1.0 Purpose:

The purpose of this document is to provide information in support of an application for an extractive industry licence for approximately 20,000m3 of rock product from Lot 5000 Geraldton – Georgina Road (Royce's property) for the purpose of rock works on a project.

2.0 Location:

The coordinates for the proposed borrow pit are Zone 50, 6,800,917N; 278007E or Latitude 28°54'02"S, Longitude 114°43'22"E. Please refer to Figure 2 for aerial photograph of location.

A map showing existing and proposed land contours is also attached as carried out by HTD surveyors.

3.0 Description of Site:

The proposed borrow pit site soil type is a very thin patchy loose sandy material with large areas of exposed weathered limestone clearly visible. The area is devoid of any remnant vegetation. No declared rare or priority species of fauna or flora have been recorded on the property (pers comm DEC Geraldton Branch). The site is primarily 2no. circular outcrops of limestone.

The proposed borrow pit is not within 20m of the property boundary, or within 40 meters of any watercourse or public road. The proposed borrow pit will cover an area of approximately 1.0 hectares at an average depth of 2.0 metres.

No on site processing works, such as screening will be required. It is expected that the land's contours will not be significantly altered by using a greater area, but relatively shallow excavation.

The boundaries of the topsoil will be clearly pegged - being perpendicular to Georgina Rd and rectangular in shape. The sparse vegetative/ grass layer and topsoil covering the proposed borrow pit will be pushed into piles (not greater than 2 metres in height) around the boundary of the pit for later use in the rehabilitation process. The pit will be only used from January to July, at which point it will be rehabilitated – please refer to Item 6.0 Site Rehabilitation for details. As a consequence of the short duration that the pit will be in use, as well as the time of year (seasonal average rainfall being low), it is not expected that drainage will be an issue. However if required, the floor of the pit will be cross ripped by a dozer prior to rehabilitation of the area to facilitate adequate and uniform drainage.

It is proposed to use up to 8 x single trailer side tippers between Mid-March/early April 16 to end of June 16 (but not continuously) to cart the material from the location to various areas along Chapman Road. The trucks will leave from the Southern boundary of the property, then west along Georgina Rd then travel north on the Brand Hwy. It is not expected that this configuration and volume of trucks will have any impact on traffic flow along any public route.

A water cart will be deployed as required to avoid the spread of dust from the excavation. As the site is remotely located to any properties this is not considered and issue. In addition all roads adjacent to the site boundary are sealed again reducing the risk of nuisance dust.

In terms of potential noise issues, the site's location in a rural area and a significant distance from any dwellings (the nearest dwelling being approximately 800 meters away) is likely to prevent any breaches of the Environmental Protection (Noise) Regulations. However, the site will also be managed in accordance with the following measure to ensure compliance:

Hours of operation will be from 7:00am to 6:00pm only; and

All machinery will be monitored to ensure that the exhaust system is functioning correctly and not producing excessive noise.

Natural screening will be provided from neighbouring properties by the lines of the ridges of the existing geological features.

Extraction will be achieved with by drill and blast techniques. To minimise vibration low powder levels will employed and works should be completed using approx. 2no blasts. Upon execution of the blasts the resultant material will be sorted using a selection of excavators and loaded out on road certified trucks.

4.0 Geological desktop study

The Limestone Quarry falls within the area known as the Spearwood regolith-landform land system. The Spearwood Dune System consists of slightly calcareous sands deposited by wind action. The dunes probably accumulated as shoreline deposits and coastal dunes during interglacial periods (about 11,700 years ago) of high sea-level. The soils originally comprised of lime sand, quartz sand and minor fine-grained, black, heavy mineral concentrations. The carbonate material has been mostly leached (dissolved), leaving dunes consisting almost entirely of quartz sand. The yellow sand colour is derived from hydrated iron oxide. The yellow sand is sourced for use in the building industry in some areas of the Spearwood system. The Spearwood sands have evolved from the in situ weathering of the underlying Tamala Limestone. Tamala Limestone is the geological name given to the widely occurring eolianite limestone deposits on the western coastline of Western Australia, between Shark Bay in the north and nearly to Albany in the south. The rock consists of calcarenite wind-blown shell fragments and quartz sand which accumulated as coastal sand dunes during the middle and late Pleistocene and early Holocene eras (so about 2.5M years ago to current date). As a result of a process of sedimentation and water percolating through the shelly sands, the mixture later lithified when the lime content dissolved to cement the grains together. Exposed limestone formations at the Pinnacles Desert near Cervantes clearly show the limestone formation through the sedimentary process.

Conditions favourable for formation of eolianite limestone are: a warm climate, favourable to the production of carbonate by shallow marine animals; for example, the production of seashells by marine molluscs; onshore winds to form beached sediment into dunes; a relatively low onshore topography, rather than onshore cliffs, to allow the formation of dune systems; relatively low onshore rainfall, to promote rapid lithification; tectonic stability. The most extensive deposits of eolianite in the world are located on the southern and western coasts of Australia. On the west coast, there are over 800 kilometres of eolianite cliffs. At its thickest, the Tamala Limestone comprises the massive

Zuytdorp Cliffs, up to 250 m high, extending for 150 km between Kalbarri, Western Australia and south of Steep Point. These cliffs are included in the Tamala Limestone Formation. Centrals quarry comprises of large exposed deposits of Tamala Limestone formation.

5.0 Adjacent Land Uses:

Nearby Lots 2347, 2356,2580 & 2668 have already been granted approval for use of quarrying limestone via. Approval No. TP08/244. WA Limestone have extracted limestone from the aforementioned site, under license from the property owners, since 1985. A survey plan was completed in July last year showing the total volume of rock material excavated from the site during WA Limestones tenure is provided in approx. 142,000m3.

Centrals acquired the license to extract limestone from the property in June 2015. Aside from granite (which came from Holcim's Georgina Quarry), much of the rock used in and around Geraldton by the CGG, Midwest Ports and the Department of Transport to construct the town and port groynes and breakwaters has come from this quarry.

In addition other immediately adjacent land uses are agricultural primarily grazing and the cultivation of crops.

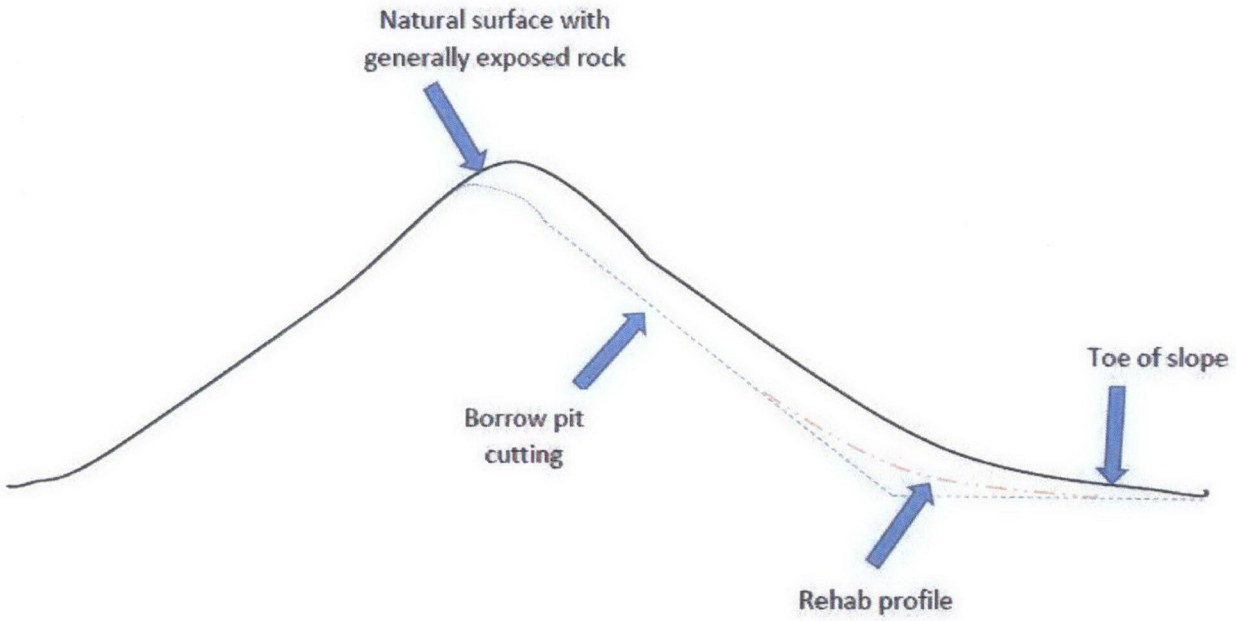
6.0 Site Rehabilitation:

The site will be rehabilitated in accordance with the following steps:

All rubbish to be removed from the borrow pit;

The sides of the pits are to be battered/contoured in keeping with the existing topography to minimise ponding within the pit and to enable free drainage from the site. The borrow pit walls will be trimmed to ensure that the final pit contours blend in closely with the surrounding landscape as shown below in Figure 1.

Figure 1: Borrow Pit Rehabilitation



- Site to be cross ripped deeply along the contour, not up and down the slope which leads to enhanced erosion. Spacing between tines shall be minimal to provide comprehensive ripping.
- Topsoil and vegetation to be re-spread across borrow pit evenly;
- After topsoil and vegetative spreading, the area will be cross ripped to a minimum of 0.1m below the topsoil (along the contour and perpendicular to water flow) to prevent erosion. However, the surface will be left as smooth as possible, so that the rehabilitated pit blends in with the natural surroundings.
- Site to be monitored over summer and autumn to determine rehabilitation success, and stabilisation measures implemented (such as capping area with gravel until winter) if necessary.

A photographic record of the site rehabilitation will be maintained. Please refer to Figure 3 for a photographic record of recently rehabilitated gravel borrow pit by Centrals in the Mullewa Shire

CENTRALS
CIVIL, EARTHMOVING & MINING CONTRACTORS

SGS SGS SGS

Figure 2: Proposed Borrow Pit Location

CENTRALS
CIVIL, EARTHMOVING & MINING CONTRACTORS

Figure 3: Recently rehabilitated gravel pit by Centrals in the Mullewa Shire

44416AS1-1-0

LOCATION PLAN - (NOT TO SCALE)

EXPLANATORY NOTE:

THE TITLE BOUNDARIES AS SHOWN HEREON WERE NOT MARKED AT THE TIME OF SURVEY AND HAVE BEEN DETERMINED FROM LANDGATE DIGITAL DATABASE ONLY AND NOT BY FIELD SURVEY.
SERVICES SHOWN HEREON HAVE BEEN LOCATED WHERE POSSIBLE BY FIELD SURVEY. IF NOT ABLE TO DO SO, LOCATED SERVICES HAVE BEEN PLOTTED FROM THE RECORDS OF RELEVANT AUTHORITIES WHERE AVAILABLE AND HAVE BEEN NOTED ACCORDINGLY ON THIS PLAN.

WHERE SUCH RECORDS EITHER DO NOT EXIST OR ARE INADEQUATE, ANNOTATION HAS BEEN MADE HEREON.

PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE SITE, THE RELEVANT AUTHORITY SHOULD BE CONTACTED FOR POSSIBLE LOCATION OF FURTHER UNDERGROUND SERVICES AND DETAILED LOCATIONS OF ALL SERVICES.

EXCAVATION

THE QUARRY IS PROPOSED TO COVER AN AREA OF 10000m² AND EXCAVATED TO A DEPTH OF 2m.

EXISTING CONTOURS
EXCAVATED CONTOURS

ENLARGEMENT PLAN SCALE 1:2000

0	22/12/16	ORIGINAL ISSUE	WW

REVISIONS

00 40 80 120
ALL DISTANCES ARE IN METRES

SURVEYED BY:	FD	21/12/16
DRAWN BY:	WW	22/12/16
CHECKED BY:	WW	22/12/16
APPROVED BY:	WW	22/12/16

AREA FILE: 1302
CONT. INT'VAL 1 m
V DATUM: AHD
H DATUM: MGA Z50
FIELD Bk: UAV

HTD
SURVEYORS & PLANNERS
HILLE, THOMPSON & DELFOS
PO Box 820, GERALDTON WA 6531
PHONE: (08) 9921 3111 FAX: (08) 9921 8072

CLIENT: CENTRALS

PROPOSED LIMESTONE QUARRY
EXTRACTIVE INDUSTRIES PLAN

LOT 5000 GEORGINA RD, GREENOUGH - CITY OF GREATER GERALDTON

SCALE: AS SHOWN
ALL DISTANCES IN METRES

SHEET SIZE: A1

DWG No.: 44416AS1-1-0