slope of 1:2 to suit the gentle undulation of the land within this area. It is anticipated that the deeper excavations would occur between the 50-57AHD contours where the slope is greater which would cause the final rehabilitated slope to be of a more consistent incline across the entire excavation area.

EQUIPMENT

Excavation will include the use of a loader and/or excavator which will be loaded straight into a trailer/truck for transport to site.



With such intermittent operation at the site the use of a water tanker may not be necessary, however the applicant has proposed the siting of two water tanks for dust suppression and emergency fire supply to ensure that a readily available water supply is available onsite. A water tanker would be used where dust becomes an operational issue.

No processing equipment is required as there will be no onsite processing and all vehicles will be stored and maintained off site.

No fuel is to be stored onsite and will be transported to the site when required.

A site office is also not required; however, should the site be used for a larger tonnage contract (up to 1-2 weeks at a time) a serviced portable toilet would be arranged to be located onsite for that time adjacent to the water tanks.

WORKFORCE

The number of workers onsite will vary depending on the size of the contract and the tonnage or material required. For a small tonnage contract 2 workers would be sufficient and on larger tonnage contracts up to 8 workers. When the site is not in use there would be no staff presence.

HOURS OF OPERATION

It is proposed that on the intermittent occasions that the site would be in operation that all work would be carried out between 7:00am and 5:00pm Monday to Saturday with no operations on a Sunday or Public Holiday.

STAGING & TIMING

With the intermittent nature of the use of the site it is suggested that the excavation area would have a lifespan of 20 years and beyond.

The resource would only be required irregularly and activity at the site would heavily depend on the amount of contracted work that would require limestone and sand. A small contract would see the site used for a 1-2 days at a time and a larger contract up to 2 weeks. These periods would be interspaced with periods that the site would be completely unattended with no equipment or resources stored onsite and no ongoing operations taking place. It is estimated that the site may be used from up to 80 days a year.

Excavation will commence in the western corner of the property and spread east as the resource is removed in sections as each contract requires. This will enable a coordinated extraction that will slowly spread across the site and will enable rehabilitation to occur to each section

It is anticipated that with the necessary approvals in place that excavation would commence in 2016.



TRANSPORT

Material will be transported from the site using either a 12 tonne 6 wheeler truck or a 25 tonne capacity truck and trailer. During a low tonnage contract it is anticipated that there would be approximately 2 truck movements per day and on a high tonnage contract up to 2 truck movements per hour (20 per day). On average there would be less than 1 vehicle movement per day for the year.

The trucks will enter and exit the property using a 6m wide access road that runs along the western boundary of the property. There is a clear line of sight for over 500m in each direction from the proposed access road onto Hampton Road ensuring safe entry and exit to the property can be achieved. Hampton Road is also a no through road so traffic volumes will be low generally. When travelling along Hampton Road the trucks will be limited to a 40km/hour speed limit to protect the gravel road surface and minimise dust emissions.

The transport vehicles will travel (830m) west along Hampton Road and turn south along Jandanol Road to connect to the Brand Highway to then travel to the work site. There is an existing fishtail from Jandanol Road onto Hampton Road to protect the bitumen road surface of Jandanol Road as traffic moves from the gravel road surface of Hampton Road onto bitumen. There are also clear lines of sight for traffic turning from Jandanol Road onto the Brand Highway.

Figure 8 – Proposed transport route from excavation site to Brand Highway



Based on the low volumes of traffic and the very intermittent use of the site upgrade of Hampton Road is not considered necessary and that the reduced speed of the trucks carting the excavated material will ensure that any impact on the road surface is minimised. Agricultural machinery, trucks and transport vehicles accessing the extractive industry adjoining this property have been utilising this road network for many years and therefore the minimal increase in traffic movements that this

operation would contribute is considered unlikely to make an impact on the frequency of maintenance required for the 1.4km long gravel road.

Figure 9 – View of fishtail from Hampton Road onto Jandanol Road

