MANAGEMENT PLAN

PROPOSED EXTRACTIVE INDUSTRY
(LIMESTONE AND SAND)

LOT 2383 HAMPTON ROAD
RUDDS GULLY

DOCUMENT CONTROL

Version Number	Prepared	Checked	Issued for release
Version 1	KJ – 7.9.2016	JB – 10.9.2016	-
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Attachment 1 – Development Plans
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1. THE PROPOSAL

This application proposes the establishment of an Extractive Industry (limestone and sand quarry) at Lot 2382 Hampton Road, Rudds Gully.

The applicant, Quadrio Earthmoving, seeks the establishment of a limestone quarry that would be operated intermittently over a period of 20 years. This report seeks to address the potential impacts of the development and outline the company's management of the site and proposed rehabilitation of the land.

The quarry will be maintained securely and will be operated in a manner that will minimise any potential impacts on surrounding land and land uses. It is considered that the location of the quarry is in keeping with the zoning and is compatible with surrounding land uses.

The application meets the requirements of the City's Local Planning Scheme, Strategy and Extractive Industry Local Planning Policy. Assessment of the application against relevant state legislation has confirmed that the proposed operation and siting of the extractive industry complies with these requirements also.

A copy of the development plans for this proposal has been included as **Attachment 1** to this report.

2. LOCATION & EXISTING DEVELOPMENT

Lot	2383
Street	Hampton Road
Locality	Rudds Gully
Certificate of Title / Plan	1468-787 / 248483
Proprietor(s)	Anthony & Fiona Gimenez

Figure 1 - Location Plan

Lot 2383 Hampton Road, Rudds Gully is 14km from the Geraldton City Centre and is located at the western extent of the rural zone which is predominately used for rural living and broad acre agricultural pursuits. The property is surrounded by 'Rural' zoned land on all sides with a previously established Extractive Industry (extraction of limestone) located on the lot adjoining to the east which has been in operation for over 25 years. There is an estate of rural-residential lots approximately 850m to the north east of the property.

Table 1 – Surrounding Development

DIRECTION	IMMEDIATELY ADJOINING	FURTHER
North-East	'Rural' zoned lots	'Rural' zoned lots
North- West	'Rural' zoned lot	'Rural Residential' zoned lots
South-East	'Rural' zoned lot with an existing extractive industry	'Rural' zoned lots
South-West	Hampton Road	'Rural' zoned lots

There is an unconstructed road reserve that runs through Lot 2383. This road reserve has not been used historically and there are no known plans to formalise this road for public access. It is not considered that this development will be influenced by the presence of this reserve.

The property is currently used as a hobby farm with the land containing cattle and paddocks for growing pasture along with a small dirt track for children riding motorcycles. A dwelling and outbuilding have been constructed at the front of the property which is approximately 450m from the proposed excavation area.

Towards the rear of the property there is a section of remnant vegetation which is located over a source of limestone that sits just below the surface of the ground. This area at present is unusable for agricultural purposes. Through removing the limestone located on the sloped area of the land and rehabilitating the land by replacing the stored topsoil/overburden this will enable the land to be used for other purposes in the future should this be pursued by the landowners.

Figure 2 – View from excavation area looking south towards Hampton Road along proposed access way

Figure 3 – View north from Hampton Road looking down proposed access way alignment for proposed quarry

3. LAND TENURE

The property is owned by Anthony & Fiona Gimenez who have entered into an agreement with Quadrio Earthmoving to excavate limestone from the site for a period of up to 20 years.

Quadrio Earthmoving Pty Ltd is a Geraldton based privately owned Earthmoving Company that preforms mining, civil and haulage services across Western Australia. Specialising in remote site works the company is self-sufficient in completing these works, from the use of portable camps, messing, ablution and refuelling facilities to its customised equipment, this has led to clearing and rehabilitating over 5000 drill pads and 1500 km of access tracks in the Pilbara region within the last 4 years.

As one of the most efficient exploration and rehabilitation contractors on the market, they are not limited to just that scope of work. Quadrio Earthmoving have also excelled in projects such as roads works, road construction, tailings storage facility lifts, tailings storage facility rehabilitation, crushing, screening, breaker car module haulage, road haulage, gravel stockpiling, waste dump rehabilitation, mining, environmental clearing, fire prevention clearing, machine hire, mechanical contracting, civil earthworks and emergency fire clearing.

Quadrio Earthmoving will be responsible for undertaking any subsequent approvals required under legislation and to meet the conditions of approval applied by the City of Greater Geraldton through the planning process.

Contact details for this proposal and any ongoing queries as to quarry operations:

4. PLANNING CONSIDERATIONS

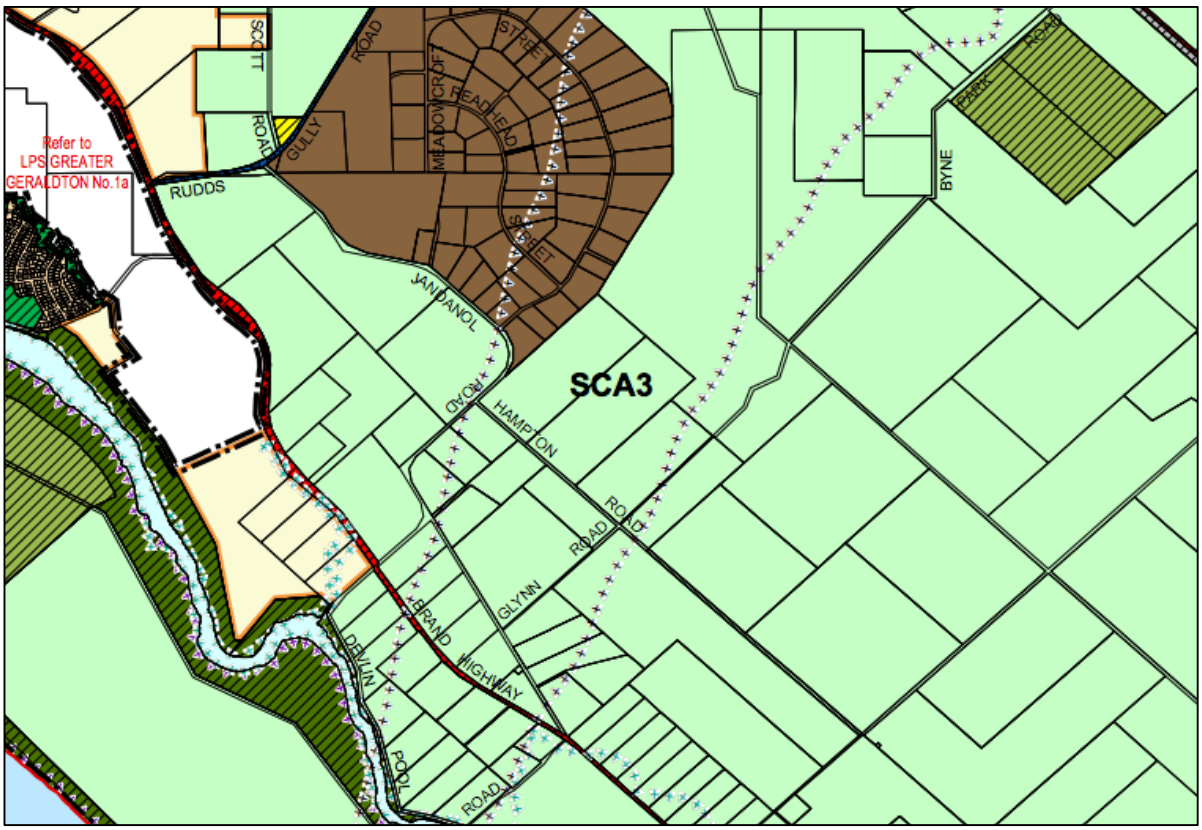
Extractive industries are a form of mining specific to the removal of basic raw materials. The Mining Act 1978 (Mining Act) includes extractive industries under the general definition of 'mining operations'. Importantly, the Act makes the differentiation between private, or freehold, land and Crown land, stating that basic raw materials on Crown land will be subject to the Mining Act, with freehold land subject to the Planning and Development Act 2005 (P & D Act). This is because under the Mining Act, basic raw materials are not considered minerals if they are on private land (to 30 metres in depth).

As this proposal is for the establishment of an extractive industry upon private land the approval of local government is required subject to its statutory and strategic documentation, local laws and the Department of Planning's state planning policies.

4.1 CITY OF GREATER GERALDTON LOCAL PLANNING SCHEME NO.1

The property is zoned 'Rural' and is within 'Special Control Area 3-Geraldton Airport' under City of Greater Geraldton Local Planning Scheme No.1 (the 'Scheme'). The land use of 'Industry- Extractive' is considered a 'D' land use under the Scheme meaning that the use is not permitted unless the local government has exercised its discretion by granting development approval.

Figure 4 – Extract of Scheme Map No.7 of Local Planning Scheme No.1



The Scheme states that the objective of the 'Rural' zone is to:

> *"(a) provide for the maintenance or enhancement of specific local character.*

(b) protect broadacre agricultural activities, such as cropping and grazing, and intensive uses, such as horticulture, from incompatible uses and minimise land use conflicts.
(c) provide for a range of non-rural land uses where they have demonstrated benefit and are compatible with the surrounding rural uses.
(d) protect and provide for existing or planned key infrastructure, public utilities and renewable energy facilities."

In considering applications upon 'Rural' zoned land the Scheme states:

"(a) the Department of Agriculture and Food's studies into identification of high quality agricultural land, to protect the economic and agricultural viability of this land.
(b) the need to protect the economic viability of the rural land use generally.
(c) the need to preserve the rural character and a rural appearance of the area.
(d) the need to ensure that the existing standard of roads, water and electricity supply and other services is sufficient for the additional demands that the proposed development would create.
(e) the need to consider the existence of basic raw materials, mineral resources and the impact of the proposal on existing and potential extractive industry operations in the area."

The proposed limestone quarry will provide a basic raw material to the Geraldton Region, being sited in a location that is compatible with surrounding land uses. The proposal will be upon a part of Lot 2383 which cannot currently be used by the owner, and this extractive industry will provide an opportunity for the limestone to be removed and rehabilitated without taking away valuable agricultural land or conflicting with other land uses on the site or surrounding.

The land use of 'Industry – Extractive' is considered suitable to coincide with rural pursuits given the land is being used for farming or in the case of the lot to the east being used for extractive industry also. The large lot sizes in the area gives large distances between lots and built development with the closest dwellings being 850m to the north-west of the lot.

Schedule 6 of the Scheme states the following purpose and objectives for 'Special Control Area 3 – Geraldton Airport (SCA3)':

"The Geraldton airport is an essential component of regional transport infrastructure and an integral part of the State aviation infrastructure network.
Objectives are therefore to:
(a) protect against developments that are incompatible with continuing airport operations.
(b) control noise sensitive development that has the potential to impact on the capacity of the airport."

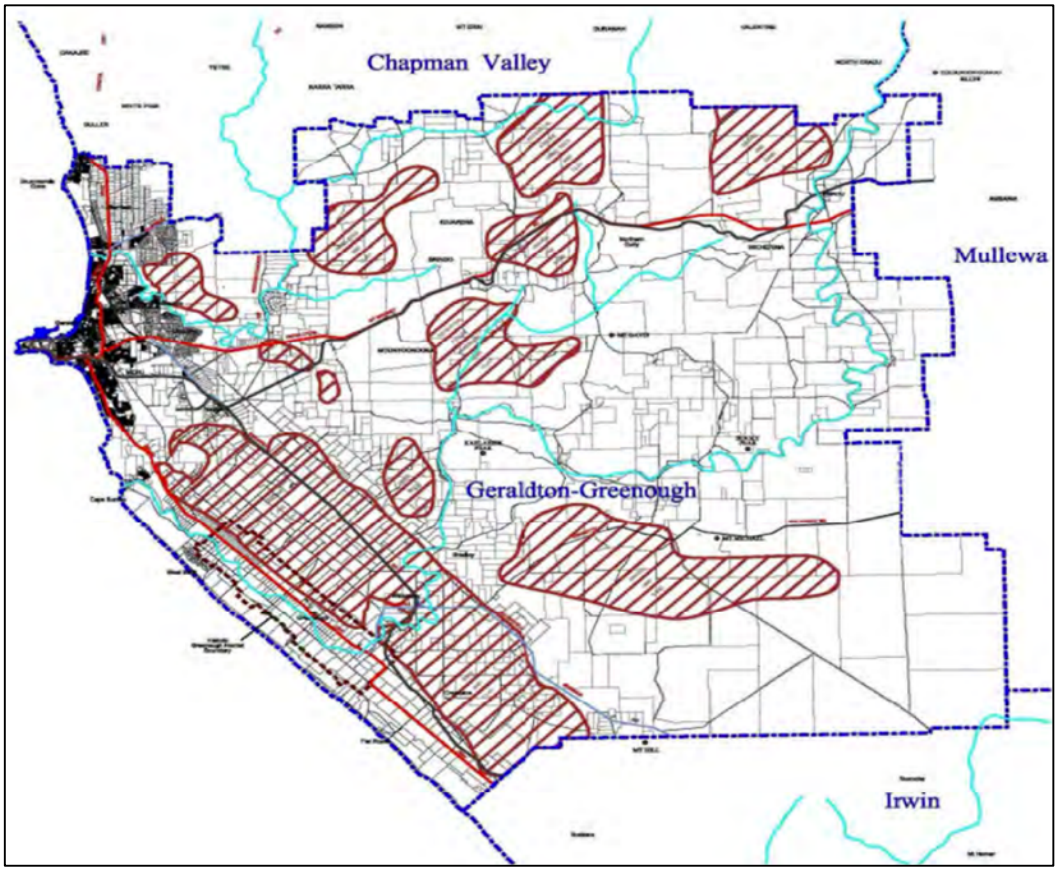
The Scheme map designates SCA3 but also provides the specific obstacle height limitation within the City of Greater Geraldton Local Planning Strategy. Lot 2383 is within the 177.7m obstacle height limit and therefore this application is compliant with the requirements of SCA3.

4.2 CITY OF GREATER GERALDTON LOCAL PLANNING STRATEGY

The 'Regional Townsites - Central Greenough & Walkaway Strategy Plan' designates Lot 2383 as 'Higher Versatility Agricultural Land' and located within the obstacle height limitation of 177.7m.

Section 18 of the Local Profile and Context Report outlines the City's aims to protect the extraction of basic raw materials. Figures 19 & 20 demonstrates that the property is within a Priority Resource Area.

Figure 5 - Priority resource areas in the Geraldton – Greenough area. Source: City of Greater Geraldton Local Rural Strategy (CGG, 2008, Figure 19)



Section 3.8 of the Strategy states:

> *"The Strategy has a desire to protect higher versatility agricultural land from incompatible development (predominately urban or rural living encroachment). It is also important to protect basic raw materials and other minerals to ensure their availability for extraction, with land being rehabilitated after. The basic raw materials within the City are largely within the rural area which generally minimises potential conflict with adjacent development…*
>
> *The identification of the Higher Versatility Agricultural Land on the Rural Land Strategy Plan reinforces the significance of the land to the agricultural sector, where the challenge is how to set aside the most productive and versatile areas of agricultural land for long-term food security to meet the needs of projected global, national and state population*

growth. Climate change, shrinking water resources, increasing urban growth and projected population increases are all competing factors (DAFWA 2013)."

Section 7 of the Strategy lists the following Strategies and Actions in support of the Extractive Industry land use proposal:

"Strategies:

1. *Protect rural land from incompatible land uses and protect high quality agricultural land.*
5. *Ensure basic raw materials are protected to enable future extraction.*

Actions:

3. *Allow for incidental and compatible land uses in the Rural zone.*
7. *Include provisions relating to the permissibility for extraction of basic raw materials and to minimise the potential for future land use conflicts."*

The proposed extractive industry is located within an area where there is an aim to protect high quality agricultural land, however in this instance the portion of Lot 2383 that is proposed for the excavation site cannot be used for agricultural cropping or the keeping of stock. This is due to the slope of the land, the low quality existing remnant vegetation and the amount of limestone under the topsoil and large rocks scattered over the surface of the land. These factors contribute to the land being unusable for agricultural purposes.

This application will essentially remove the limestone and cause the site to be rehabilitated which will produce additional usable agricultural land and supports the Local Planning Strategies aims and actions in providing basic raw materials locally to the Geraldton Region in suitable locations.

4.3 LOCAL PLANNING POLICY – EXTRACTIVE INDUSTRY

The application is considered to meet with the requirements of the Extractive Industry Local Planning Policy with the required information contained within this report and proposed plans. The application is not seeking any variation to the requirements of the Policy.

Objective 2c of the Policy states:

"To ensure extractive industry occurs with minimal detriment to the local amenity and environment, and in a manner which allows for future use and development consistent with long-term planning intentions for the area."

As the site is to be used intermittently and within the hours of operation supported by the local planning policy it is considered that the application would not cause detrimental impacts on the locality. In addition, on assessment of the City's Local Planning Scheme and Strategy it can be confirmed that the proposal does not impact on any future development intentions for the area and is compatible with the aims of the 'Rural' zone to provide opportunity for the extraction of basic raw materials. The application provides an opportunity to not only source basic raw material but also in the rehabilitation of the land, increase the lots arable and usable land for agricultural pursuits.

4.4 STATE PLANNING POLICIES

SPP 2.4 – Basic Raw Materials Policy

This SPP Policy acknowledges that a readily available supply of basic raw materials close at hand in the region is essential in keeping down the cost of procuring required materials.

Although the policy only relates to the metropolitan region, the general intent is relevant to the Geraldton region as it experiences growth and an increased demand for raw materials in an economic climate where cost effective delivery of infrastructure is an important consideration.

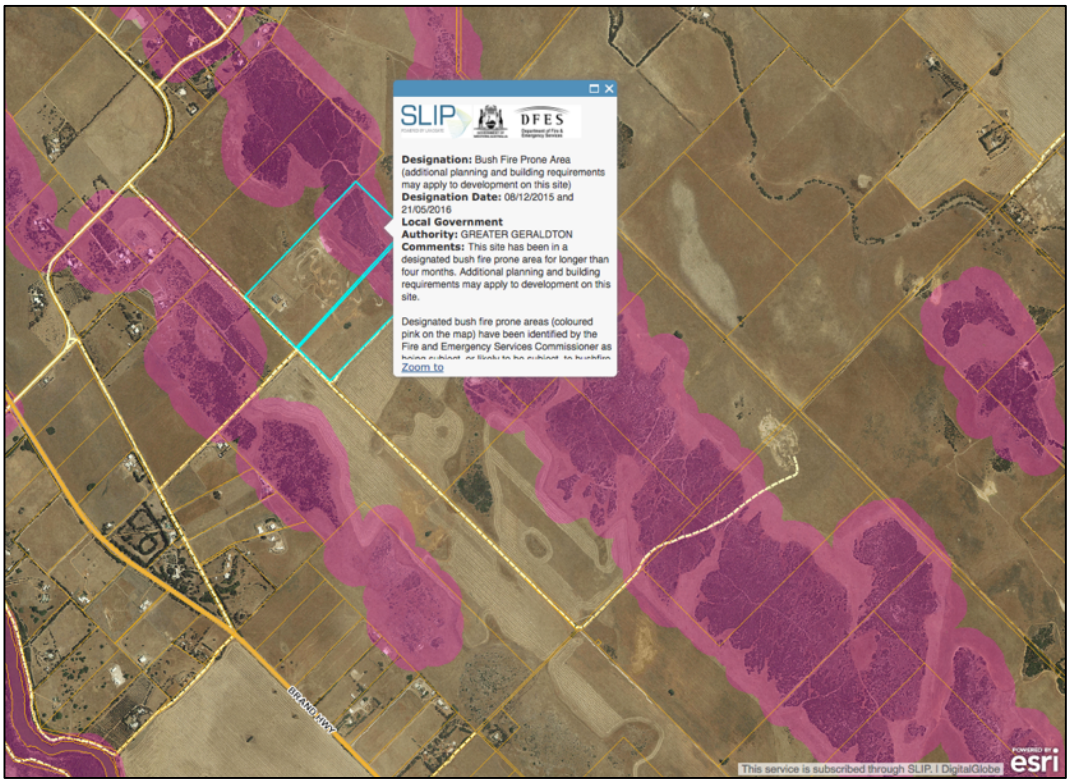
SPP 3.7 – Planning in Bushfire Prone Areas

The requirements for Bush Fire Prone Areas is legislated through the *Planning and Development (Local Planning Schemes) Amendment Regulations 2015* with further guidance provided through SPP 3.7 Planning in Bushfire Prone Areas.

Lot 2383 Hampton Road is located within a designated Bush Fire Prone Area.

Included as **Attachment 2** to this report is a copy of the Bushfire Management Plan for this proposal.

Figure 6 – Extract from the Bush Fire Prone Area mapping



SPP 4.1 – State Industrial Buffer Policy

Extractive industries have the potential to generate a range of emissions including noise and dust as well as risk levels which may not be compatible with other land uses. As a result, the excavation area

is required to be separated from residential areas and other sensitive land uses to ensure that amenity (environmental quality, health and safety standards) are maintained.

The State Industrial Buffer Policy establishes the requirement for determining an appropriate buffer area to both protect the proposed industry, but also to protect surrounding land and sensitive land uses. This Policy recommends the use of the Environmental Protection Authority (EPA) Guidance Statement "Separation Distances between Industrial and Sensitive Land Uses" to determine appropriate separation distances between extractive industry and sensitive land uses.

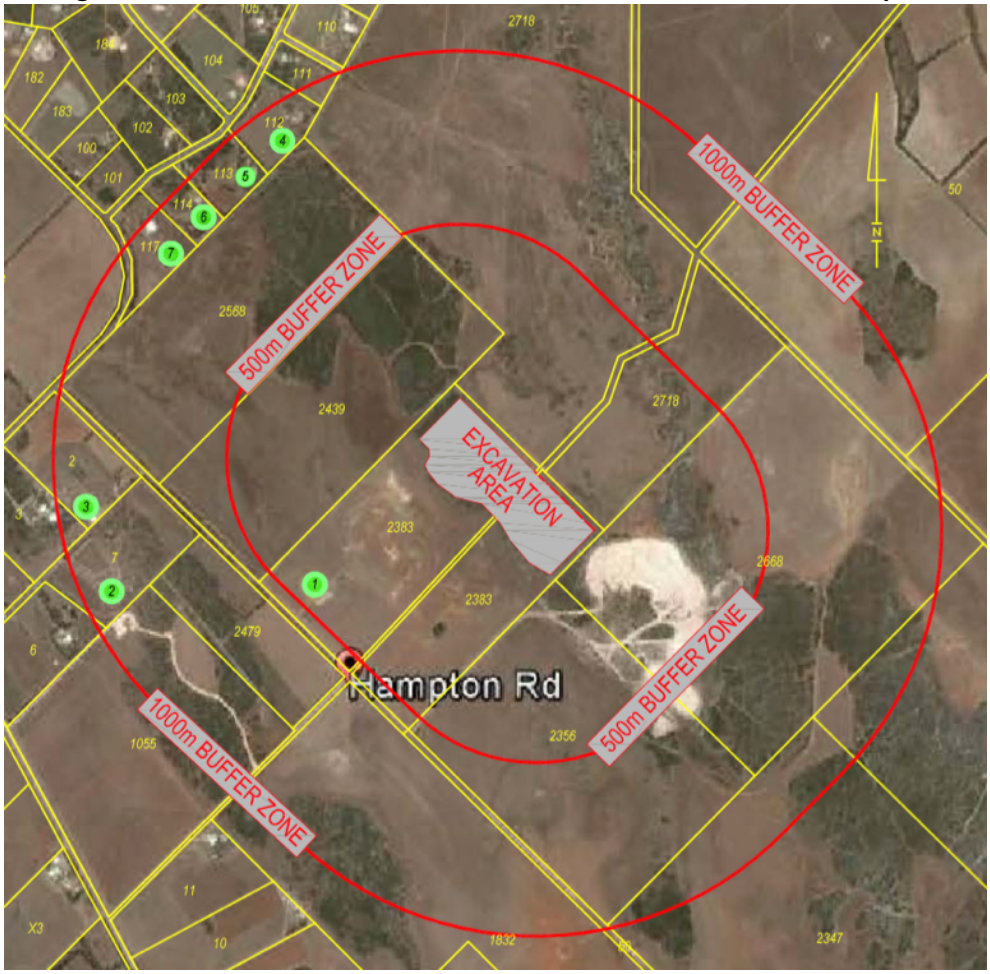
The EPA guidelines recommend that in the case of an application for the extraction of limestone and sand that an appropriate separation distance would be between 300-500m from the excavation area.

Provide as Figure 7 below is an extract from **Attachment 1** to this report which demonstrates the location of all dwellings within a 500m and 1000m radius of the proposed excavation area which are numbered 1-7 to enable ease of reference within this report.

Dwelling 1 is located on the subject property and is therefore not considered part of this assessment.

There are no dwellings (sensitive premises) located within 500m of the proposed excavation area which is compliant with the recommended separation distance of the EPA Guidance Statement.

Figure 7 - Extract of Buffer Zone Sketch from Attachment 1 of this report



There are 6 dwellings (notated as dwellings 2-7 on the plan) located within 1000m of the excavation area and may be considered of relevance to the assessment of this proposal:

- Dwellings 2 & 3
    - These dwellings are located to the west of the excavation area at a minimum distance of 900-950m;
    - It is not anticipated that these properties would be impacted by the operation of the quarry by either noise or dust (bearing in mind the intermittent use of the site also) given that they are located almost 1km from the site and the presence of the regions prevailing southerly pushing sound away from these properties and providing a significant level of background noise.
    - With the applicant proposing to maintain 20m of vegetation strip along the front edge of the excavation area this will assist in attenuating any noise and dust emissions from the site. This will also visually screen the excavation area.
    - Excavation is to be undertaken at 47AHD which will ensure that excavation is undertaken at a level that assists to visually screen the excavation area and assist with noise suppression

- Dwellings 4, 5, 6 & 7
    - These dwellings are located north-west of the excavation area at a minimum distance of 850m.
    - Between these dwellings and the excavation area the land features undulating terrain and vegetation which provides dust and noise attenuation.
    - The excavation area cannot be seen from these dwellings.

5. SUMMARY OF PROPOSAL

Extractive Industry	
Access	6m wide access
Setbacks	20m side setback 20m rear setback
Total fenced excavation area	14.517ha
Total excavation area	8.534ha
Maximum depth of excavations	No excavation below 47AHD or greater than 8m in depth
Tonnage per year	Up to an estimated maximum of 50,000 tonnes a year Small contract 1,000 tonnes Medium contract 10,000 tonnes Large contract up to 30,000 tonnes
Lifespan of site	20 years
Distance to nearest dwelling	850m (dwellings 4-7 on Attachment 1)
Operating hours	7:00am-5:00pm Monday to Saturday No operation on Sundays or Public Holidays
Truck movements	2 vehicle movements per day for smaller contracts 2 vehicle movements per hour for larger contracts
Built Development	
Fuel Storage	No fuel to be stored onsite Mobile tankers to be used when necessary
Toilet facility	Permanent facility not proposed for the site, serviced portable toilet will be placed on site should it be required
Site Office	Not required given the intermittent use of the site
Water Supply	2 water tanks to be located at the crest of the slope. Water to be transported to site. Used for dust suppression only as dewatering is not required.

The project aims to:

- Provide a local source of limestone for the Mid-West region;
- Enable competitive tendering processes with reduced transport and acquisition costs associated with the access of a local limestone quarry;
- Continue to provide local employment;
- Comply with all required legislation, policies, guidance notes and City of Greater Geraldton conditions;
- Provide a quarry for the extraction of basic raw material that does not reduce the amount of high quality agricultural land;
- Operate a quarry that successfully managed the site in relation to visual, noise and dust impacts; &
- Operate a quarry using appropriate safety and risk controls, being aware of environmental influences.

6. EXTRACTION PROCESS

6.1 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.

6.2 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.

6.3 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.

6.4 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.

6.5 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.

6.6 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.

6.7 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

7. MANAGEMENT PLAN

Environmental issues and potential impacts arising from the operation of an extractive industry can be managed in such a way as to minimise or eliminate those factors. The following information contains the processes and measures that the company has initiated to provide confidence in its operation of the extractive industry to ensure there is no detrimental impact on the surrounding land, land uses or the environment.

7.1 VISUAL MANAGEMENT

The visual amenity of a development can come into focus for a number of key factors that this report will discuss:

- Development being located at an elevation that can be seen
- Close proximity to neighbouring properties and/or dwellings;
- Lack of visual screening

The excavation area will be located approximately 530m from Hampton Road and 850m from the nearest dwelling that has views towards the proposed extraction area located to the south-west of the excavation area. The proposed excavation area can only be seen from the dwellings located to the west of the site as the land to the north and north-west are sloped and contain remnant vegetation which provide a visual screen between the dwellings and the excavation area.

In relation to those dwellings located to the west there is current limited visibility through to the proposed quarry site, although this view of the site is at some distance (minimum of 900m) and through existing vegetation upon the dwelling sites. To limit the visual impact of the excavation area from these dwellings the applicant proposes to excavate the site in a way that maintains a similar outlook to that which is already there.

This is proposed to be achieved by maintaining a 20m strip of remnant vegetation along the southern (front) edge of the excavation area to provide a visual screen to the operating quarry area. The entry into the working area will also be behind this remnant vegetation buffer. With operations proposing to come down to a maximum of 47AHD this will ensure that operations will remain at a lower height than the buffer vegetation, screening the excavation area and assisting to attenuate any potential noise and dust emissions that may still be heard over the nearly 1km distance from the excavation area to the dwellings.

Consequently, from the dwellings that are constructed at a high enough elevation that can achieve a line of sight to the excavation area their view should in effect only be changed by being able to see the 6m wide gravel access road and from some dwellings they may be able to see partially into the access way into the excavation area behind the 20m of remnant vegetation.

As dwellings are not the only factors in assessing the visual impact of the operations, the applicant also proposes the following additional actions to manage visual impacts from neighbouring properties and roads:

- Operate at a AHD that ensures that the remnant vegetation provides a visual screen to Hampton Road and dwellings;
- store any topsoil and overburden along the perimeter of the excavation areas to provide a visual and noise barrier to adjoining properties;

- Limit the amount of land that is being excavated at any one time;
- Ensure that each cell once exhausted is rehabilitated as the quarry slowly expands across the site;
- Maintain the site in a clean and orderly manner;
- Clean any spills immediately on the local road network;
- Store any plant and equipment out of sight; &
- Ensure that the security fencing, signage and gates are of a design and scale that is in keeping with the area.

Figure 10 – Proposed western access to excavation area located behind 20m of remnant vegetation to provide visual barrier to site

7.2 NOISE MANAGEMENT

Quadrio earthmoving currently operates all its worksites in accordance with the requirements of the Environmental Protection (Noise) Regulations 1997. A copy of the company's Noise Management plan has been included as **Attachment 3** to this report.

Noise has the ability to impact those operating on a site, however noise can also impact on those outside of the excavation area and it is therefore important to reduce the potential for detrimental impact through sound operational practices and strategic actions.

It should be noted that these noise impacts will only be relevant when the site is in use. This quarry would only be used intermittently throughout the year as demand requires. Small jobs would only see workers and machinery on site for 1-2 days at a time and larger scale jobs up to 2-3 weeks. A loader or excavator running in conjunction with a truck transporting the material from site will not exceed the requirements under the EPA guidelines in addition to complying with the required setbacks to sensitive premises.

The closest dwellings are 850m to the north-west and are screened by a 300-800m wide area of vegetation in addition to changes in slope that effectively places a hill area between the dwellings and the proposed excavation site. This is also enhanced by the applicants proposal to excavate the quarry in a way that maintains the floor of the quarry below the height of the 20m buffer vegetation on the southern edge of the exaction site.

There are two dwellings located 950m to the west and are surrounded by existing vegetation and other infrastructure upon the lots. Noise is not anticipated to be of concern given the intermittent and low key operation of the quarry and the presence of the existing quarry to the east which appears to operate to a similar scale and form as this proposal and does not appear to cause impact or concern to surrounding landholdings.

The applicant proposes the following actions to assist in the management of noise originating from the excavation area:

- Continue to Implement the company's Noise Management Plan;
- Comply with Environmental Protection (Noise) Regulations 1997;
- Ensure that operations are only carried out within the prescribed working hours/days;
- Provide appropriate PPE to workers;
- Using any topsoil/overburden strategically to provide additional acoustic screening;
- Ensure equipment is turned off when not in use;
- Ensure equipment is in good repair;
- Maintain operations at a lower level than the remnant vegetation to assist with noise screening;
- Ensure any noise complaints are followed up promptly;

7.3 DUST MANAGEMENT

The excavation and transport of limestone has the potential to generate dust emissions within the site and along transport routes and therefore it is necessary that appropriate controls and processes are in place to assist with reducing potential dust impacts.

The applicant proposes the following management measures to minimise issues related to dust:

- Monitor dust emissions continually to ensure preventative and proactive measures are taken immediately;
- Install two water tanks to ensure that water is always available on-site for dust suppression;
- A water tanker be made available to distribute the water at the excavation site and along access roads as required;
- Maintain internal access roads in good condition;
- Ensure transport vehicles do not exceed 20km/hour along internal roads and 40km/hour along Hampton Road;
- Maintain a vegetation buffer around the excavation site; &
- Do not operate at the site in strong wind conditions where dust suppression is ineffective.

A copy of the company's Dust Management plan has been included as **Attachment 4** to this report.

7.4 WATER MANAGEMENT

Water is to be stored onsite in two water tanks with the water being transported to site via a water tanker. There is no water required in the excavation process of the material, unless the circumstances of the operation require the use of water for dust suppression. A personal supply of potable water is required to be transported to the work site by each worker.

As material is removed the land will be excavated in such a way as to not cause runoff or erosion issues across the landscape. Given that the maximum depth of excavation is to be 8m in height and with generous setbacks, the retaining of remnant vegetation along the front edge and with every effort made to sculpt the land and replace the topsoil progressively as the resource is exhausted from an

area it is not considered that drainage will be a concern. In the same way ground water contamination is not considered relevant with this application given that the process of excavation does not involve any processes or chemicals that would cause contamination of the ground water supply.

There are no Department of Environment Regulation Environmentally Sensitive Areas, RAMSAR Wetlands, or Department of Water Public Drinking Water Source Areas within the proposed development area.

7.5 SAFETY MANAGEMENT

The site will be accessed via a 6m wide internal access way which will incorporate a locked gate at the entry to the excavation area to limit unauthorised entry. There will also be warning signage erected at the entry to the property, at the gates and also two warning signs located along all perimeter fence lines to the excavation area. Please see proposed site plan for location of signage and access gates.

With the commitment to maintain and continually improve their working environment and business processes, Quadrio earthmoving has received accreditation from Quality Control Services for meeting the following ISO International Standards:

- ISO 9001 – Quality Certified Systems
- ISO 14001 – Environmental Certified System
- ISO 4801 – Safety Certified System

This certification demonstrates that Quadrio Earthmoving operates to the highest of standards in Safety Management, Environmental Management and Business Systems Management. For more information on this accreditation please visit: www.qcse.com.au and www.iso.org

Quadrio Earthmoving will ensure that all workers are inducted into the operational procedures and that they understand the environmental and safety implications of the site. Where applicable workers will undertake a Job Safety Analysis or Risk Assessment to ensure appropriate controls are put in place to minimise risks. Each worker carries a mobile phone (the site is within phone coverage) and there are also radios available in all vehicles to coordinate work onsite.

7.6 ENVIRONMENTAL MANAGEMENT

As the quarry is small in scale and the use of the site intermittent and contract driven the environmental impacts of the operation of the site are minimal.

Quadrio Earthmoving is committed to ensuring the highest standard is maintained in the management of environmental factors relating to its operations. Included with this report as **Attachment 5** is a copy of the company's Environmental Management Plan.

Clearing

The Environmental Protection Act 1986 is the principal legislation for the prevention, control and abatement of pollution and environmental harm, the regulation of clearing, and the conservation, preservation, protection, enhancement and management of the environment. Clearing of native vegetation is an offence unless a clearing permit has been granted or an exemption applies.

The excavation site is partially covered in remnant vegetation that is required to be removed in order to access the limestone that sits below the surface. The remnant vegetation would be removed as required and stored along the perimeter of the excavation area where it would be track rolled to

loosen any seeds. Once the section of land being excavated is complete the vegetation would be mixed with the stored topsoil and replaced to rehabilitate the area. This would be a rolling process with sections being excavated and remediated across the site as the material is exhausted and a new section opened up for excavation.

Under Section 51B of the Environmental Protection Act, the Minister for Environment may declare a specified area to be an 'environmentally sensitive area (ESA)'. A search of Department of Environment Regulation (DER) records indicates that this property and the remnant vegetation is not within an environmentally sensitive area. Quadrio Earthmoving is in liaison with DER to obtain the necessary clearing permit for the removal of remnant vegetation under the Environmental Protection Act 1986.

Figure 11 – Remnant Vegetation within excavation area

7.7 HERITAGE MANAGEMENT

There are no known heritage implications associated with the proposed application site. A search of the Department of Aboriginal Affairs Aboriginal Heritage Inquiry System demonstrated no Registered Sites or other heritage applications at this time.

The applicant acknowledges the requirements of the Aboriginal Heritage Due Diligence Guidelines and will use these guidelines to assist them with planning and considering Aboriginal Heritage in relation to the proposed works.

Figure 12 – Extract from the Aboriginal Heritage Inquiry System demonstrating no known sites upon the property or within close proximity to the excavation area

8. REHABILITATION MANAGEMENT PLAN

The Rehabilitation Management Plan contains the relevant objectives and management measures and actions for the successful rehabilitation of the site. This has been provided to ensure that the excavation site is effectively rehabilitated throughout the lifetime of the quarry and to provide appropriate monitoring and completion criteria for the end use of the site and success of the rehabilitation programme.

8.1 REHABILITATION OBJECTIVES

This Rehabilitation Management Plan aims to achieve the following objectives:

- To provide revegetated areas that will provide and support an ecological link with existing remnant vegetation and the larger biodiversity vegetation corridor of the area
- To ensure that on decommissioning of the quarry that the site is rehabilitated in a way that recognises its environmental importance to the region
- To provide revegetation actions that allow for the site to be rehabilitated in sections but with an overall coordinated approach
- To provide additional, arable land to the subject property that can be utilised for agricultural purposes without compromising the integrity of the vegetation belt identified within the Local Biodiversity Strategy.

8.2 REHABILITATION AREAS

For the purpose of rehabilitation actions, the Rehabilitation Management Plan Map demonstrates two areas which are dissected by the unconstructed portion of the Glynn Road Reserve that passes through Lot 2383; Rehabilitation Area A (north of Glynn Road) and Rehabilitation Area B (South of Glynn Road).

Each area will be rehabilitated separately to ensure timely reinstatement of vegetation throughout the life of the quarry. Each 'Rehabilitation Area' is made up of three areas; Remnant Vegetation, Revegetation Area and Future Agricultural Purposes area.

A Rehabilitation Management Plan Map has been included as **Attachment 6** to this report.

8.3 COMPLETION CRITERIA

There are three areas identified on the Rehabilitation Management Plan Map (see Attachment 6) that require rehabilitation management strategies for this site; Remnant Vegetation, Rehabilitation Area and the Future Agricultural Purposes Area. The Completion Criteria for each of these areas is outlined below.

8.3.1 REMNANT VEGETATION

- Activities of the quarry have not impacted on the remnant vegetation with any impacted areas suitably rehabilitated
- Further growth of the remnant vegetation is evident and unrestricted by quarry activities
- Weed control measures have ensured that native species are not impacted

8.3.2 REHABILITATION AREAS

- A stable landform that is in keeping with the existing surrounding landscape contours and characteristics
- Minimise erosion impacts through appropriate contouring and stabilisation (wind & water)
- Establish a self-sustaining area of local vegetation species on the sloping batters/contours
- Achieve a track of vegetation that will provide linkages to remnant vegetation on the site and surrounding properties
- Weed control measures have ensured that regrowth species are not impacted
- 100 trees/shrubs per 100m^2 achieved after 3 years from decommissioning of the site and the planting of tube stock where necessary

8.3.3 FUTURE AGRICULTURAL PURPOSES AREA

- Achieve weed species at a level not likely to threaten pasture, stock or other agricultural land uses
- Site covered with self-sustaining pasture species for year around coverage
- Gently undulating ground free of large impressions suitable for the traversing of machinery and stock uses

8.4 REHABILITATION PROCEDURES – THROUGHOUT LIFE OF QUARRY

8.4.1 CLEARING OF VEGETATION

- Vegetation clearing will be progressive across the site as an area is required to be opened up for excavation of materials
- Where possible removed vegetation will be immediately track-rolled and spread over an area that is being rehabilitated
- If direct spreading is not possible removed vegetation will be track-rolled or mulched and stored in bunds around the perimeter of the active excavation area and replaced as soon as possible
- Removed vegetation will be used to encourage natural regrowth within the Revegetation Areas and to provide wind and water erosion control

8.4.2 LAND RECONSTRUCTION

- Contouring and reconstruction of the land will occur as a part of the quarry area is excavated to the final depth and the area no longer being required to be accessed
- All machinery and equipment removed from the area
- All batters and faces to be re-contoured to a minimum of a 1:4 slope
- Slope to be reshaped with benches and ripped to encourage a natural seed bed. This will also assist with water penetration and reduce potential water erosion
- All slopes to be stabilised with a minimum of 300mm of topsoil and overburden. A deeper profile may be applied where surplus volumes are realised.
- Track-rolled vegetation reinstated on slopes to encourage natural reseeding and provide stabilisation and nutrients to new growth

- Any compacted surfaces will be ripped to assist with root and water penetration, any gravel to be removed from site.
- 'Future Agricultural Purposes' area to have topsoil and overburden spread to a minimum depth of 300mm and seeded with pasture species. A deeper profile may be applied where surplus volumes are realised.

8.4.3 TOPSOIL & OVERBURDEN

- Topsoil and overburden that is removed, where possible, will be transferred from an area being cleared for excavation to an area being rehabilitated. Where this is not possible the soil will be stored in bunds along the perimeter of the active excavation area.
- Topsoil when stored, to be spread where possible in summer months for maximum germination potential
- Topsoil and overburden to be reinstated at a minimum depth of 300mm. A deeper profile may be applied where surplus volumes are realised.

8.4.4 REVEGETATION ACTIONS

8.4.4(a)- Pre-Revegetation Actions

- Weed activity to be monitored within the site and within reinstated topsoil and overburden. Inspection will be undertaken after the first rains annually to monitor germination levels and to implement appropriate spraying programs as necessary.
- Where weed density and/or species are considered detrimental to rehabilitation spraying may be required prior to tracked rolled vegetation being spread.
- Broad scale spraying is not recommended as it can impact existing remnant vegetation and can be detrimental to the germination and growth of some species. As there is not an issue with weed load onsite this spraying measure would likely not be required and through appropriate ongoing management and monitoring of the land it is not considered that this is likely to change with time.
- Where weed control is required, the topsoil and overburden is to be spread to allow the weed species to germinate to maximise spraying efforts.

8.4.4(b) - Revegetation

- Spreading of track-rolled vegetation;
    - When the extraction of materials within an area of the quarry is completed the site will be reconstructed with overburden and topsoil replaced.
    - The previously removed track rolled vegetation will then be spread to allow for natural regermination and to assist in the stabilisation of the land from potential water and wind erosion.
    - Once all of the excavation area within a 'Rehabilitation Area' is completed the 'Revegetation Areas' will be monitored over the next 3 years for revegetation.
    - Signs to be erected clearing demonstrating areas that are under revegetation
    - At the end of three years should the density of regrowth not be sufficient, a tube stock program will be implemented.

- Tube Stock Planting Programme
    - Vegetation with local providence will be used (please see Species List provided below)

- Seed will be collected during the life of the quarry for use by local nursery in providing tube stock for the site
- Where tube stock is to be planted this will be undertaken during the first winter months
- Tube stock to be planted to infill natural regrowth of the Revegetation Areas
- Where necessary fertiliser to be used to support plant growth
- Revegetation is to be irrigated for the first summer to support growth and maximise survival rates
- Additional planting undertaken in subsequent planting seasons as necessary to achieve required density/survival rates over the Revegetation Areas.
- Vegetation to be monitored for 3 years

- Pasture Sowing
  - Within the areas that are referenced as 'Future Agricultural Purposes'
  - Topsoil and overburden to be spread over area and seeded with mixed pasture species to achieve self-sustaining cover

8.4.4(c) - Erosion Control

- Material is to be removed in stages to allow for each area to be rehabilitated as the material is exhausted and a new portion of the excavation area cleared to minimise the amount of time an area is exposed to potential water and wind erosion.
- The land will be contoured to a maximum a 1:4 slope to match with the existing landforms of the area and the previously removed vegetation and topsoil/overburden replaced. This will ensure that rehabilitated areas will not have any erosion or drainage impacts as the replaced vegetation matter will act as a natural catchment for any potential water runoff, allowing time for water to be absorbed into the ground.
- Slopes to be battered with benches that are soft and rough with undulations running across the contour. Final run with machinery should be along contour and not downslope.
- At the lowest point of the excavation area there will be a 20m wide buffer of existing remnant vegetation that will remain and will act as a catchment for any potential overflow/water that is not caught by the replaced vegetation or has not been absorbed into the ground at that point.
- For the portion of the excavation area that will be in operation and cleared of any vegetation, the area will be maintained and drained to ensure that there are no pits that can fill with water. Slopes, and if necessary drainage lines, will be installed and maintained to ensure that water drains towards the existing remnant vegetation and does not collect within the operating excavation area.

8.4.4(d) - Pest Control

Introduced and native fauna has the potential to impact on rehabilitation efforts. Control of species should be considered carefully, and where possible, in liaison with surrounding landowners to undertake a coordinated programme. Potential pest control actions for the site to include:

- Site to be monitored for rabbit and kangaroo activity
- Poisoning of rabbits through the use of Pindone is to be undertaken in the case of low rabbit activity
- Medium to high rabbit will require the use of fumigation or warren collapse techniques by a licenced technician.

- High rabbit and/or kangaroo activity may also require the installation of trees guards should fumigation or warren collapse be unsuccessful for rabbits and the level of kangaroos effect revegetation survival rates of germinated seedlings and tubestock

8.4.4(e) - Weed Control

- Weed activity to be monitored within the site and within reinstated topsoil and overburden. Particular inspection will be undertaken after the first rains to monitor germination levels and to implement appropriate spraying programs as necessary.
- Where weed load and/or species are considered detrimental to rehabilitation spraying may be required prior to tracked rolled vegetation being spread.
- Broad scale spraying is not recommended as it can impact existing remnant vegetation and can be detrimental to the germination and growth of some species. As there is not an issue with weed load onsite this spraying measure would likely not be required and through appropriate ongoing management and monitoring of the land it is not considered that this is likely to change with time.
- Where weed control is required, the topsoil and overburden is to be spread to allow the weed species to germinate to maximise spraying efforts.
- Broad plant growth within the rehabilitation area and across the site to be supported through an annual spraying program which will be undertaken in the cleared areas of the site with spot spraying undertaken where necessary to reduce weed load or eradicate declared species (weeds).

8.4.5 MONITORING & EVALUATION

- Monitoring of regrowth vegetation or tube stock to be done by visual assessment and where necessary counts to evaluate level of success
- Monitoring undertaken over the summer months to determine rehabilitation requirements for the next winter/planting season
- Monitoring after first rains to determine weed management requirements
- Erosion control and soil stability to be continually assessed
- Irrigation and fertilisation requirements to be assessed and implemented where necessary
- Rehabilitation of each 'Rehabilitation Area' will be monitored for a period of 3 years to ensure that Completion Criteria is achieved
- Where Completion Criteria is not achieved measures such as additional seed/tube stock planting to be implemented.

8.4.6 RESPONSIBLE PARTIES & TIMEFRAME

- It shall be the responsibility of Quadrio Earthmoving to undertake all rehabilitation actions, requirements, monitoring and evaluation in accordance with Section 8.4 of this report.
- These actions are to be undertaken throughout the life of the quarry until the site is ready to be decommissioned.

8.5 DECOMMISSIONING OF THE SITE

8.5.1 ACTIONS

- All machinery to be removed from site
- Water tanks to be emptied and removed from site (unless by agreement of landowner they remain for agricultural use)
- Any internal gravel access roads throughout the site to be removed unless otherwise agreed to by the landowner to remain (only applicable to those access roads outside of the revegetation areas.

8.5.2 RESPONSIBLE PARTIES & TIMEFRAME

- Quadrio Earthmoving is responsible for all decommissioning requirements
- Decommissioning of the site to be completed within 3 months from the closure of the quarry (non-renewal)

8.6 REHABILITATION PROCEDURES – POST-CLOSURE

8.6.1 LAND RECONSTRUCTION

- All machinery and equipment removed from the area
- All batters and faces to be re-contoured to a minimum of a 1:4 slope
- Slope to be reshaped with benches and ripped to encourage a natural seed bed. This will also assist with water penetration and reduce potential water erosion
- All slopes to be stabilised with a minimum of 300mm of topsoil and overburden. A deeper profile may be applied where surplus volumes are realised.
- Track-rolled vegetation reinstated on slopes to encourage natural reseeding and provide stabilisation and nutrients to new growth
- Any compacted surfaces will be ripped to assist with root and water penetration, any gravel to be removed from site.
- 'Future Agricultural Purposes' area to have topsoil and overburden spread to a minimum depth of 300mm and seeded with pasture species. A deeper profile may be applied where surplus volumes are realised.

8.6.2 TOPSOIL & OVERBURDEN

- Topsoil and overburden to be reinstated at a minimum depth of 300mm. A deeper profile may be applied where surplus volumes are realised.
- Topsoil to be spread where possible in summer months for maximum germination potential

8.6.3 REVEGETATION ACTIONS

8.6.3(a)- Pre-Revegetation Actions

- Weed activity to be monitored within the site and within reinstated topsoil and overburden. Inspection will be undertaken after the first rains to monitor germination levels and to implement appropriate spraying programs as necessary.
- Where weed density and/or species are considered detrimental to rehabilitation spraying may be required prior to tracked rolled vegetation being spread.
- Broad scale spraying is not recommended as it can impact existing remnant vegetation and can be detrimental to the germination and growth of some species. As there is not an issue with weed load onsite this spraying measure would likely not be required and through appropriate ongoing management and monitoring of the land it is not considered that this is likely to change with time.
- Where weed control is required, the topsoil and overburden is to be spread to allow the weed species to germinate to maximise spraying efforts.

8.6.3(b) - Revegetation

- Spreading of track-rolled vegetation;
    - Site reconstructed with overburden and topsoil replaced
    - The previously removed track rolled vegetation will then be spread to allow for natural regermination and to assist in the stabilisation of the land from potential water and wind erosion
    - Signs to be erected clearing demonstrating areas that are under revegetation
    - Tube stock program will be implemented for any areas that have not achieved 100 trees/shrubs per 100m^2

- Tube Stock Planting Programme
    - Vegetation with local providence will be used (please see Species List provided in **Section 8.7**)
    - Seed collected during the life of the quarry to be used by local nursery in providing tube stock for the site
    - Where tube stock is to be planted this will be undertaken during the first winter months (approximately June) following restoration works
    - Tube stock to be planted to infill natural regrowth of the Revegetation Areas
    - Where necessary fertiliser to be used to support plant growth
    - Revegetation is to be irrigated for the first summer to support growth and maximise survival rates
    - Additional planting undertaken in subsequent planting seasons as necessary to achieve required density/survival rates over the Revegetation Areas.
    - Revegetation to be monitored for 3 years

- Pasture Sowing
    - Within the areas that are referenced as ‘Future Agricultural Purposes’
    - Topsoil and overburden to be spread over area and seeded with mixed pasture species to achieve self-sustaining cover

8.6.3(c) - Erosion Control

- The land will be contoured to a maximum 1:4 slope to match with the existing landforms of the area and the previously removed vegetation and topsoil/overburden replaced. This will ensure that rehabilitated areas will not have any erosion or drainage impacts as the replaced vegetation matter will act as a natural catchment for any potential water runoff, allowing time for water to be absorbed into the ground.
- Slopes to be battered with benches that are soft and rough with undulations running across the contour. Final run with machinery should be along contour and not downslope.
- At the lowest point of the excavation area there will be a 20m wide buffer of existing remnant vegetation that will remain and will act as a catchment for any potential overflow/water that is not caught by the replaced vegetation or has not been absorbed into the ground at that point.

8.6.3(d) - Pest Control

- Site to be monitored for rabbit and kangaroo activity
- Poisoning of rabbits through the use of Pindone is to be undertaken in the case of low rabbit activity
- Medium to high rabbit will require the use of fumigation or warren collapse techniques by a licenced technician.
- High rabbit and/or kangaroo activity may also require the installation of trees guards should fumigation or warren collapse be unsuccessful for rabbits and the level of kangaroos effect revegetation survival rates of germinated seedlings and tubestock

8.6.3(e) - Weed Control

- Weed activity to be monitored within the entire site and within reinstated topsoil and overburden. Particular inspection will be undertaken after the first rains to monitor germination levels and to implement appropriate spraying programs as necessary.
- Broad scale spraying is not recommended as it can impact existing remnant vegetation and can be detrimental to the germination and growth of some species. As there is not an issue with weed load onsite this spraying measure would likely not be required and through appropriate ongoing management and monitoring of the land it is not considered that this is likely to change with time.
- Broad plant growth within the rehabilitation area and across the site to be supported through an annual spraying program which will be undertaken in the cleared areas of the site with spot spraying undertaken where necessary to reduce weed load or eradicate declared species (weeds).

8.6.4 MONITORING & EVALUATION

- Monitoring of regrowth vegetation or tube stock to be done by visual assessment and where necessary counts to evaluate level of success
- Monitoring undertaken over the summer months to determine rehabilitation requirements for the next winter/planting season
- Monitoring after first rains to determine weed management requirements
- Erosion control and soil stability to be continually assessed
- Irrigation and fertilisation requirements to be assessed and implemented where necessary
- Rehabilitation will be monitored for a period of 3 years to ensure that Completion Criteria is achieved

- Where Completion Criteria is not achieved measures such as additional seed/tube stock planting to be implemented

8.6.5 RESPONSIBLE PARTIES AND TIMEFRAME

- It shall be the responsibility of Quadrio Earthmoving to undertake all rehabilitation actions, requirements, monitoring and evaluation in accordance with **Section 8.6** of this report.
- These actions are to be undertaken from the decommissioning of the site and for three years from the planting of tube stock
- After this time it will be the responsibility of the landowner to protect and monitor the ongoing rehabilitation and management of the area

8.7 SPECIES LIST

The remnant vegetation upon the site is dominated by *Melaleuca cardiophylla*, and various Acacia and Banksia spp. The rehabilitation process will involve the replacement of the topsoil which will be spread with the track rolled cleared vegetation and will occur progressively across the site as an area of the quarry is completed. It is recognised that these species will naturally germinate within the revegetation areas with existing seed stock contained within the topsoil and released during the track rolling of the cleared vegetation.

Figures 13-16 - Existing remnant vegetation

The following tube stock is to be used on the site to infill the Revegetation Areas where 100 trees/shrubs per 100m^2 is not achieved. These species will ensure that any infill planting will diversify

the species onsite with further local providence to increase the biodiversity of the vegetation contained upon the property.

Species	Common Name	Example (Source: https://florabase.dpaw.wa.gov.au)
Melaleuca cardiophylla	Tangling Melaleuca or Umbrella Bush	
Diploleana grandiflora	Wild Rose or Tamala Rose	
Templetonia retusa	Cocky's Tongues	
Westringia damperii	Shore Westringia	

Other species may be incorporated into the planting programme as directed by the local government and the success of seed collection from the site to be grown by a local nursery.

Use of Local Species

- Seed collecting to be undertaken throughout the life of the quarry
- Seed to be used for the growing of tube stock with a local nursery
- Where seed from the site is not sufficient alternative local species will be substituted