REFERRAL OF A PROJECT FOR A DECISION ON THE NEED FOR ASSESSMENT UNDER THE *ENVIRONMENT EFFECTS ACT 1978*

REFERRAL FORM

The *Environment Effects Act 1978* provides that where proposed works may have a significant effect on the environment, either a proponent or a decision-maker may refer these works (or project) to the Minister for Planning for advice as to whether an Environment Effects Statement (EES) is required.

This Referral Form is designed to assist in the provision of relevant information in accordance with the *Ministerial Guidelines for assessment of environmental effects under the Environment Effects Act 1978* (Eighth Edition, 2023). Where a decision-maker is referring a project, they should complete a Referral Form to the best of their ability, recognising that further information may need to be obtained from the proponent.

It will generally be useful for a proponent to discuss the preparation of a Referral with the Impact Assessment Unit (IAU) at the Department of Transport and Planning (DTP) before submitting the Referral.

If a proponent believes that effective measures to address environmental risks are available, sufficient information could be provided in the Referral to substantiate this view. In contrast, if a proponent considers that further detailed environmental studies will be needed as part of project investigations, a more general description of potential effects and possible mitigation measures in the Referral may suffice.

In completing a Referral Form, the following should occur:

- Mark relevant boxes by changing the font colour of the 'cross' to black and provide additional information and explanation where requested.
- As a minimum, a brief response should be provided for each item in the Referral Form, with a more detailed response provided where the item is of particular relevance. Cross-references to sections or pages in supporting documents should also be provided. Information need only be provided once in the Referral Form, although relevant cross-referencing should be included.
- Responses should honestly reflect the potential for adverse environmental effects. A Referral will only be accepted for processing once IAU is satisfied that it has been completed appropriately.
- Potentially significant effects should be described in sufficient detail for a reasonable conclusion to be drawn on whether the project could pose a significant risk to environmental assets. Responses should include:
    - a brief description of potential changes or risks to environmental assets resulting from the project;
    - available information on the likelihood and significance of such changes;
    - the sources and accuracy of this information, and associated uncertainties.
- Any attachments, maps and supporting reports should be provided in a secure folder with the Referral Form.
- A USB copy of all documents will be needed, especially if the size of electronic documents may cause email difficulties. **Individual documents should not exceed 10MB as they will be published on the Department's website.**

- A completed form would normally be between 15 and 30 pages in length. Responses should not be constrained by the size of the text boxes provided. Text boxes should be extended to allow for an appropriate level of detail.
- The form should be completed in MS Word and not handwritten.

The party referring a project should submit a covering letter to the Minister for Planning together with a completed Referral Form, attaching supporting reports and other information that may be relevant. This should be sent to:

Postal address

Minister for Planning
PO Box 500
EAST MELBOURNE VIC 8002

Couriers

Minister for Planning
Level 16, 8 Nicholson Street
EAST MELBOURNE VIC 3002

In addition to the submission of the hardcopy to the Minister, separate submission of an electronic copy of the Referral via email to ees.referrals@delwp.vic.gov.au is required. This will assist the timely processing of a referral.

PART 1 PROPONENT DETAILS, PROJECT DESCRIPTION & LOCATION

1. Information on proponent and person making Referral

Name of Proponent:	Regional Quarries Riviera Pty Ltd and Dandy Premix Quarries Pty Ltd (wholly owned subsidiaries of ASX listed (MGH) Maas Group Holdings)
Authorised person for proponent: **Position:** **Postal address:** **Email address:** **Phone number:** **Facsimile number:**	Garry Cranny Dandy Premix Quarries Pty Ltd - Sustainability Manager 21-23 Bennet Street, Dandenong Vic 3175 gcranny@dandypremix.com 03-9703 8260, Mob: 0419 587 440 039793 2096
Person who prepared Referral: **Position:** **Organisation:** **Postal address:** **Email address** **Phone number:** **Facsimile number:**	Mandy Elliott Principal Consultant EnviroME admin@envirome.com.au
Available industry & environmental expertise: (areas of 'in-house' expertise & consultancy firms engaged for project)	Dandy Premix Quarries has extensive experience in the planning, construction, operation and environmental management of quarries within Victoria. Dandy Premix Quarries receives technical advisory services from a range of consultants who are providing assistance with investigations and assessment of various matters to inform this referral. The following attachments are provided as part of the Referral: • Attachment A: Figures • Attachment B: Planning Property Report • Attachment C: Detailed Ecological Investigations: Yarra Valley Quarry Stage 3, Launching Place, Victoria (Ecology and Heritage Partners Pty Ltd, June, 2024) • Attachment D: Dust Assessment, (ESA, June 2024) • Attachment E: Blasting Impact Assessment, (Terrock, May 2024) • Attachment F: Landscape and Visual Impact Assessment, (Tract, June 2024) • Attachment G: Groundwater Assessment, (John Leonard Consulting, Feb 2024) • Attachment H: Hydrology Assessment, (Water Technology, Nov 2023)

	• Attachment I: Noise assessment, (Watson Moss Growcott, July 2024) • Attachment J: Traffic Assessment (Traffix Group, June 2023) • Attachment K: Geotechnical Assessment (GHD, Jan 2024) • Attachment L: Summary of Rehabilitation activities

2. Project – brief outline

Project title: WA375 Yarra Valley Quarry (YVQ) Extension

Project location: (describe location with AMG coordinates and attach A4/A3 map(s) showing project site or investigation area, as well as its regional and local context)

The existing and proposed expanded WA375 (Yarra Valley Quarry) is situated in the lower foothills at the southern flank of Mount Toolebewong approximately 65 km east of Melbourne, approximately 6.5 km north-east of Woori Yallock and 8km north west of Launching Place. The Yarra Valley Quarry (which has an approved Work Authority – WA375) and proposed quarry extension area is largely enclosed by bushland and steep ridges to the north, east and west on adjacent Crown Land (some managed by Parks Victoria) and private rural land holdings. The proposed quarry extension is entirely within land owned by Regional Quarries Riviera Pty Ltd and the DEECA-ERR Work Authority 375 (WA375) tenement is held and operated by Dandy Premix Quarries Pty Ltd, both wholly owned subsidiaries of ASX listed company Maas Group Holdings (MGH).

The neighbouring land areas as presented on Figure 2 - Location Plan (**Attachment A**) include:

- Mount Toolebewong State Forest (PUZ1) to the north of Crown Allotment 50C (RCZ3) and north west of Crown Allotment 49A (RCZ1) west
- Crown Land to the north (RCZ1) and the north-east (PUZ1) of WA375 (SUZ1).
- Parks Victoria managed Yarra Ranges National Park land borders WA375 to the upper north-east and eastern boundary
- Parks Victoria managed O'Shannassy Aqueduct Trail (PUZ1), a narrow strip of land is located to the immediate south-eastern boundary of WA375 with privately owned (RCZ1) land to the east of the trail
- A precinct of approximately 10 rural residential properties (RCZ3) located to the south-west of WA375 with frontages to either McMahons Road or Ure Creek Road
- 195 McMahons Road, owned by Dandy Premix Quarries Pty Ltd, comprised of 2.02ha of freehold land, is the nearest south-west precinct property to WA375.

The majority of the western boundary of WA375 is bounded by McMahons Road, with the balance abutting Dandy Premix Quarries Pty Ltd land at Crown Allotments 49A, 50C and 2051. Crown Allotment 2051 is 1.552ha of a former Government Road between existing WA375 Quarry and Lot 50C. Refer to Figure 4a that shows these allotments in **Attachment A – Figures**.

The existing Yarra Valley Quarry currently occupies an area of 90 ha, while the proposed future extraction area will extend into the adjoining 42.6 ha of 30 Moora Road, Mount Toolebewong, 3777, known as Crown Allotment 50C and Crown Allotment 2051. The quarry access road is sealed for all but approximately 80 metres of its length from the crushing plant to the site entrance on McMahons Road.

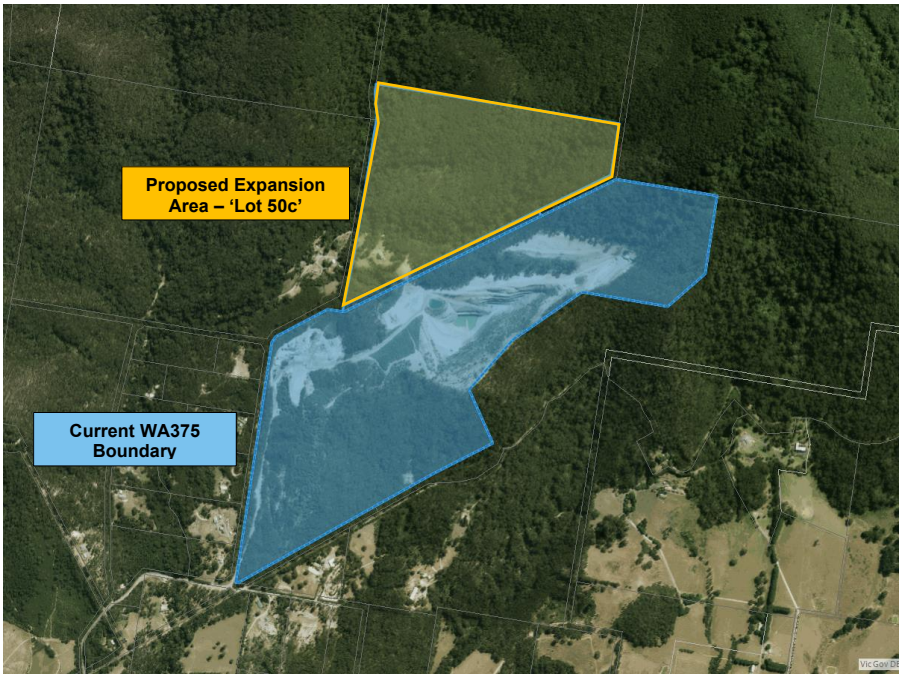

Figure a: Current WA and proposed extension

Short project description (few sentences)**:**

Dandy Premix Quarries Pty Ltd (a wholly owned subsidiary of Maas Group Holdings) has applied for a Work Authority (WA375) Variation and associated Work Plan Variation to vary the size (Work Authority boundary) of the quarry by increasing the current extraction area from 23.3 ha to 42.58ha and the extraction depth (from 155m to 285m) at the existing WA375 quarry, located at 130 McMahons Road, Launching Place, 3139.

The primary resource being extracted at the site is hornfels, which is suited to the production of high-quality crushed rock, concrete, asphalt and sealing aggregates, and are primarily sold to private customers, Local Government and government authorities at a rate of approximately 250,000 – 300,000 tonne/year.

3. Project description

Aim/objectives of the project (what is its purpose / intended to achieve?):

The expansion of the Yarra Valley Quarry seeks to realise the full potential of a known extractive resource at the existing quarry in Launching Place, Victoria. Extractive materials are a key component of construction materials, without which our roads, buildings and schools could not be built without such materials. The expansion of the existing quarry into the adjacent land will supply Victoria with additional essential quarry materials and thereby support and enhance the economic viability of the State. The primary resource being extracted at the site is hornfels which is suited to the production of all grades of crushed rock, concrete, asphalt and sealing aggregates.

Resource definition drilling campaigns have indicated a reserve of 45 Mt of quality hornfels (moderately weathered to fresh hornfels), an estimated 5 Mt of lower quality saleable material, highly weathered to extremely weathered hornfels and clay overburden, to meet recurring market needs over the forecast 70–80-year lifecycle of the quarry expansion, resulting in an estimated total of 50 Mt of saleable material.

Background/rationale of project (describe the context / basis for the proposal, e.g. for siting):

Yarra Valley Quarry quarries rock (hornfels) which is used in the construction industry to make road aggregate and other hard rock products. As the population rises, so does the demand for quarry materials, which has led to greater than anticipated depletion of the existing rock reserves within the Yarra Valley Quarry.

The Yarra Valley Quarry, originally owned and operated by Hornsfeld Resources Pty Ltd, has been operational since the mid-1980's. In 2007, the Yarra Valley Quarry was acquired by Dandy Premix Quarries Pty Ltd (trading as Yarra Valley Quarries Pty Ltd). In November 2022 Dandy Premix Quarries Pty Ltd was purchased by Maas Group Holdings Ltd (MGH) to strengthen the company's capability of supplying the infrastructure, residential, commercial and industrial markets in Victoria.

The existing site is quarried for fresh (unweathered) hornfels. Quarrying has occurred on the site for over 70 years. Prior to hard rock extraction and crushing the site was used for timber production and hill gravel extraction.

Demand for the quarry products has grown considerably over the past few years. The Victorian government is investing an average of over $10 billion per annum over the next four years into new infrastructure such as schools, hospitals and the transport network to cater for this growth in Victoria's population, which has driven demand for hard rock products.

There is approximately 3-5 years of hard rock resource remaining (based on current rates of production) for extraction at the current quarry. The proposed development seeks to realise the full potential of the area.

The existing crushing/screening plant, pugmill and product stockpile areas will remain in their current locations, while overburden from the expanded extraction area will be placed into the existing quarry pit (hole) as part of the progressive rehabilitation. It is not envisaged that the proposal will result in any significant increase in the existing hourly processing rate, while the annual sales production rate is expected to increase moderately from about 300,000 tonnes per annum (TPATPA) currently to approximately 375,000 TPATPA under the Work Plan Variation application.

Main components of the project (nature, siting & approx. dimensions; attach A4/A3 plan(s) of site layout if available):

The main component of the project is the extended quarry area. Other quarry facilities already exist on site and do not require immediate upgrading for the expansion.

The quarry is proposed to extend its operations west, north-west into Dandy Premix freehold property – Crown Allotments 50C and 2051 (42.58ha) land. Expansion into Crown Allotment 50C and 2051 involves the removal of approximately 26 hectares of native vegetation for which first party offsets will be secured in the balance of Crown Allotments 50C (14.8ha) and in Crown Allotments 49A (90.32ha) adjoining to the immediate west of Crown Allotments 50C. Refer to Figure 4a Allotment Plan and Figure 4b Rehabilitation and Biodiversity Plan that shows these allotments in **Attachment A – Figures**.

Ancillary components of the project (eg. upgraded access roads, new high-pressure gas pipeline; off-site resource processing):

As the quarry already exists, it is not anticipated that any upgrades to roads or existing infrastructure will be required.

Key construction activities:

The key construction activity to enable the expansion of the quarry is the removal of topsoil and clay overburden.

Overburden and topsoil will be stripped and initially stockpiled outside the active extraction area, but within the disturbance area, as near as possible to where it will be required for progressive rehabilitation, or temporarily stockpiled within the extraction area for future use in rehabilitation works. Soil stockpiles are shown schematically in Figure 3 Site Layout Plan within **Attachment A**.

Key operational activities:

The site has, and will continue to, employ both traditional soft rock techniques (dozer, excavator, haul trucks) to remove and transport overburden and highly weathered hornfels as well as hard rock extraction techniques, including drill and blast, hydraulic rock breaker, excavators and loaders to extract and load the harder, fresher hornfels; with the extracted material transported around the site via off-road haul trucks to the onsite crushing and screening plant.

Depicted in Figure 3 Site Layout (**Attachment A**) is the typical working face treatment for the site, and a schematic showing the terminal batter configuration (extract shown below).

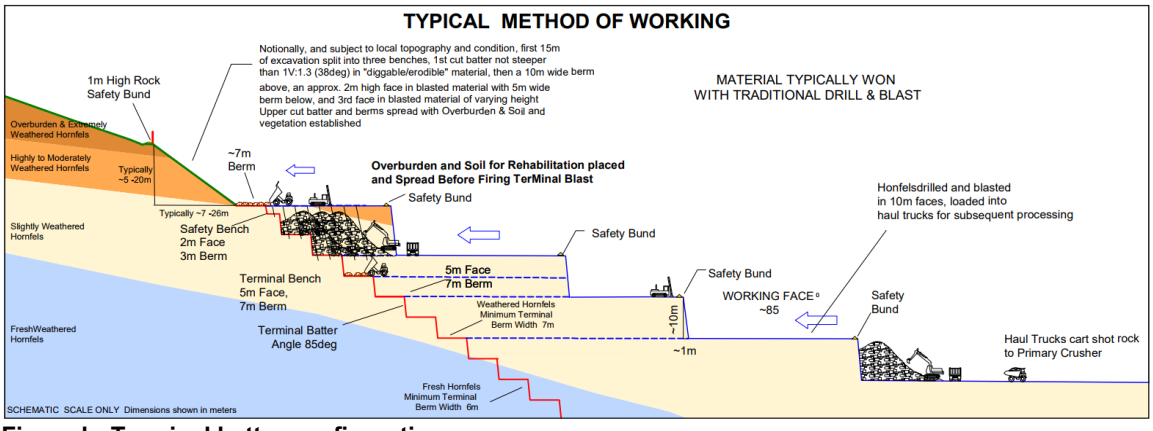

Figure b: Terminal batter configuration

The extraction of rock and its processing is conducted using conventional methods similar to those used at typical hard-rock quarries. These involve:

- removing overburden by excavator and placing it on the eastern and south-eastern batters within the existing quarry hole to progressively achieve the rehabilitation profile (topsoil is separately stockpiled in windrows and used for final rehabilitation as required ahead of revegetation);

- drilling and blasting (typically involving a “shot” approximately every 4 weeks);
- loading broken rock into haul trucks and transporting it to the processing area;
- tipping rock into the primary crushing plant feed hopper;
- separating out “scalps” (soil and poor quality material);
- primary and secondary crushing;
- screening to sales product (size) specifications;
- stockpiling the various sized sale products (e.g. 20mm, 14/10mm and 7mm aggregates);
- screening and blending secondary sales products using a mobile crusher and screens;
- occasional blending some of the aggregate products to customers’ specifications in a pug mill; and
- loading of sales products for transport from the site in covered/tarped bulk quarry materials road trucks.

The extraction area will progressively move in a north-westerly direction from its current location (taking it further away from the nearest sensitive receptors), refer to Figure 3 Site Layout Plan in Attachment A. The existing crushing/screening plant, pugmill, sales loading and product stockpile areas will be retained and remain in their current locations for the foreseeable future.

The total area to be disturbed by this operation, including all roads, hardstands, other earthworks and the extraction area, is estimated to be 48.68 hectares, comprising:

- site access including office / weighbridge	0.55ha
- plant and stockpile area including workshop, fuel store, maintenance shed	4.00ha
- total extraction area	42.58ha
- Site access tracks	1.55ha

Overburden storage (overburden not used in immediate progressive rehabilitation) will be restricted to the worked-out areas of the quarry pit, i.e. will always be within the extraction area, and therefore has not been separately identified.

PROCESSING METHODS & FACILITIES

The site operates with dry processing. There is no washing of material on the site and therefore no production of material wash slimes. Consequently, there is no past history, current requirement, or planned need for slimes dams. There are no changes to the existing main processing plant arrangement or to the stockpiling arrangements.

The broken/blasted material is sorted at the face with a front-end loader and/or excavator to produce the rip rap / armour rock material and transported by haul trucks or trammed to an appropriate stockpiling area within the excavation, and the remainder of the material transported to the processing plant.

Fixed Plant

The site operates a fixed crushing and screening plant for the majority of products. The location and arrangement of the main (fixed) processing plant is not changing from the 2010 approval.

The majority of material suitable for crushing and screening is processed through the main crushing and screening plant. The main processing plant is shown on Figure 3 Site Layout Plan (**Attachment A**) and is located centrally within the plant and sales stockpile area.

Mobile Plant

The site employs (self-powered) mobile crushing and screening units to produce a range of crushed rock products. The location of the mobile crushing and screening plant is shown schematically on Figure 3 Site Layout Plan (**Attachment A**) and is located between the main (fixed) plant and the entry into the quarry extraction pit, out of site from public view and further removed from the nearest off-site sensitive receptor. The mobile processing plant may move around the site in close proximity of the extraction activity area, depending on blasting requirements, product stockpiles and changing traffic management priorities. In addition to the crushing and screening units there are associated stacker and transfer conveyors, and other associated minor items of infrastructure.

The items of mobile equipment most frequently used in extraction activities will comprise an excavator and/or dozer for stripping to remove overburden and highly weathered rock, and a drill rig for drill and blast to extract the harder, fresher rock. Front-end loaders, excavators and haul trucks will be used for material cartage within the site.

Key decommissioning activities (if applicable):

The quarry is required to be rehabilitated as per the work plan requirements under the *Mineral Resources (Sustainable Development) Industries Act 1990*.

The objectives of the Rehabilitation Plan for the site is to leave the rehabilitated land in a safe, stable and sustainable condition, in a form that will be suitable to the proposed end land uses and will not be hazardous to the land users and the public after the completion of quarrying activities.

The affected land will be managed and progressively rehabilitated throughout the quarry life to minimise the impact to the community, as far as reasonably practicable, i.e. without compromising the ability to work the site and the commercial viability of the operation.

The Rehabilitation Plan details the objectives, strategies and design for rehabilitation, as well as the monitoring and criteria for rehabilitation of all domains within the site, up to the final closure of the site. The Rehabilitation Plan objectives will be discussed with the broader community and relevant stakeholders, which are routinely and specifically canvased through implementation of the site Community Engagement Plan.

The YVQ has undertaken progressive rehabilitation and replanting with indigenous plant stock over the life of the quarry. Friends of the Helmeted Honeyeater have been involved in supplying and planting of the indigenous plant stock for rehabilitation purposes. **Attachment L** provides a summary and collection of photographs which present the successful rehabilitation and revegetation of the former extraction areas of the quarry.

Is the project an element or stage in a larger project?

☐ No ☒ Yes If yes, please describe: the overall project strategy for delivery of all stages and components; the concept design for the overall project; and the intended scheduling of the design and development of project stages).

The project is the final stages of expansion of the existing quarry. The final expansion stage of the Yarra Valley Quarry seeks to realise the full potential of a known extractive resource at the existing Yarra Valley Quarry in Launching Place, Victoria.

Is the project related to any other past, current or mooted proposals in the region?

☒ No ☐ Yes If yes, please identify related proposals.

What is the estimated capital expenditure for development of the project?

Project approval that secures resource of 50,000,000 tonne, will “unlock” in order of $25M - $30M of future capital investment for development over ensuing 3-10 year period of the project.

4. Project alternatives

Brief description of key alternatives considered to date (eg. locational, scale or design alternatives. If relevant, attach A4/A3 plans):

There are no other feasible alternatives available to provide for the quarry's expansion.

Expansion into the adjacent quarry owned (Lot 50C) freehold land is considered the only option. Expansion into the more elevated area of Lot 50C with higher biodiversity and visual amenity values and the adjoining Lot 49A parcel of land, have been avoided and these parcels will be secured and protected as biodiversity (Native Vegetation, First Party) offsets.

Brief description of key alternatives to be further investigated (if known)**:**

Not applicable.

5. Proposed exclusions

Statement of reasons for the proposed exclusion of any ancillary activities or further project stages from the scope of the project for assessment:

Not applicable.

6. Project implementation

Implementing organisation (ultimately responsible for project, ie. not contractor)**:**

Regional Quarries Riviera Pty Ltd and Dandy Premix Quarries Pty Ltd (wholly owned subsidiaries of Maas Group Holdings).

Implementation timeframe:

The expansion will allow the quarry to operate for an additional up to 85 years and will occur over a number of stages as described below. Essentially, it is anticipated that the stages will be undertaken in the following timeframes:

- Stage 1 – approximately 23 Years
- Stage 2 - approximately 30 Years
- Stage 3 - approximately 9 Years
- Stage 4 - approximately 21 Years, and
- Final Rehab - 2 Years

Proposed staging (if applicable):

The four stages of extraction are provided schematically in the Figure 3: Site Layout Plan (**Attachment A**).

Stage 1

The first development stage is a northern extension of the operations to an arbitrary limit as shown schematically in Figure 3 Site Layout Plan (**Attachment A**), effectively cutting the extraction area into two similar sized parts. The basis of this is to:

- minimise the initial removal of native vegetation, and therefore disturbed area.
- minimise the impact on the Ure Creek tributaries by delaying the impact on Tributary 3.
- strike an economic balance between accessible saleable rock and overburden removal.
- limit overburden removal so that sufficient room is available for progressive overburden storage.

Extraction operations will continue while simultaneously extending the northern batters to their final profile position. The upper working batters will concurrently be extended in a westerly direction into the area in Crown Allotment 50C and 2051, developing the 7m decoupling berm with a 2m face height on the final northern batter to be followed with successive 7m berms from the 5m high working batters as the terminal profile is established.

Overburden will be placed along the northeast corner of the excavation bounded to the north by the inflexion in the terminal batters and to the south by the edge of the terminal batters.

To allow additional room for this overburden storage, the upper part (320m AHD) of the alignment of Tributary 1 will be moved west along the 320m AHD bench by approximately 300m along a constructed drain and into a designed drainage pathway down the batters. This drain will be designed to cater for the expected flows while preventing erosion of the placed overburden.

As operations continue west, Tributary 2 surface water received upstream from its undisturbed catchment area (above 365m AHD), will combine with water from the disturbed area and be directed down the batter slopes in a drainage pathway to the sump at the bottom of the pit. In addition, part of the Ure Creek catchment area serviced by the Main Tributary (referred to as 'Moora Creek') which in turn, receives drainage flows from Tributary 2 and Tributary 3, will be impacted along the western boundary of the extraction area by a second intersecting of Tributary 2. Similar surface water drainage arrangements to those established for upper reach of Tributary 2 will be established to cater for this lower-level intersection of Tributary 2 on the western boundary.

The current lower-level horizontal alignment of Tributary 2 will be used as a guide to set the direction of the water running into the pit and to the sump in the floor of the excavation. The inflection line created by the change of batter orientation will broadly define design of the water pathway. This drain will be designed to cater for the predicted flows and to prevent erosion of the placed overburden.

Completion of this stage will result in the removal, storage and placement of 30,000m^3 of topsoil, the removal and relocation of up to 1.9 million cubic metres of overburden/extremely weathered Hornfels and the excavation of 3.4 million cubic metres of highly/moderately to slightly weathered and fresh Hornfels (approximately 8.8 mt of plant feed).

Stage 2

Stage 2 development extends the quarry to the full extraction boundary area. It establishes the extraction operation mode for the remainder of the quarry including the establishment of the upper final batters. As the operation extends downwards and away from the steeper topography, larger areas are exposed at the lower levels where the hornfels quality generally improves. These larger areas provide greater flexibility in selecting suitable areas for targeted extraction based on rock quality.

Tributary 3 is intercepted as the upper batters extend northwest and the same methodology of redirecting the surface water runoff as described in Stage 1 (Tributary 2) will be utilised for Tributary 3. A drainage sump will be used to collect incidental water falling on the western part of the excavation as well as surface water intercepted from the local catchment area serviced by the lower level of Tributary 3.

The water from Tributary 3 will be directed into a quarry sump(s) and pumped or directed via gravity to the Holding Dam (approx. 230m AHD) which will be relocated as the extraction progresses. The purpose of the holding dam is to provide a buffer water storage structure which allows water to be pumped from the north or south sumps as required to maintain a dry quarry floor (work area). It also serves as the primary water source for dust suppression of the haul roads. The holding dam will be a semi-permanent structure that will be relocated within the extraction area as required and will eventually be removed once the final pit lake is formed as part of the site rehabilitation, final landform works.

Completion of this stage will result in the removal and storage and placement of 22,000m^3 of topsoil, the removal and relocation of 1.6 million cubic metres of overburden/extremely weathered Hornfels and the excavation of 5.3 million cubic metres of highly/moderately to slightly weathered and fresh Hornfels (approximately 13.8 mt of plant feed).

Stage 3

The main focus of Stage 3 development is deepening of the quarry. This stage results in lowering the quarry floor (work area) down to a range between 220m AHD to 180m AHD. At 217m AHD, a 12m berm will be established as a public egress level for when the pit is rehabilitated and fills with water. Below 210m AHD, the batter profile changes to an 8m wide berm with 10m high faces.

Surface water management is shown in Figure 3: Site Layout Plan (Attachment A). Water will be directed into two water retention structures. The majority of the pit water will be directed into the sump(s) at the bottom of the quarry. The semi-permanent Holding Dam (with an overflow into Tributary 1) located to the south on 230m AHD will be used to collect water falling onto the existing southern overburden dump as well as water collected from the intersected tributary catchments and will continue to be utilised as a source of water for dust suppression operations.

Completion of this stage will result in the removal and relocation of 500,000 cubic metres of overburden/extremely weathered Hornfels and the excavation of 2.0 million cubic metres of highly/moderately to slightly weathered and fresh Hornfels (approximately 5.2 mt of plant feed).

Stage 4

Stage 4 progresses the extraction to the final floor level of 110m AHD. The pit access ramp will be

fully developed and remain as a feature of the rehabilitated landform for access to the water body at 217m AHD.

Completion of this stage will result in the excavation of the remaining 5.8 million cubic metres of fresh Hornfels (approximately 15.6 mt of crusher feed).

Quarried areas and terminal faces are rehabilitated as soon as practicable after they are established. Only those areas approved in the Work Plan will be opened for quarrying and ancillary operations.

7. Description of proposed site or area of investigation

Has a preferred site for the project been selected?

☐ No ☒ Yes If no, please describe area for investigation.
If yes, please describe the preferred site in the next items (if practicable).

General description of preferred site, (including aspects such as topography/landform, soil types/degradation, drainage/ waterways, native/exotic vegetation cover, physical features, built structures, road frontages; attach ground-level photographs of site, as well as A4/A3 aerial/satellite image(s) and/or map(s) of site & surrounds, showing project footprint):

The Yarra Valley Quarry site is situated in the southern foothills of the Yarra Ranges. A small section of the Yarra Ranges National Park is to the immediate east which links to the remaining majority north-east of the site; and the Mount Toolebewong State Forest adjoins the site to the north. The site and surrounds are covered by a Significant Landscape Overlay (Schedule 6), an Environmental Significance Overlay (Schedule 1), an Erosion Management Overlay and a Bushfire Management Overlay.

The Yarra Valley Quarry is situated on the southern margins of the Kinglake Plateau (part of the Kinglake Surface that also includes the Dandenong Ranges) physiographic unit near the junction with Nillumbik Terrain. The Kinglake Plateau is a low-relief erosional surface along the drainage divide to the north and northeast of Melbourne. The plateau is characterized by gently undulating summits, a deeply ferruginised regolith and steep erosional scarps to the adjoining Nillumbik Terrain. The elevation of the plateau is mostly between 500 and 600 metres AHD.

The local topography varies from less than 100 metres AHD along the flood plain of the Yarra River to 750 metres AHD at the summit of Mount Toolebewong. The area is drained by the Yarra River and numerous tributaries, including Ure Creek, originating in the elevated areas surrounding the Yarra River floodplain.

The topography across the existing and proposed expansion area varies from 160 metres AHD at the southwestern corner of the site to 460 metres AHD at the northeastern corner. The floor of the existing pit is at an elevation of about 190 metres AHD.

The YVQ Launching Place site is located on Devonian aged Humevale Formation sediments. The sediments at the quarry site have been metamorphosed to hornfels and quartzite by the Toole-Be-Wong Granodiorite pluton which outcrops about one kilometre north of the current pit.

Site area (if known): …expanded quarry extraction area is approximately 42.58 (hectares)

Route length (for linear infrastructure) …….NA…. (km) **and width** ……NA (m)

Current land use and development:

The majority of the current land use (90.11ha) is the existing quarry (SUZ1) and the proposed area of expansion in Lot 50C (42.58 ha) is a forested area adjacent to the quarry within Dandy Premix Quarries Pty Ltd freehold ownership. It contains a rural residence in a small area of native vegetation clearance which will demolished. The Lot 50C land (RCZ3) is not currently used, nor is it suited to any form of agricultural activity.

Description of local setting (eg. adjoining land uses, road access, infrastructure, proximity to residences & urban centres):

There are a small number of rural living lots to the elevated north of the site on Mount Toolebewong (approximately 1.0kms away) and a residential community of approximately 10 dwellings to the southwest of the site (ranging from approximately 0.6 – 1.2 kms from the proposed extraction activity area in Crown Allotment 50C. There are two dwellings within land owned by Yarra Valley Quarry but these will be removed to facilitate the quarry expansion.

The closest off-site sensitive uses are a number of dwellings on "rural residential/bush blocks" on the western side of McMahons Road. The closest of these dwellings is at 165 McMahons Road, approximately 300 metres southwest from the crushing and screening plant, 600 metres from the existing extraction area and 650 metres from the nearest extent of the proposed future extraction area. The nearest dwellings to the north and south of the proposed future extraction area are located over 800 metres away.

Access to the quarry will continue to be from the existing T-intersection of Dalry Road with McMahons Road, then via the 1.5km of sealed McMahons Road to the intersection of McMahons Road and Parrot Road. Internal access to the proposed extraction area will similarly be along existing quarry haul roads, as well as newly constructed haul roads that would be developed within the expanded extraction area as required.

Planning context (eg. strategic planning, zoning & overlays, management plans):

Under the Yarra Ranges Planning Scheme, the existing Work Authority extent at 130 McMahons Road, Launching Place, is in a Special Use Zone – Schedule 1 (Earth and Energy Resources Industry). The land proposed for the quarry expansion is in the Rural Conservation Zone – Schedule 3 (Conservation values).

Overlays affecting the existing and proposed extraction area are the Erosion Management Overlay, the Environmental Significance Overlay – Schedule 1 (Highest Biodiversity Habitat Areas and Biolink Corridors), the Significant Landscape Overlay – Schedule 6 (Rolling Hills and Bushy Agriculture Landscape) and the Bushfire Management Overlay. Refer to **Attachment B** for the property report indicating zones and overlays for the site and proposed extraction area.

The land is affected by Clause 51.03 and the Upper Yarra Valley and Dandenong Ranges Regional Strategy Plan (the Strategy Plan). Section 46F of the *Planning and Environment Act 1987* requires that the Yarra Ranges Planning Scheme comply with the Strategy Plan. Clause 51.03 and the Schedule to Clause 51.03 implements the Strategy Plan within the Scheme. Chapter 15.03 of the Strategy Plan prohibits the establishment of new extractive industry operations on certain land in the Yarra Ranges Shire, including the expansion land. In *Dandy Premix Quarries Pty Ltd v Yarra Ranges SC* [2020] VCAT 569, the Victorian Civil and Administrative Tribunal declared that the expansion of the quarry at 130 McMahons Road into the surrounding land is not a 'new' extractive industry operation for the purposes of Clause 51.03 and is not prohibited.

The existing quarry (WA375) operates under Planning Permit YR-2010/58, (and amended on 23 December 2010 under YR-2010/58/A), which applies only to the existing quarry and the land at 130 McMahons Road, Launching Place. To facilitate the expansion of the existing quarry into 30 Moora Road, Mount Toolebewong (including Crown Allotment 50C and Crown Allotment 2051), a new 'omnibus' planning permission is proposed to be obtained that will encompass the existing approvals under YR-2010/58 in addition to the planning permissions required to allow for the expansion of the quarry.

Local government area(s):

Shire of Yarra Ranges.

8. Existing environment

Overview of key environmental assets/sensitivities in project area and vicinity
(cf. general description of project site/study area under section 7)**:**

The YVQ site is approximately 55 kilometres east of Melbourne's CBD. The study area the subject of the quarry expansion is situated in the foothills of the Yarra Ranges. The area of expansion (Crown Allotment 50C and 2051) is located adjacent to the existing operating quarry which has been subject to stone and gravel extraction activities for over four decades. The site and surrounds are covered by a Significant Landscape Overlay (Schedule 6).

The study area for the YVQ expansion covers approximately 132.9 hectares, comprising approximately 42.58 hectares in the proposed Lot 50C and 2051 extension site and an additional 90.32 hectares in Lot 49A being the majority of the proposed native vegetation offset site (15.47 hectares of offset site available in the non-impact area balance of Lot 50C).

The study area is modelled to contain Riparian Forest (EVC 18), Damp Forest (EVC 29) and Shrubby Foothill Forest (EVC 45), EVCs (NatureKit Map, DEECA 2023a). Based on the approximate age of the forest and indicators of logging truck infrastructure (turnaround bays etc.), confirms that historical land use within the study area included logging operations.

The area comprises remnant vegetation as well as residential dwellings and associated infrastructure in the south-west corner. The quarry and its surrounds contain substantially steep slopes, with west and east facing aspects, a ridge line through the centre of the study area in the north and contains three drainage/tributary lines traversing the study area east to west, then south to Ure Creek located in the southern extent of Lot 49A.

The existing quarry and adjoining Lot 50C expansion site are located within a densely vegetated Eucalypt Forest. The vegetation effectively screens the quarries operational area from the majority of external views.

The Foothills landscape within the study area includes a mosaic of existing clearings along the lower slopes which include farmland and rural residential properties, the clearings become a component of the wider view which includes limited background views of the existing operational quarry.

9. Land availability and control

Is the proposal on, or partly on, Crown land?

☒ No ☐ Yes If yes, please provide details.

Current land tenure (provide plan, if practicable):

The quarry site comprises the following properties:

- PC 364849Q (Oct 2010), the existing consolidated area of WA375,
- Crown Allotment 50C, containing the proposed expanded extraction area, and
- Crown Allotment 2051, the former Government Road provision purchased by Dandy Premix Quarries Pty Ltd in 2016.

These freehold titles are held by Regional Quarries Riviera Pty Ltd and Dandy Premix Quarries Pty Ltd, both wholly owned subsidiaries of the ASX listed Maas Group Holdings (MGH).

Dandy Premix Quarries Pty Ltd also owns the adjacent land at Crown Allotment 49C (215 McMahons Road Mount Toolebewong) and 195 McMahons Road Mount Toolebewong.

Intended land tenure (tenure over or access to project land):

Not changed

Other interests in affected land (eg. easements, native title claims):

No Easements and one unregistered Lease Caveat to Eastern Energy for power access.

No Native Title Claims.

10. Required approvals

State and Commonwealth approvals required for project components (if known):

The proposed YVQ expansion will require a variation to existing Work Authority 375 under the *Mineral Resources (Sustainable Development) Act 1990* and new planning permission under the *Planning and Environment Act 1987.*

In accordance with the *Mineral Resources (Sustainable Development) Act 1990,* an Approved Work Plan will be required which will include a condition (and rehabilitation liability bond) for a Rehabilitation Plan demonstrating the progressive rehabilitation of the land disturbed by the Project, and proposed future land use for the site.

A planning permit is required under the *Planning and Environment Act 1987* for use and development and removal of native vegetation.

A works on waterways permit from the Port Phillip and Westernport Catchment Management Authority is likely to be required where any action impacts on waterways within the study area. The expansion of YVQ is unlikely to impact on any registered waterways.

Have any applications for approval been lodged?

☐ No ☒ Yes If yes, please provide details.

A Work Authority Variation and Work Plan Variation to increase the Work Authority area boundary, to extend the extraction area and increase the extraction depth at WA375 for the Yarra Valley Quarry was lodged on 3rd July 2024 with Earth Resources Regulator (ERR) branch of the Department of Energy, Environment and Climate Action (DEECA).

Approval agency consultation (agencies with whom the proposal has been discussed):

Earth Resources Regulator – Resources Victoria (DEECA)

Other agencies consulted

Department of Transport and Planning (Development Facilitation Program)
Parks Victoria
DEECA-Environment (formerly DELWP)
Melbourne Water
Southern Rural Water

PART 2 POTENTIAL ENVIRONMENTAL EFFECTS

11. Potentially significant environmental effects

Overview of potentially significant environmental effects (identify key potential effects and comment on their significance and likelihood, as well as key uncertainties):

Flora and Fauna

The study area assessed by EHP (Ecological assessment - **Attachment C**) covers approximately 131 hectares of predominantly eucalypt forest, comprising approximately 26 hectares in the proposed extension area and an additional 105 hectares in the potential offset areas. Much of the lower part of the study area compromises approximately 70-80-year old regrowth eucalypt forest, confirmed as being previously impacted by historical logging operations.

Native vegetation in the study area is representative of three EVCs: Riparian Forest (EVC 18), Damp Forest (EVC 29) and Shrubby Foothill Forest (EVC 45). The presence of these EVCs is generally consistent with the modelled pre-1750s native vegetation mapping (DEECA 2023c).

There are some patches of intact older-growth forest, largely confined to the higher elevation gullied areas, that provide greater nesting, protective habitat and dispersal opportunities for fauna. In these areas, middle storey species such as tree ferns are more common, and a greater proportion of large hollow-bearing trees remain. There is habitat connectivity between the study area and Mount Toolebewong State Forest, which is directly adjacent to the study area along the northern and western boundaries. Several upper area gullies and riparian habitats in the proposed offset areas are likely to act as important dispersal corridors for native fauna moving between the study area and Mount Toolebewong State Forest.

Flora

Targeted surveys for the following State and nationally significant flora species were undertaken across the proposed extraction areas; Clover Glycene *Glycine latrobeana*, Maroon Leek-orchid *Prasophyllum frenchii*, Green-striped Greenhood *Pterostylis chlorogramma*, Round-leaf Pomaderris *Pomaderris vacciniifolia*, Matted Flax-lily *Dianella amoena* (EPBC Act), Purple Eyebright *Euphrasia collina* subsp. *Muelleri*, River Swamp Wallaby-grass *Amphibromus fluitans* and additional FFG Act listed flora that may occur in the study area. However, no national or State significant flora were recorded during the site surveys and based on the result of the detailed surveys there is a low likelihood that any significant flora species are present within the proposed extraction area.

Fauna

Two species of national significance, listed as Endangered under the *Environment Protection Biodiversity and Conservation Act 1999* (Greater Glider *Petauroides Volans* and Gang-gang Cockatoo *Callocephalon fimbriatum*) and three species of State FFG Act significance (Dingo *Canis lupus dingo* and Powerful Owl *Ninox strenua*, both listed as Vulnerable and Lace Monitor *Varanus varius, listed as Endangered*) were detected within the study area during the targeted fauna surveys. The likelihood of any additional National or State significant fauna occurring within or adjacent to the impact area is considered low by EHP due to the absence of suitable habitat and/or lack of records in proximity to the study area.

A referral is in the process of being submitted under the EPBC Act 1999.

Amenity

The quarry expansion is not expected to have any major effects on human health. However, noise, blast impacts (airblast, vibration and fly rock) and dust modelling and assessments have been undertaken.

Private properties in the surrounding area include mixed-use broadacre farmland, hobby farms and rural residential properties located among the foothills southwest of the quarry and north near the summit of Mount Toolebewong. Twenty-three sensitive receptors are identified within 1.5 km

of the proposed extension area. The closest house (on property not under ownership of YVQ) is 165 McMahons Road at a minimum distance of 660m from the proposed extraction limit.

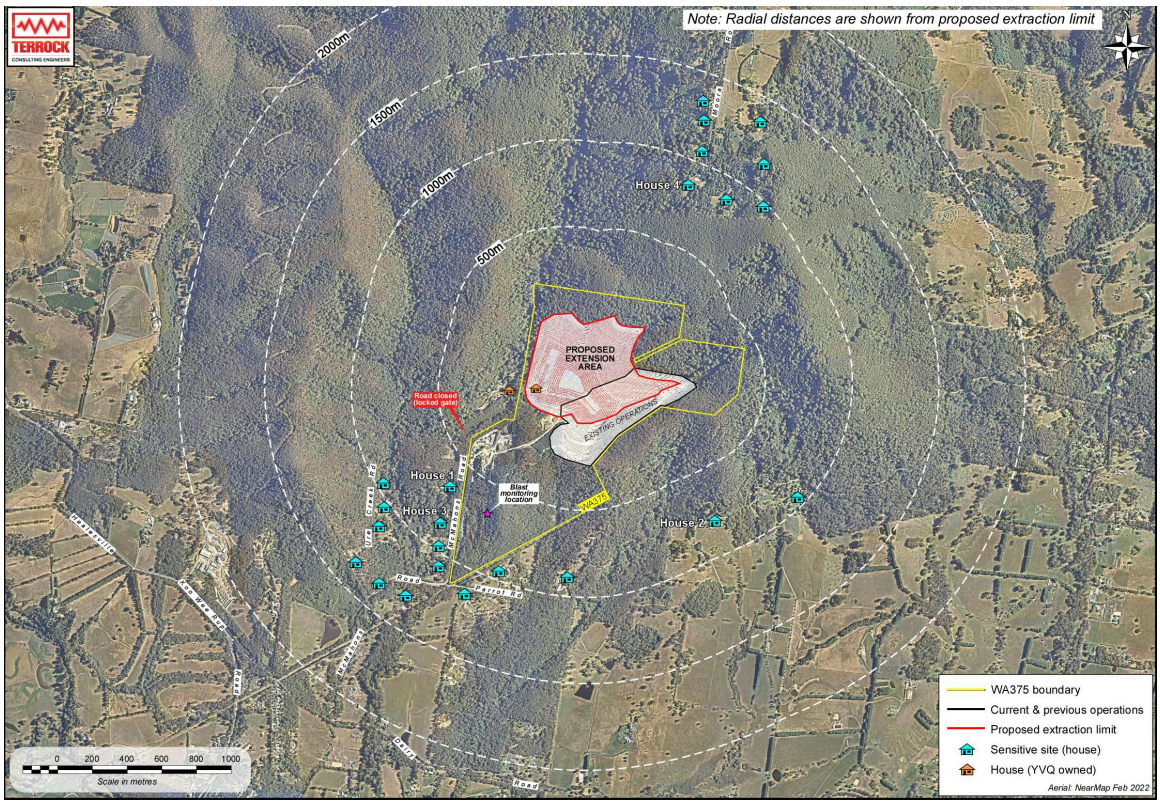

Figure c: Closest Sensitive Receptors *(Source: Appendix 1 Attachment E Blasting Assessment, Terrock)*

Dust emissions

Particulate emissions from the existing quarry's operations have been observed as being very low in the vicinity of the nearest sensitive receptors. Dust emitted from the expanded quarry is not expected to lead to severe or chronic health or safety hazards over the short or long term. The modelling detailed in Appendix 5 of the Dust Assessment (**Attachment D**) predicts that respirable crystalline silica (RCS) concentrations will be well below EPA Victoria's criterion at the nearest sensitive receptor. RCS will be monitored initially each month by co-locating a $PM_{2.5}$ mid-volume sampler beside the 'FDS17' optical dust monitor for 7-day periods and analysing the material collected on the filter for crystalline silica. It is anticipated that monitoring for twelve months will be sufficient to confirm that RCS is not an issue of concern at sensitive receptors.

Airblast, fly rock and vibration (blasting)

DEECA regulate the allowable vibration and airblast levels associated with quarrying. The existing quarry's blast monitoring record shows low levels of ground vibration and airblast impacts occur in the area southwest of the quarry (McMahons Road) where the closest sensitive receptors are located. The absence of complaints from residents indicates that blast vibration levels and impacts to amenity are low and generally imperceptible at locations around 1 kilometre from blast sites. An average of one blast per month is currently needed to meet production targets.

Because the extraction area is proposed to be expanded in a northwest direction, the separation distances from sensitive receptors to the southwest will be similar to those for current operations. At sensitive receptors along Moora Road to the north, the separation distance from the quarry would reduce by approximately 200m. This would result in a modest increase of ground vibration and airblast levels at sensitive sites from blasts near the northern extraction limit, though the separation distances are sufficient for levels to remain generally low and well within DEECA's acceptable limits.

The effects of blasting is expected to have a low or negligible impact to native fauna. Blasting impact assessment report is provided at **Attachment E**.

Noise (operations)

A Noise assessment was undertaken by Watson Moss Growcott Acoustics for the proposed extension of extractive operations (**Attachment I**). The main variable identified from existing operations will be the location of mobile equipment closer to sensitive receptors to the north of the quarry, with noise impacts most acute in the initial stages of extraction.

The assessment monitored current and modelled proposed noise emissions and found that:

- Noise emissions associated with existing early morning operations prior to 07.00am are not compliant with Noise Protocol Night period noise limits, due to noise associated with trucks entering and exiting the site.

- Trucks entering the quarry between 06.30am – 07.00am will be managed to ensure noise compliance (Noise Protocol Night period) or entry will be prohibited until 07.00am (Noise Protocol Day period) to ensure noise compliance. To minimise the impacts of low frequency noise on nearby sensitive receptors from the movement of sales trucks, noise control strategies concerning truck movements will be included as part of the noise management plan for the quarry.

- Following relocation of the mobile primary crushing plant, noise emissions associated with the day period operations are modelled and have been confirmed by monitoring, to comply with the Noise Protocol Day period noise limits

Visual and Landscape values

The proposed quarry development is an extension to the existing quarry extraction operations and therefore only the extension of the extraction area into adjoining Lot 50C has been necessary to consider as a landscape impact. The following points include the anticipated landscape changes:

- New impacts will be introduced for several visual receptors that currently do not have views of the quarry, typically in the range of 1-3km from the quarry's boundaries. These impacts are considered to be low in both the nature of change and the magnitude of the change
- Vegetation clearing through staged expansion of the quarry's extraction operations will create a clear change to the moderate landscape value of the Mount Toolebewong Foothills within the quarry site.
- However, it will not be obvious or have a dominant effect and will be visually mitigated over time through progressive revegetation.
- The extracted and remnant vegetation terraced bench and batters, resulting from the quarrying operation will extend the current extraction area to the north, north-west and re-profile some of the existing topographic landform.
- Two existing drainage lines in Lot 50C will be progressively altered due to extraction activities, but their ephemeral flows will continue to be diverted to ensure the ecological health of their receiving tributary waterway and thereafter the lower reach of Ure Creek.
- Mitigation measures have been recommended in the Visual Impact Assessment at **Attachment F** to minimise landscape impacts, including progressive rehabilitation of the new quarry area to replace removed vegetation.

The Landscape and Visual Impact assessment is provided as **Attachment F**.

12. Native vegetation, flora and fauna

Native vegetation

Is any native vegetation likely to be cleared or otherwise affected by the project?

☐ NYD ☐ No ☒ Yes If yes, answer the following questions and attach details.

What investigation of native vegetation in the project area has been done? (briefly describe)

Ecology and Heritage Partners Pty Ltd (EHP) has been engaged by YVQ since 2020 to undertake detailed ecological investigations across a study area of 125 hectares to determine the presence or absence of any significant flora and fauna species. Assessments were undertaken in 2020 and again in 2024. **Attachment C** – Ecological Assessment, EHP 2024 incorporates all assessments undertaken and is attached to this referral.

Flora - Surveys for significant flora species were undertaken over five days in Spring 2020 (28, 29 and 30 September, and 16, 17 November 2020, and 16, 26 March 2024)

Ure Creek Assessment - A zoologist and botanist undertook a baseline assessment of ecological values along two 400 metre stretches of Moora Creek and Ure Creek on 16 and 26 March 2024. The study areas were upstream and downstream of the proposed entry point for quarry water discharge into the creek and included areas within 10 metres of the creek line including the creek itself.

What is the maximum area of native vegetation that may need to be cleared?

☐ NYD Estimated area ……approximately 26…….(hectares)

Up to 200 large trees (scattered and in patches) are proposed to be removed within the extraction area as part of the of native vegetation clearing impact.

How much of this clearing would be authorised under a Forest Management Plan or Fire Protection Plan?

☒ N/A …… approx. percent (if applicable)

Which Ecological Vegetation Classes may be affected? (if not authorised as above)

☐ NYD ☒ Preliminary/detailed assessment completed. If assessed, please list.

Native vegetation in the study area is representative of three EVCs: Riparian Forest (EVC 18), Damp Forest (EVC 29) and Shrubby Foothill Forest (EVC 45). The presence of these EVCs is generally consistent with the modelled pre-1750s native vegetation mapping (DEECA 2023c).

Table 7 of the Ecological Assessment (**Attachment C**) provides a summary of the EVC's to be removed as part of the quarry extension. These EVC's are of 'least concern' conservation status.

Bioregion	EVC	BCS	Mapped Area (ha)
Highlands – Southern Fall	Riparian Forest (EVC 18)	Least Concern	2.14
	Shrubby Foothill Forest (EVC 45)	Least Concern	10.34
	Damp Forest (EVC 29)	Least Concern	12.94

Have potential vegetation offsets been identified as yet?

☐ NYD ☒ Yes If yes, please briefly describe.

Approximately 107 hectares of adjacent forested area will be provided as a first party offsets and conservation area. The proposed offset area currently provides habitat for a range of fauna that prefer closed eucalypt forest and riparian forest.

Offset sites must be protected in perpetuity with an on-title security agreement. A first party offset security Landowner Agreement via a Section 69 agreement under the *Conservation Forests and Lands Act 1987* is proposed to be established on the Lot 49A (90.32ha) land parcel directly to the

west of the proposed extraction area, along with the remaining (non-impact) balance of Lot 50C (15.47ha) and 195 McMahons Road (Lot 54B, Part, 2.02ha) for the required offsets.

EHP also provide a number of management measures to assist with habitat creation and recommended plans to be prepared such as a Biodiversity and Rehabilitation Management Plan.

A further site assessment of the proposed offset site will be undertaken during the Spring 2024 timeframe to confirm updated/current values.

Other information/comments? (eg. accuracy of information)

NYD = not yet determined

Flora and fauna

What investigations of flora and fauna in the project area have been done?
(provide overview here and attach details of method and results of any surveys for the project & describe their accuracy)

Investigations of flora are outlined in the previous section.

Fauna

A total of 230 person-hours of survey for terrestrial fauna were undertaken in the spring periods of 2020 and 2021 and the summer of 2021, and comprised fauna habitat assessments, incidental observations, spotlighting, nocturnal call playback surveys, infra-red remote camera surveys, and active searching. An additional 28 person-hours of survey for terrestrial and aquatic fauna was undertaken in March 2024 along two sections of Ure Creek. Table 4 in **Attachment C** - Ecological Assessment provides the following details regarding fauna surveys:

Survey technique	Significant species or groups targeted, or with potential to be detected using the technique	# Sites	Total survey effort
Habitat assessments and incidental observations of fauna	N/A	Entire survey area, with detailed assessments completed at each survey site	Duration of the survey period
Spotlighting	Significant owl, mammal, and reptile species listed in Table A3.2, Appendix 3.2	Spotlighting transects undertaken throughout the study area	Four nights of spotlighting across the study area (17, 18, 19, 26 November 2020)
Nocturnal call playback	Powerful Owl, Sooty Owl, Masked Owl	Six sites across the study area (CPB1-CPB6)	At least one call playback event completed at each survey site during each survey event
Infra-red remote camera trapping	Greater Glider, Leadbeater's Possum, Smoky Mouse, Spot-tailed Quoll, Brush-tailed Phascogale, Lace Monitor	Proposed extension area: 30 cameras comprising 6 arboreal camera sites, 10 ground camera sites. Potential offset areas: four cameras comprising one arboreal camera site and one ground camera site	At least 30 survey nights per camera
Active searching	Curve-tail Burrowing Crayfish	Active searching during transects in the study area	Duration of nocturnal survey transects

Incidental observations of fauna were recorded during field assessments. Species included Gang-gang Cockatoo *Callocephalon fimbriatum* (listing upgraded to Endangered under the EPBC Act on 2 March 2022), Crimson Rosella *Platycercus elegans,* Rose Robin *Petroica rosea,* Laughing Kookaburra *Dacelo novaeguineae*, and Tiger Snake *Notechis scutatus.* Camera trapping during October-November 2020 recorded a variety of common arboreal and ground-dwelling species including Swamp Wallaby *Wallabia bicolor*, Short-beaked Echidna *Tachyglossus aculeatus,* Common Wombat *Vombatus ursinus* and Common Brushtail Possum *Trichosurus vulpecula.*

Several common arboreal mammals were detected during spotlighting over November 2020, including Ringtail Possum *Pseudocheirus peregrinus*. The FFG Act listed Dingo *Canis lupus dingo* was also recorded within the proposed extraction area, with characteristic white paws and tail tip, as well as black lips and nose.

- Burrowing Crayfish *Engaeus sp*

Evidence of Burrowing Crayfish *Engaeus sp.* was present throughout the study area, and most prevalent near watercourses. Burrowing Crayfish holes and their characteristic mounds were recorded in the proposed extension and the surrounding potential offset areas. Based on the known distribution of Burrowing Crayfish species, it is likely the holes belong to one of three species: State significant Curve-tail Burrowing Crayfish, Central Highlands Burrowing Crayfish *Engaeus affinis* or Tubercle Burrowing Crayfish *Engaeus tuberculatus* (DEECA 2024a). Burrowing Crayfish in the study area were not able to be identified to species level as this would require direct observation of the species, which typically requires the use of tunnel tube traps.

- Southern Greater Gliders

Two Southern Greater Gliders were detected within the proposed extension area during spotlighting surveys, and a further four Southern Greater Gliders were detected in the western potential offset area. The species were recorded on the 17 and 19 of November 2020 and observed sitting in canopy tree species (eucalypts).

Southern Greater Gliders were detected in higher numbers in the potential offset areas compared to the proposed extension area. While the entire study area provides suitable habitat for Southern Greater Glider, habitat quality for the species is comparatively higher in the potential offset areas, due largely to the greater density of hollow-bearing trees and absence of edge-effects likely to be present in the proposed extension area.

- Lace Monitor

One State significant Lace Monitor was detected on a ground remote camera, during the camera trapping survey.

- Powerful Owl

One Powerful Owl adult was detected within the proposed extension area during call playback surveys on 18 November 2020. A further two juvenile Powerful Owls were observed and heard calling in the western potential offset area during spotlighting transects on two occasions (19 and 26 November 2020), while a further one adult was detected in the western potential offset area (18 August 2021). The adult Powerful Owl in the proposed extension area was observed sitting in a canopy tree and is likely to have flown in following call playback projection. The two juvenile Powerful Owls were observed on both occasions to be moving frequently between trees in the southern extent of the western potential offset area.

While a breeding pair of Powerful Owls are likely to have nested in the vicinity of the study area, there is no evidence of a Powerful Owl nest tree in the proposed extension area. This was confirmed during a field assessment in the proposed extension area on 23 December 2020. The assessment confirmed the presence of 20 hollow-bearing trees in the proposed extension area that may be suitable for Powerful Owl nesting.

Powerful Owls typically have a home range of between 1,000 and 5,000 hectares (Soderquist and Gibbons 2007). In this context, it is likely the local Powerful Owl breeding pair and juveniles utilise the entire surrounding landscape, including the proposed extension area for foraging and roosting activities.

In regard to the species described above, EHP state that the loss of vegetation as part of the quarry expansion is highly unlikely to result in the long-term loss of a significant proportion of these species' habitat (i.e. 1-5%) given these species occupy a large habitat range across much of the Victorian alpine region to the further east of Melbourne.

Have any threatened or migratory species or listed communities been recorded from the local area?

☐ NYD ☐ No ☒ Yes If yes, please:

- List species/communities recorded in recent surveys and/or past observations.
- Indicate which of these have been recorded from the project site or nearby.

One nationally significant and 42 State significant flora species have been previously recorded within 5 kilometres of the study area (DEECA 2024a) – refer to Figure 3 of **Attachment C**.

Twenty-one nationally significant and 37 State significant fauna species have been previously recorded within 5 kilometres of the study area (DEECA 2024a) (refer to Figure 4 of **Attachment C**). Of these species, Southern Greater Glider (listed as Endangered under the EPBC Act), Gang-gang Cockatoo (listed as Endangered under the EPBC Act), Powerful Owl (Vulnerable under the FFG Act), Dingo (Vulnerable under the FFG Act) and Lace Monitor (Endangered under the FFG Act) were recorded in the study area during surveys.

Additionally, habitat assessed by EHP as suitable within the study area for the nationally significant Brown Treecreeper, Yellow-bellied Glider, Pilotbird, and Leadbeater's Possum, as well as the State significant Platypus, Curve-tail Burrowing Crayfish, Sooty Owl, and Southern Toadlet. However, several of these species were investigated, and not detected, during targeted surveys by EHP and are therefore considered unlikely to occupy the study area.

The table below provides a summary (refer to Table 11 of **Attachment C**).

Species	Listing	Suitable habitat within the Project Site	Closest VBA records	Presence within study area
Southern Greater Glider	Endangered (EPBC Act)	Large hollow-bearing trees suitable for nesting are present. Foraging opportunities available including young leaves and nectar from Eucalyptus and Corymbia species	104 records within 10km of study area. Most recently recorded in 2021	Recorded during targeted surveys
Gang-gang Cockatoo	Endangered (EPBC Act)	Potential foraging and roosting opportunities present in the form of large tree hollows	184 records within 10km of study area. Most recently recorded in 2020	Recorded incidentally
Brown Treecreeper	Vulnerable (EPBC Act)	Some open eucalypt forest and suitable nesting hollows present	5 records within 10km of study area. Most recently recorded in 2019	Not recorded during surveys
Yellow-bellied Glider	Vulnerable (EPBC Act)	Large hollow-bearing trees suitable for nesting are present. Foraging opportunities available including sap and nectar	78 records within 10km of study area. Most recently recorded in 2020	Not recorded during targeted camera trapping and spotlighting
Pilotbird	Vulnerable (EPBC Act)	Habitat present in the form of thick understorey, particularly along preferred foraging areas such as gullies and riparian corridors	26 records within 10km of study area. Most recently recorded in 2019	Not recorded during surveys
Leadbeater's Possum	Critically Endangered (EPBC Act)	Large hollow-bearing trees suitable for nesting and adequate middle-storey acacia species to enable dispersal are present. Foraging opportunities available including lerp and sap	26 records within 10km of study area. Most recently recorded in 2021	Not recorded during targeted camera trapping and spotlighting

Powerful Owl	Vulnerable (FFG Act)	Suitable large tree hollow nesting and foraging opportunities in study area	63 records within 10km of study area. Most recently recorded in 2022	Recorded during targeted surveys
Lace Monitor	Endangered (FFG Act)	Suitable habitat in the form of large tree hollows, gullied and forested areas	24 records within 10km of study area. Most recently recorded in 2019	Recorded during targeted surveys
Dingo	Vulnerable (FFG Act)	Suitable forested habitat	1 record within 10km of study area. Most recently recorded in 2015	Recorded during camera trapping surveys
Platypus	Vulnerable (FFG Act)	High-quality vegetated, permanent streams (Ure Creek) present	82 records within 10km of study area. Most recently recorded in 2021	No targeted surveys undertaken
Curve-tailed Burrowing Crayfish	Endangered (FFG Act)	Evidence of Burrowing Crayfish was present throughout the study area, and most prevalent near watercourses	n/a	No targeted surveys undertaken
Sooty Owl	Endangered (FFG Act)	Suitable large tree hollow nesting and foraging opportunities in study area	38 records within 10km of study area. Most recently recorded in 2020	Not recorded during targeted spotlighting surveys
Southern Toadlet	Endangered (FFG Act)	Some suitable habitat in the form of forested areas containing ephemeral drainage lines and gullies	31 records within 10km of study area. Most recently recorded in 1978	No targeted surveys undertaken

If known, what threatening processes affecting these species or communities may be exacerbated by the project? (e.g. loss or fragmentation of habitats) Please describe briefly.

EHP (Table 14, **Attachment C**) have identified the following potential threatening processes that may occur due to the project:

- Alteration to the natural flow regimes of rivers and streams
- Habitat fragmentation for fauna
- Invasion of native vegetation by environmental weeds
- Loss of hollow bearing trees

Are any threatened or migratory species, other species of conservation significance or listed communities potentially affected by the project?

☒ NYD ☒ No ☒ Yes If yes, please:

- List these species/communities:
- Indicate which species or communities could be subject to a major or extensive impact (including the loss of a genetically important population of a species listed or nominated for listing) Comment on likelihood of effects and associated uncertainties, if practicable.

As noted above, some of the species recorded within 5km radius of the study area (site) have been recorded in the proposed quarry extension area or within the proposed offset site.

Is mitigation of potential effects on indigenous flora and fauna proposed?

☒ NYD ☒ No ☒ Yes If yes, please briefly describe.

Approximately 107 hectares of adjacent forested areas will be provided as an offset and conservation area. Refer to Figure 4 of Attachment A – Rehabilitation and Biodiversity Offset Plan.

Other information/comments? (e.g. accuracy of information)

13. Water environments

Will the project require significant volumes of fresh water (eg. > 1 Gl/yr)?

☐ NYD ☒ No ☐ Yes If yes, indicate approximate volume and likely source.

Process water (which is clean water used for crushing plant, transfer conveyors and product stockpiles dust suppression, equipment washdown or for irrigation of rehabilitated areas) is obtained from the combination of rainfall collection from the catchment that services the Main Dam and water pumped from the extraction pit sump(s) to the Holding Dam. The site water cart used for dust suppression on haul and access roads is filled from the Holding Dam.

Typical annual water usage for the quarry (as based on the predicted sales / operation) is in the order of 10-15 megalitres per annum for dust suppression. There is no mains water supply to the site. There are no amenities or other infrastructure requiring a continuous supply of potable water and bottled drinking water is available on site for employees and visitors.

The site receives an average annual rainfall in the order of 900 - 1100mm and adequate rainwater is collected and stored in tanks for site use. Rainfall is collected by drains and directed to the quarry sump(s) located in the base of the excavation pit. The exact location of sumps, pipes, drains and pumps is dynamic as excavation progresses. The overriding principal is to direct surface water to the lowest point(s) in the base of the excavation, i.e., the quarry sump(s), which are designed to keep the pit floor dry and keep water away from the extraction faces.
The extraction pit is to be operated dry and dewatering of surface water collecting in the pit from the pit sump will be required. Any collected rainfall on disturbed areas is adequately contained to settle within the appropriately sized pit sump(s) with regular dewatering by pump to the Holding Dam above, where further settling and site use occurs.

The terminal pit floor will be approximately 100m below the monitored upper groundwater level and extraction activities will therefore intersect/encounter groundwater in fractured rock at some point. A full groundwater impact assessment has been undertaken by John Leonard Consulting Services (JLCS) and is attached as Hydrogeological Assessment (**Attachment G**). Four groundwater observation bores are installed on the Dandy Premix freehold land. Current advice is that groundwater take and use licences are not required, however if groundwater licensing becomes necessary, it will be obtained as and when required.

Will the project discharge waste water or runoff to water environments?

☐ NYD ☒ No ☐ Yes If yes, specify types of discharges and which environments.

There will be no discharge of dirty / waste water from the site. Stormwater runoff from any disturbed areas within the quarry will be captured and stored in a system similar to the current operation to ensure no polluted or sediment laden runoff discharges out of the work authority area unless approved under an EPA Licensed Discharge.

The quarry sumps are well below the existing or rehabilitated ground level and the capacity of the quarry sumps throughout the life of the quarry will be sufficient to accommodate storm events. If necessary, these sumps and settling facilities can be drained with pumps and the water used to irrigate rehabilitated areas of the quarry. Excess sediment will be removed and incorporated into site rehabilitation/revegetation.

In the context of extractive industries, sediment-laden water is water that contains natural solids from material rinsing, dust suppression and from surface water collecting within the disturbed area that is directed to sediment traps/basins. There will be no washing of material on this site and no production of slimes, so no significant volumes of sediment-laden water will be produced.

Rainfall collected within the excavated and disturbed areas will be directed to quarry sumps and settling pits within the excavation or to sediment traps/basins, or a settling dam(s).

A Surface Water Management Plan has been prepared and forms part of the Work Plan variation application.

Are any waterways, wetlands, estuaries or marine environments likely to be affected?

☐ NYD ☐ No ☒ Yes If yes, specify which water environments, answer the following questions and attach any relevant details.

The proposed expansion of the extraction area will result in the surface runoff flows from three drainage lines (ephemeral tributaries) of Ure Creek being captured and redirected to the base of the expanded Extraction Pit (referred to as Tributary 1, Tributary 2 and Tributary 3) – see below.

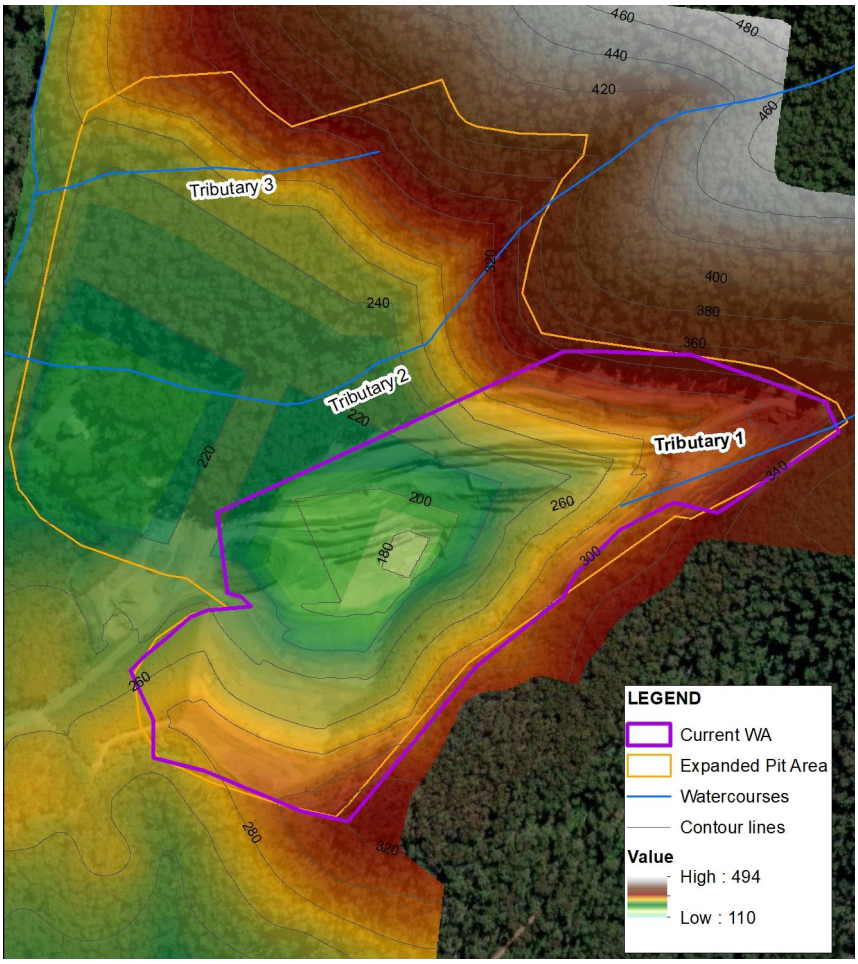

Figure d: Tributaries (*Source: Figure 6-4 of Attachment H – Hydrology Assessment (Water Technology, Nov 2023))*

Are any of these water environments likely to support threatened or migratory species?

☒ NYD ☐ No ☐ Yes If yes, specify which water environments.

EHP has surveyed evidence of the presence of burrowing crayfish, however the particular species has not been determined.

Are any potentially affected wetlands listed under the Ramsar Convention or in 'A Directory of Important Wetlands in Australia'?

☐ NYD ☒ No ☐ Yes If yes, please specify.

Could the project affect streamflows?

☐ NYD ☐ No ☒ Yes If yes, briefly describe implications for streamflows.

The water balance modelling suggests there is minimal change in daily and annual flow rates to Moora Creek (informally 'named' as the main north-south tributary to Ure Creek into which Tributaries 1, 2 and 3 ephemerally drain) and therefore Ure Creek throughout the operational period of the quarry.

To allow additional room for the overburden storage, the upper part (320m AHD) of the alignment of Tributary 1 (refer to Figure 3 within **Attachment A** and figures through **Attachment H** –

Hydrology Assessment, Water Technology) will be moved west along the 320m AHD bench by approximately 300m along a constructed drain to flow into a designed drainage pathway down the batters. This drain will be designed to cater for the expected flows while preventing erosion of the placed overburden.

As operations continue west, Tributary 2 surface water received upstream from its undisturbed catchment area (above 365m AHD), will combine with water from the disturbed area and be directed down the batter slopes in a drainage pathway to the sump at the bottom of the proposed pit. In addition, part of the Ure Creek catchment area serviced by the Main Tributary (referred to as 'Moora Creek') which in turn, receives drainage flows from Tributary 2 and Tributary 3, will be impacted along the western boundary of the extraction area by a second intersecting of Tributary 2. Similar surface water drainage arrangements to those established for upper reach of Tributary 2 will be established to cater for this lower-level intersection of Tributary 2 on the western boundary. This drain will be designed to cater for the predicted flows and to prevent erosion of the placed overburden.

Tributary 3 is intercepted as the upper batters extend northwest and the same methodology of redirecting the surface water runoff as described in Stage 1 (Tributary 2) will be utilised for Tributary 3. A drainage sump will be used to collect incidental water falling on the western part of the extraction area as well as surface water intercepted from the local catchment area serviced by the lower-level of Tributary 3.

The water from Tributary 3 will be directed into a quarry sump(s) and pumped or directed via gravity to the Holding Dam which will be dynamically relocated as extraction activities progress through Stages 1-4. The dual purpose of the Holding Dam is to provide a buffer water storage structure which allows water to be pumped from the existing and future north, or south pit sumps as required. This enables it to serve as the primary water source for water cart dust suppression of the haul and site access roads. The Holding Dam can also provide supplementary (excess to capacity) off-site flow into Moora Creek to maintain its downstream flows and the ecological condition of Ure Creek below. The Holding Dam will be a semi-permanent structure that will be relocated within the extraction area as required. It will eventually be removed once the final pit lake is formed with its 217m AHD overflow to Moora Creek as part of the site rehabilitation, final landform works.

Could regional groundwater resources be affected by the project?

☐ NYD ☐ No ☒ Yes If yes, describe in what way.

No adverse groundwater impacts have been detected to date. However, as the proposed quarry expansion would extend an additional 100 metres below the water table there is potential for impacts to local environmental values to occur. The assessment of risks to groundwater if more aggressive dewatering is required has been identified as low risks of harm to groundwater users, surface water systems and GDEs. Refer to **Attachment G – Hydrogeological Assessment, John Leonard Consulting Services (2024)**.

Could environmental values (beneficial uses) of water environments be affected?

☐ NYD ☒ No ☐ Yes If yes, identify waterways/water bodies and beneficial uses (as recognised by State Environment Protection Policies)

Could aquatic, estuarine or marine ecosystems be affected by the project?

☐ NYD ☐ No ☒ Yes If yes, describe in what way.

As described above, changes to Tributaries 1, 2 and 3 (ephemeral drainage lines) are expected however are not predicted to have significant downstream effects.

Is there a potential for extensive or major effects on the health or biodiversity of aquatic, estuarine or marine ecosystems over the long-term?

☒ No ☐ Yes If yes, please describe. Comment on likelihood of effects and associated uncertainties, if practicable.

Is mitigation of potential effects on water environments proposed?

☐ NYD ☐ No ☒ Yes If yes, please briefly describe.

A Water Management Plan has been prepared as part of the Work Plan Variation application process to ensure minimal impacts occur and water is treated onsite prior to discharge via local tributaries.

Other information/comments? (e.g. accuracy of information)

14. Landscape and soils

Landscape

Has a preliminary landscape assessment been prepared?

☐ No ☒ Yes If yes, please attach.

A Landscape and Visual Impact Assessment has been prepared by Tract and is attached to this referral – **Attachment F**.

Is the project to be located either within or near an area that is:

- **Subject to a Landscape Significance Overlay or Environmental Significance Overlay?**

  ☐ NYD ☐ No ☒ Yes If yes, provide plan showing footprint relative to overlay.

The existing and expanded quarry is within both a SLO and ESO. (Refer to **Attachment B** for the property report indicating zones and overlays for the site and proposed extraction area.

- **Identified as of regional or State significance in a reputable study of landscape values?**

  ☐ NYD ☐ No ☒ Yes If yes, please specify.

Of relevance is the *Upper Yarra Valley and Dandenong Ranges Regional Strategy Plan*.

The strategic context review recognises that the policy emphasises the diverse rural activities within the Yarra Ranges, and the scenic natural landscape within which the Shire is situated. Specifically, the scenic quality of the distant Yarra Ranges National Park and the Foothills are mentioned.

The following strategic points are the most relevant findings within the study area for this assessment:

  - The scenic beauty and unique landscape features within Yarra Ranges is emphasised as a core component of its landscape quality. This includes the foothills of the Ranges, and the visual amenity provided by the Ranges as a backdrop throughout the Shire. These characteristics should be maintained and protected, with particular regard to both middle and long views throughout the Yarra Ranges.

  - There are several townships within the study area, including Launching Place, Woori Yallock and Seville East. These townships are expected to experience varying levels of urbanisation in the future.

  - Major recreation routes through the Yarra Valley (roads & trails, such as the Warburton Rail Trail and O'Shannassy Aqueduct Trail) and key visitor destinations are likely to form the basis of visitor perceptions of the Yarra Valley region. On that basis, the amenity values associated with tourism routes are of importance.

- **Within or adjoining land reserved under the *National Parks Act 1975* ?**

  ☐ NYD ☐ No ☒ Yes If yes, please specify.

Surrounding the quarry boundary to the north is the Mount Toolebewong State Forest. To the east is the Yarra Ranges National Park and to the south-east is the start of the O'Shannassy Aquaduct Trail.

- **Within or adjoining other public land used for conservation or recreational purposes ?**

  ☐ NYD ☐ No ☒ Yes If yes, please specify.

Mount Toolebewong State Park as well as other Crown land (PUZ1) adjoins the existing and proposed expansion of the quarry site to the north and north-west .

Is any clearing vegetation or alteration of landforms likely to affect landscape values?
☐ NYD ☐ No ☒ Yes If yes, please briefly describe.

The existing quarry and adjoining expansion site are located within a densely vegetated Eucalypt Forest. The vegetation and topography effectively screens the quarries operational area from the majority of external views; however, it is visible from two representative viewpoints limited to the southwest of the study area and from background views (approximately between 3 – 5km).

The landscape character type of the surrounding site area, which is yet to be cleared and extracted is classified as a Foothills environment which has a Moderate landscape value.

The proposed quarry development is an extension to the existing quarry extraction area operation and therefore only the extension to the extraction area will be considered as a landscape impact. The following points include the anticipated landscape changes:

- The vegetation clearing through the expanding extraction operation will create a clear change to the Foothills vegetation.
- The extraction and remnant terraced bench and batters, resulting from the quarrying operation will extend the current extraction area to the north-and lower the existing landform.
- Two existing drainage lines will be progressively altered due to the proposed extraction activities.

Is there a potential for effects on landscape values of regional or State importance?
☐ NYD ☐ No ☒ Yes Please briefly explain response.

The Landscape and Visual Impact Assessment found that the overall landscape impacts of the quarry development are considered to be Moderate before the implementation of mitigation measures (described below).

Is mitigation of potential landscape effects proposed?
☐ NYD ☐ No ☒ Yes If yes, please briefly describe.

The Landscape and Visual impact assessment found that impacts resulting from the proposed expansion would be long term but partially reversable (the landform can't be reversed but revegetation can visually mitigate the impact over time). The new impacts would be offset by the effects of the progressive rehabilitation of areas following Stage 1 and Stage 2 sequential extraction. The current rehabilitation works visible from within the study area is seen to be effective and is currently offering mitigation of the extraction to existing background views and some remediation to the landscape impacts which will strengthen over time.

Implementing a progressive rehabilitation plan during the staged extraction of the quarry will reduce the anticipated magnitude of change and the nature of change. The reduced impact would occur over time and is anticipated to take effect from Stage 3 onwards.

Other information/comments? (e.g. accuracy of information)

<u>Visual Impacts</u>

The existing operational quarry site is positioned within a location that currently limits visual impacts within the surrounding study area and is well positioned to reduce landscape and visual impacts. The expansion of the quarry site will increase the visibility of the existing operating quarry from the identified representative viewpoints.

The visual impact of the proposed extraction area will become a new impact from some middle ground views (1-3 km) and background views (3- 5km) with an existing view would have increased visibility of the quarry. The nature of change and magnitude of change would be seen to be a Low impact from all discernible viewpoints. Through the implementation of mitigation measures and sequential rehabilitation during the four-stage extraction plan, the visual impacts, nature of change and magnitude of change could be reduced to a Negligible impact once the

progressive revegetation matures, (see **Attachment F** for details of the Landscape and Visual Impact Assessment).

Note: A preliminary landscape assessment is a specific requirement for a referral of a wind energy facility. This should provide a description of:

- The landscape character of the site and surrounding areas including landform, vegetation types and coverage, water features, any other notable features and current land use;
- The location of nearby dwellings, townships, recreation areas, major roads, above-ground utilities, tourist routes and walking tracks;
- Views to the site and to the proposed location of wind turbines from key vantage points (including views showing existing nearby dwellings and views from major roads, walking tracks and tourist routes) sufficient to give a sense of the overall site in its setting.

Soils

Is there a potential for effects on land stability, acid sulphate soils or highly erodible soils?

☒ NYD ☒ No ☒ Yes If yes, please briefly describe.

The quarry is not expected to have major effect on land stability, acid sulphate soils or highly erodible soils over the short or long term.

Are there geotechnical hazards that may either affect the project or be affected by it?

☒ NYD ☒ No ☒ Yes If yes, please briefly describe.

Other information/comments? (eg. accuracy of information)

The quarry is located within the Melbourne Structural Zone, the easternmost zone of the Whitelaw Terrane of the Lachlan Fold Belt. The Melbourne Structural Zone is a complexly deformed tectonic zone which has undergone multiple deformation events, resulting in a series of large-scale north-south trending structures combined with the intrusion and extrusion of igneous rock units.

The outcropping geology in the vicinity of the Yarra Valley Quarry consists predominately of Humevale Siltstone and overlain by Neogene-aged incised colluvium towards the west of the quarry. While the GeoVic database (2014) indicates that the Humevale Siltstone in the area is characterised by a series of laminated brown siltstones, with minor very fine to fine grained sandstone laminae, site observations indicate that this area has been subject to contact metamorphism caused by the intrusion of the Toole-be-wong Granodiorite resulting in the rock within the contact aureole being altered to hornfels.

Four rock types are found within the WA375 footprint:

- The oldest geology found within the site is the Melbourne Formation.
- The Humevale Siltstone is the main extractive resources within the quarry site (WA375). This unit is a sequence of marine mudstones, with minor sandstone and marlstone.
- The metamorphism of the Humevale Siltstone (to hornfels) was observed on site, placing the quarry footprint within the metamorphic aureole of the Toole-be-wong Granodiorite.
- The youngest unit found within the quarry site area is a series of Neogene-aged incised colluvial deposits, consisting of generally unconsolidated silt, sand and gravel.

15. Social environments

Is the project likely to generate significant volumes of road traffic, during construction or operation?

☐ NYD ☒ No ☐ Yes If yes, provide estimate of traffic volume(s) if practicable.

The day to day operational activities are not anticipated to change significantly; however, the proposed expansion of the extraction area will increase the life of the quarry.

Notwithstanding, a forecast increase in production output will result in a commensurately moderate increase of McMahons Road quarry truck traffic. Traffix Group has undertaken a traffic engineering impact and road safety assessment (**Attachment J**) confirming the road network can easily cope with the anticipated increase in truck traffic.

Is there a potential for significant effects on the amenity of residents, due to emissions of dust or odours or changes in visual, noise or traffic conditions?

☐ NYD ☒ No ☐ Yes If yes, briefly describe the nature of the changes in amenity conditions and the possible areas affected.

There are at least 19 dwellings within 1 km of the existing quarry and proposed expanded extraction area, and an additional 50 within 2km of the current quarry Work Authority Boundary. These dwellings are predominately located to the south and north of the Crown Allotment 50C and 2051 quarry expansion area.

Dust and noise impacts, as well as the potential to transport dust and sediment on to public roads, are quarrying and rehabilitation hazards that are common to nearly all extractive industry operations. These hazards are to be managed so that the risks posed to sensitive receptors in the local vicinity are minimised as far as reasonably practicable.

The closest receptors are the two dwellings owned by Dandy Premix on Crown Allotment 49A and Crown Allotment 50C respectively. Only one of these dwellings (on Crown Allotment 49A) is occupied and it will be vacated prior to any expanded extraction works commencing following the granting of the Approved Work Plan Variation and Work Authority Variation.

Four sensitive receptors are located along an approximate 500m stretch of McMahons Road, west of and within 30m of the Work Authority boundary. These residences are located south to north along the western side of McMahons Road with the Work Authority boundary running parallel along the eastern side of this unsealed local access only road. The main sources of dust and noise are the existing crushing and screening plant operations, mobile equipment (wheel loaders and excavators), haul trucks and access/egress associated with road trucks used for sales deliveries.

The current operating hours of the quarry will be maintained so that compliance with EPA Victoria noise limits across the relevant Monday to Friday and Saturday day, evening and night periods are achieved in accordance with the EPA Victoria published noise protocol.

Air Emissions – dust

The main dust sources associated with the current and proposed future operations include:

- the movement of haul trucks and loaders on haul roads and within operational areas;
- crushing, screening and product stockpiling operations;
- topsoil stripping and overburden removal; and
- suspension of dust from bare, erodible surfaces by strong winds.

Blasting generates short-term dust emissions and a visible plume (typically lasting for less than ten minutes); however, as blasting will continue to only occur once to twice a month, it does not make a significant contribution to off-site dust fall rates or suspended particulate concentrations (EPA's assessment criteria for airborne particles are based on averaging periods ranging from 24 hours to 12 months).

Emissions from these sources will continue to be minimised by application of dust management measures. The proposal can be expected to result in an overall reduction in dust emissions, because:

- overburden will be placed in a sheltered east, south-east environment within the existing quarry pit, rather than in the more exposed above-ground location used in the past; and
- implementation of the additional dust control measures as part of the Dust Management Plan.

Continuous dust PM_{10} and $PM_{2.5}$ monitoring was conducted by using a continuous ambient air monitor installed about 200 metres from the existing quarry processing plant, close to where the dust deposition gauge is located at 195 McMahons Road (in the vicinity of the nearest sensitive receptor).

The following average particulate concentrations were recorded for the period between 1 January and 18 June 2024:

- $PM10$ – 13.01µg/m^3; and
- $PM2.5$ - 4.34µg/m^3.

These concentrations are well below EPA Victoria's "Air Pollution Assessment Criteria" for PM_{10} and $PM_{2.5}$ of 20µg/m^3 and 8µg/m^3, respectively and, as detailed the Dust Assessment are predominantly attributable to background (non-quarry) sources (refer to **Attachment D**).

Noise – blasting

The Terrock Consulting Engineers blasting impact assessment **(Attachment E)** found that blasting will be in compliance with prescribed regulatory criteria including ERR limits with low to negligible impacts to local amenity and the surrounding environment.

Ground vibration and airblast levels from the quarry would remain relatively low due to the scale of blasting proposed, wide separation distances, and local geology and topography of the surrounding area.

The maximum airblast level from the closest blast to the nearest sensitive receptor is predicted to be 105dBL, well below the ERR limit of 115 dBL. Maximum vibration levels are predicted to be 1.17mm/s at the nearest sensitive receptor, also well below the ERR limit of 5mm/s.

Noise – operations

The Watson Moss Growcott Acoustics acoustic assessment report found that noise associated with operational plant and truck movements across the site comply at the closest sensitive receptor (resident) with the EPA Victoria Noise Protocol day and night time noise limits (see **Attachment I**).

Is there a potential for exposure of a human community to health or safety hazards, due to emissions to air or water or noise or chemical hazards or associated transport?

☐ NYD ☒ No ☐ Yes If yes, briefly describe the hazards and possible implications.

As previously described, it is not anticipated that there will be significant effects on human communities from emissions to air, water or noise from the proposed quarry extraction area expansion. However, it is anticipated that there will be low to negligible exposure to dust emissions, blasting impacts and increased road truck volumes from the proposal.

Is there a potential for displacement of residences or severance of residential access to community resources due to the proposed development?

☐ NYD ☒ No ☐ Yes If yes, briefly describe potential effects.

Are non-residential land use activities likely to be displaced as a result of the project?

☐ NYD ☒ No ☐ Yes If yes, briefly describe the likely effects.

Do any expected changes in non-residential land use activities have a potential to cause adverse effects on local residents/communities, social groups or industries?

☐ NYD ☒ No ☐ Yes If yes, briefly describe the potential effects.

Is mitigation of potential social effects proposed? ☐ NYD ☐ No ☒ Yes If yes, please briefly describe. Continued dust monitoring, including for respirable crystalline silica (RCS) and preparation and the implementation of mitigation measures outlined in the Dust and Noise Management Plans. Traffix Group recommended road safety mitigation measures applicable to the quarry local access roads (McMahons and Dalry Roads) will also be implemented.
Other information/comments? (e.g. accuracy of information)

Cultural heritage

Have relevant Indigenous organisations been consulted on the occurrence of Aboriginal cultural heritage within the project area?

☐ No If no, list any organisations that it is proposed to consult.
☒ Yes If yes, list the organisations so far consulted.

Consultation has occurred with the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation and a site meeting and inspection was undertaken om 11 April 2022 with Wurundjeri Woi-wurrung representative.

What investigations of cultural heritage in the project area have been done?
(attach details of method and results of any surveys for the project & describe their accuracy)

The Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation is the Registered Aboriginal Party (RAP) for the activity area.

An investigation into the cultural heritage statutory obligations regarding the land situated at Yarra Valley Quarry, 130 McMahons Road Launching Place was conducted by Tardis Archaeology in 2020 and heritage advice confirmed in 2022. The investigation considered the obligations under the *Aboriginal Heritage Act 2006*, *the Aboriginal Heritage Regulations 2018* and the *Heritage Act 2017*.

The advice from Tardis is that a mandatory CHMP is not required as the activity area is not within an area of cultural heritage sensitivity.

A search of ACHRIS shows there are no registered Aboriginal heritage places within the activity area or within 50m of the activity area boundary. ACHRIS also shows that the activity area has not previously been subject to archaeological assessment.

The investigation completed by Tardis Archaeology demonstrates that the proposed expanded extraction activity at the Yarra Valley Quarry, 130 McMahons Road, Launching Place does not require the preparation of a mandatory CHMP because, although the activity is a high impact activity pursuant to Regulation 51 (a)(b), no part of the proposed activity area (Lot 50C) is a legislated area of cultural heritage sensitivity.

DEECA-ERR advice of January 2024 further confirmed the proposed Work Plan Variation does not trigger the requirement for a mandatory Cultural Heritage Management Plan.

The Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation have also been on site and confirmed that a CHMP is not required.

Is any Aboriginal cultural heritage known from the project area?

☐ NYD ☒ No ☐ Yes If yes, briefly describe:

- Any sites listed on the AAV Site Register
- Sites or areas of sensitivity recorded in recent surveys from the project site or nearby
- Sites or areas of sensitivity identified by representatives of Indigenous organisations

Are there any cultural heritage places listed on the Heritage Register or the Archaeological Inventory under the *Heritage Act 1995* within the project area?

☐ NYD ☒ No ☐ Yes If yes, please list.

Is mitigation of potential cultural heritage effects proposed?

☐ NYD ☒ No ☐ Yes If yes, please briefly describe.

Other information/comments? (e.g. accuracy of information)

16. Energy, wastes & greenhouse gas emissions

What are the main sources of energy that the project facility would consume/generate?

- ☒ Electricity network. If possible, estimate power requirement/output …….
- ☒ Natural gas network. If possible, estimate gas requirement/output ……...
- ☒ Generated on-site. If possible, estimate power capacity/output …….
- ☒ Other. Please describe.

Please add any relevant additional information.

Other - Water usage for dust suppression (refer to section 15).

What are the main forms of waste that would be generated by the project facility?

- ☒ Wastewater. Describe briefly.
- ☒ Solid chemical wastes. Describe briefly.
- ☒ Excavated material. Describe briefly.
- ☒ Other. Describe briefly.

Please provide relevant further information, including proposed management of wastes.

Overburden and topsoil stockpiles retained on-site for progressive rehabilitation and revegetation are described elsewhere in the referral.

What level of greenhouse gas emissions is expected to result directly from operation of the project facility?

- ☒ Less than 50,000 tonnes of CO_2 equivalent per annum
- ☒ Between 50,000 and 100,000 tonnes of CO_2 equivalent per annum
- ☒ Between 100,000 and 200,000 tonnes of CO_2 equivalent per annum
- ☒ More than 200,000 tonnes of CO_2 equivalent per annum

Please add any relevant additional information, including any identified mitigation options.

17. Other environmental issues

Are there any other environmental issues arising from the proposed project?

☒ No ☒ Yes If yes, briefly describe.

18. Environmental management

What measures are currently proposed to avoid, minimise or manage the main potential adverse environmental effects? (if not already described above)

☒ Siting: Please describe briefly

The proposed quarry expansion has been designed to avoid and minimise environmental effects as far as reasonably practicable, given that the location of the resource on site to be extracted cannot be changed. As stated in Section 4, Project Alternatives, there are limited alternatives available to access such resources.

As noted in Section 3, Project Description, the plant and stockpiling area will continue to be located within the existing site operational footprint and extraction area.

☒ Design: Please describe briefly

The details in relation to particular activities is discussed in previous sections. Of particular interest is the YVQ's willingness to relocate the primary crushing plant within the site to reduce the operational noise impact on the closest sensitive receptors.

☒ Environmental management: Please describe briefly.

The *Minerals Resources (Sustainable Development) Act* 1990 and associated Regulations requires that an approved Work Plan, as varied, include a Risk Management Plan that identifies and assesses the applicable risks and ensures that those risks are eliminated or minimised as far as reasonably practicable. The applicable risks are those that may be posed by 'quarrying hazards' or 'rehabilitation hazards' to a defined set of 'sensitive receptors', being "the environment, any member of the public, or land, property or infrastructure in the vicinity of the proposed work". Consequently, the Risk Management Plan can include management of a slightly broader set of risks than that usually considered in an EE Act referral process, which is generally focussed on potential adverse effects to the broader environment (including amenity and Aboriginal cultural heritage values).

Additionally, the Work Authority holder has an obligation under the MRSD Act to carry out the extractive industry in accordance with the approved Work Plan (as varied). A General Environmental Duty also exists under the EP Act. The submitted Work Plan Variation, once approved, will be a compliance document (along with any Work Plan Specific Conditions applied to the approved Work Plan and the Work Authority conditions).

Along with the Risk Management Plan, the Work Plan Variation application is accompanied by (includes) adaptive management plans. These adaptive management plans are each specifically referenced by the approved Risk Management Plan. The adaptive management plans are themselves implemented in the Risk Management Plan, through the various Risk Treatment Plans, by reference in stated control measures and monitoring requirements. They are provided with the Work Plan application to demonstrate that the applicant understands the appropriate adaptive measures that need to be put in place (applied) to manage identified risks effectively.

A full list of the management plans provided as part of the Work Plan Variation are:

- Surface Water Management Plan
- Blast Management Plan
- Ground Control Management Plan
- Imported Materials Management Plan
- Fire Response and Readiness Plan

In addition to the above, YVQ will implement a number of the proposed plans in the EHP (Attachment C) report such as:

- Biodiversity and Rehabilitation Management Plan, inclusive of Species Protection Management Plan and Weed Management Plan. This plan should provide detailed information on the objectives, performance targets, timeframes and responsibilities for the successful management and reinstatement of biodiversity across the study area. The Plan should include specific protection, management, restoration and reporting requirements across the study area
- Construction Environmental Management Plan (CEMP).

☒ Other: Please describe briefly

19. Other activities

Are there any other activities in the vicinity of the proposed project that have a potential for cumulative effects?

☒ NYD ☒ No ☒ Yes If yes, briefly describe.

20. Investigation program

Study program

Have any environmental studies not referred to above been conducted for the project?

☐ No ☒ Yes If yes, please list here and attach if relevant.

A Geotechnical Assessment has been prepared by GHD (Jan 2024) to develop a site geological and geotechnical model. **This assessment is provided at Attachment K.**

Has a program for future environmental studies been developed?

☐ No ☒ Yes If yes, briefly describe.

Various monitoring and management plans will be implemented, as required by the Site Specific Conditions included as part of the Approved Work Plan Variation, via the ERR preliminary referral and Work Plan endorsement process under the MR(SD) Act 1990.

Consultation program

Has a consultation program conducted to date for the project?

☐ No ☒ Yes If yes, outline the consultation activities and the stakeholder groups or organisations consulted.

An initial local Community (residents) Community Consultation Meeting held April 2019 to brief and engage nearby residents about the quarry expansion proposal.

Informal engagement has been conducted in March and June 2024 with several of the nearest residents to outline the quarry expansion proposal and in so doing, to seek their agreement to additional ecological and noise level monitoring activities to inform the proposed quarry expansion technical reports.

Has a program for future consultation been developed?

☐ NYD ☐ No ☒ Yes If yes, briefly describe.

A Community Engagement Plan has been prepared.

The aim of the Community Engagement Plan is to share relevant information about the extractive industry operations, throughout the life of the Work Authority (WA375), with the community potentially affected by the quarry operations. It also documents how the Community are provided with reasonable opportunities for their views about activities at the site, or off-site amenity impacts from the site and potential end-of-quarrying-life uses for the site to be expressed, considered and responded to. The name and contact details of the Quarry Manager are displayed on a sign at the site entrance for any members of the community to use as one means for providing feedback.

There are several community engagement techniques that are available to Dandy Premix Quarries Pty Ltd to enable effective and transparent engagement with the local Community. These techniques include, but are not limited to Newsletters, Fact Sheets, Company website, Workshops, Advertisements / Public displays, Community notice boards, Community activities, Open houses, public meetings, Face-to-face meetings and Surveys.

The appropriate Community engagement technique is targeted to the individual stakeholder and will be selected based on a review of any changes to operational activities that have the potential to affect that particular Stakeholder, or Stakeholder group.

The following Stakeholder engagement plan has been developed to respond to the issues identified in the Stakeholder issues analysis. This plan has been developed in line with the International Association for Public Participation (IAP2) best practice.

Stakeholder	Issue or concern	Level of engagement (IAP2)	Key message	Method of engagement	Timing (weekly, monthly, as required)
Yarra Ranges Shire Council	Amenity Impacts	Involve	Education / Compliance	Emails Meetings	As required
Earth Resources Regulation (ERR)	Compliance	Involve	Education / Compliance	Email Face-to-face meeting Phone calls	As required
Regional Roads Victoria	Local traffic impacts.	Inform	Education / Compliance	Email Face-to-face meeting Phone calls	As required
Parks Victoria	Impact on the Yarra Ranges National Park	Inform	Education / Compliance	Email Face-to-face meeting Phone calls	As required
Department of Energy, Environment and Climate Action (DEECA-Environment)	Biodiversity Impacts	Inform	Compliance	Email Face-to-face meeting Phone calls	As required
Southern Rural Water	Flood management Groundwater	Involve	Education / Compliance	Email Face-to-face meeting Phone calls	As Instructed
Melbourne Water	Impact on water infrastructure	Involve	Education / Compliance	Email Face-to-face meeting Phone calls	As Instructed
EPA	GED Compliance	Involve	Education / Compliance	Email Face-to-face meeting Phone calls	As per licence conditions

First Peoples	Heritage protection	Inform Involve	Compliance	Email Face-to-face meeting Phone calls	As required
Adjacent landowners and residents	Amenity Impacts	Inform	Education / Compliance	Face-to-face meeting Site visits Newsletters and/or Fact Sheets	As required
Community within vicinity of quarry	Amenity Impacts	Inform	Education	Face-to-face meeting Site visits Newsletters and/or Fact Sheets	As required

A Community Reference Group (CRG) has recently been established which is representative of the most local resident Community under the ERR mandatory Community Engagement Plan (CEP) requirement. Meetings of the CRG commenced 3 September 2024, followed by a 30 October 2024 meeting, at which it was agreed that quarterly meetings will be held going forward. The 2025 schedule of CRG Meetings were agreed to be held on a Wednesday afternoon in each of the months of February, May, August and November, with specific dates to be confirmed. An Agenda has been developed for the CRG Meetings and Minutes are being taken for acceptance and circulation to CRG members – to date 7 local Community residential addresses, representing 13 residents have attended and additional invitations are currently being extended to include a broader Community group.

The initial Community Engagement Meeting for the proposal Quarry expansion was held on Saturday 6 April 2022. An outline of the proposal Quarry expansion was provided. This was followed by a Q&A session, initially as a group, then and one-on-one opportunities were provided by those attendees who preferred to speak with Quarry personnel more privately.

Authorised person for proponent:

I, Garry John Cranny (full name),

Manager Sustainability (position), confirm that the information contained in this form is, to my knowledge, true and not misleading.

Signature Garry Cranny

Date 01 Nov 2024

Person who prepared this referral:

I, ……Mandy Elliott… (full name),

…Principal Consultant…(position), confirm that the information contained in this form is, to my knowledge, true and not misleading.

Signature

Date 01 Nov 2024