

# Deep Creek Quarry

Independent Planning Commission – Public Meeting

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Director, Energy and Resource  
Assessments

13 December 2023

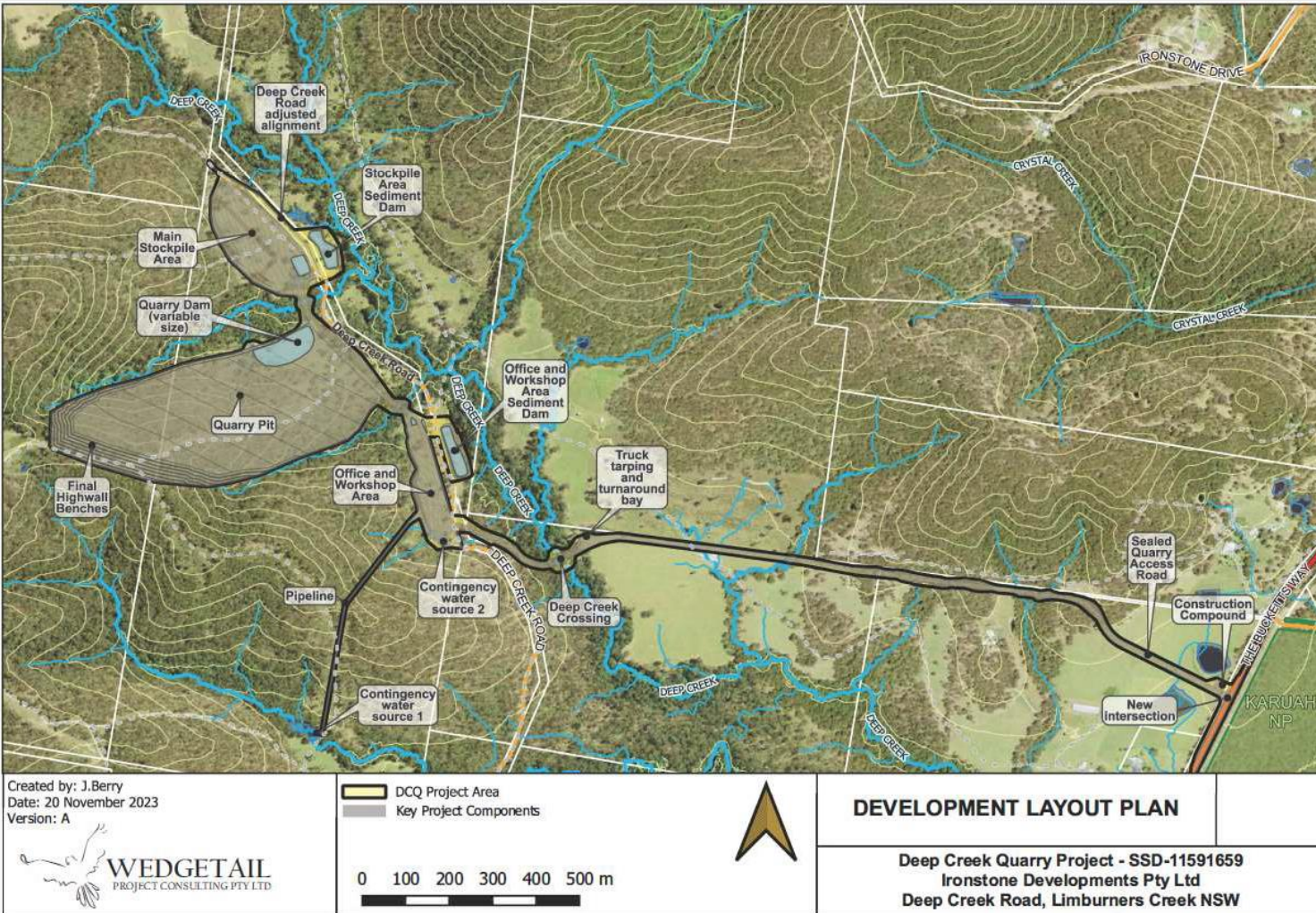


# Assessment process

- *Environmental Planning & Assessment Act 1979*
- State Significant Development
- Department of Planning & Environment
- Whole of Government Assessment
- Independent Planning Commission – Determination (> 50 Objections)



# The Project



Component	Proposed development
Operational workforce	10 full time equivalent personnel
Quarry products	Hard rock aggregates
Production limit	500,000 tpa quarry products
Footprint	Approx. 30 hectares
Depth of extraction	37 m Australian Height Datum
Quarry method	Open cut extraction methods including excavation, drill, blast, <u>load</u> and haul
Processing	On site crushing, screening, and stockpiling
Operating hours	<u>Construction and quarry operations</u> 7 am to 5 pm Monday to Friday, 8 am to 1 pm Saturday <u>Blasting</u> 9 am to 4 pm Monday to Friday <u>Loading and dispatch of trucks</u> 6 am to 6 pm Monday to Friday, 6 am to 1 pm Saturday
Site access	Dedicated quarry access road and intersection off The Bucketts Way
Product transport	25 laden truck movements per hour 110 laden truck movements per day
Rehabilitation and final landform	Rehabilitated to achieve a stable, safe, non-polluting landform able to support self-sustaining native vegetation and pasture for grazing

Figure 2-1 | Proposed site layout



# Strategic context

- Quarry would supply Hunter, Central Coast and Sydney markets
- Strong regional demand for hard rock to support the construction industry and meet housing and infrastructure needs
- Project is located 12.5 km from Pacific Highway
- Local amenity, historic, tourism, agricultural, and ecological values requires consideration of competing land uses



**Table 3-1 | Proposed and operating SSD hard rock quarries within 25 km of the Project**

Proposal / Project	Location	Production rate	Status
Hillview Quarry	Stroud	750,000 tpa over 20 years	Applicant preparing EIS
Seaham Quarry	Eagleton	2 Mtpa over 30 years	Applicant preparing EIS
Stone Ridge Quarry	Balickera	1.5 Mtpa over 30 years	Applicant preparing EIS
Eagleton Quarry	Eagleton	600,000 tpa over 30 years	Applicant preparing Submissions Report
Karuah South Quarry	Karuah	600,000 tpa over 25 years	Applicant preparing Submissions Report
Karuah East Quarry	Karuah	1.5 Mtpa until December 2034	Operating quarry, approved in 2014
Brandy Hill Quarry	Brandy Hill	1.5 Mtpa until July 2050	Operating quarry approved in 2020

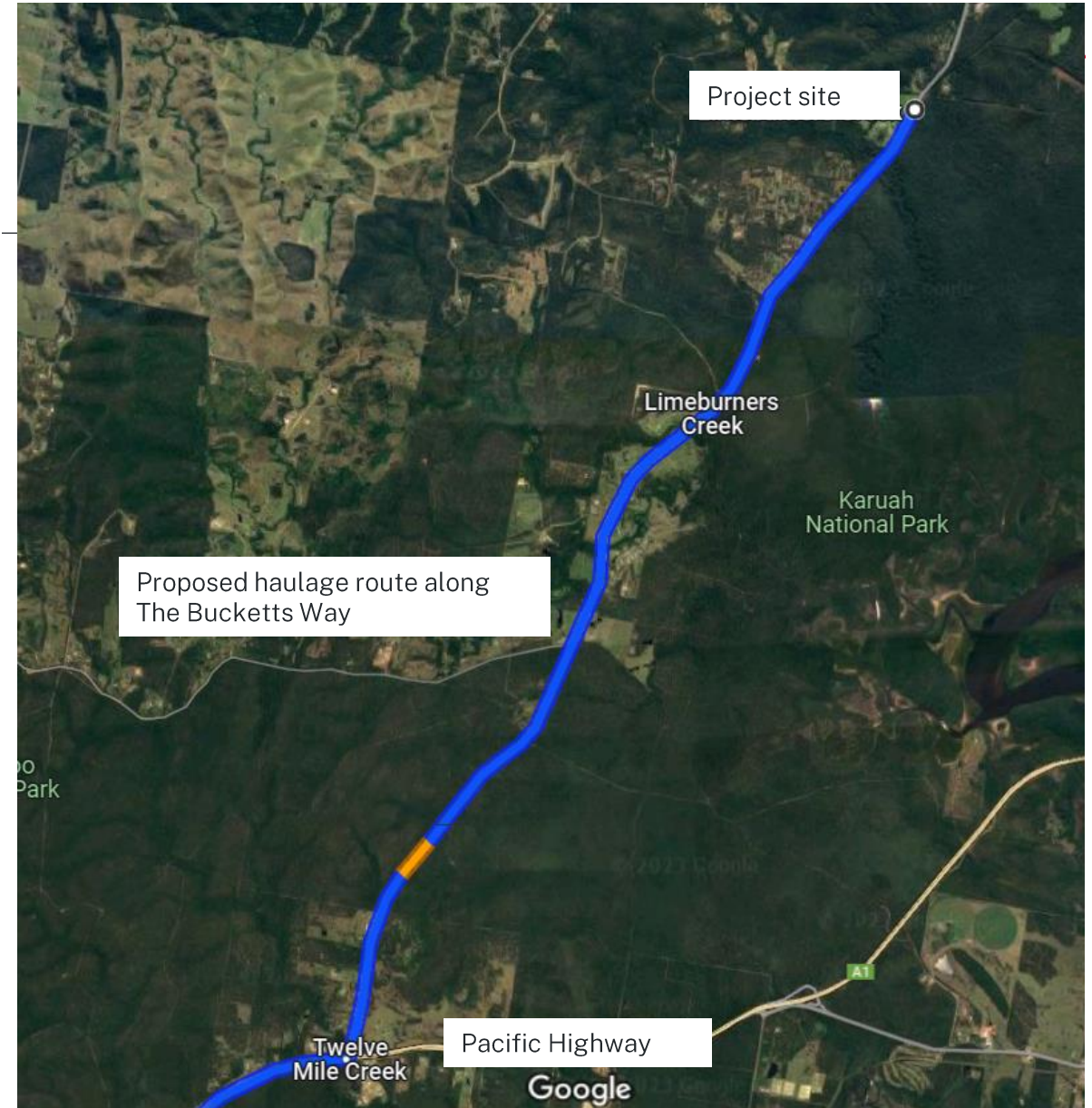
# Engagement

- Public Exhibition – 13 November to 17 December May 2021
  - 59 public submissions:
    - 56 objections (54 from individuals, 2 from special interest groups)
    - 2 supporting submissions
    - 1 commenting submission
  - Sought advice from 15 government agencies
  - Consulted MidCoast Council and Port Stephens Council
- Site visit and community information session - December 2021
- Second site visit, including consultation with landowner - June 2023
- Key community concerns: traffic, biodiversity, noise and vibration, air quality, water



# Traffic

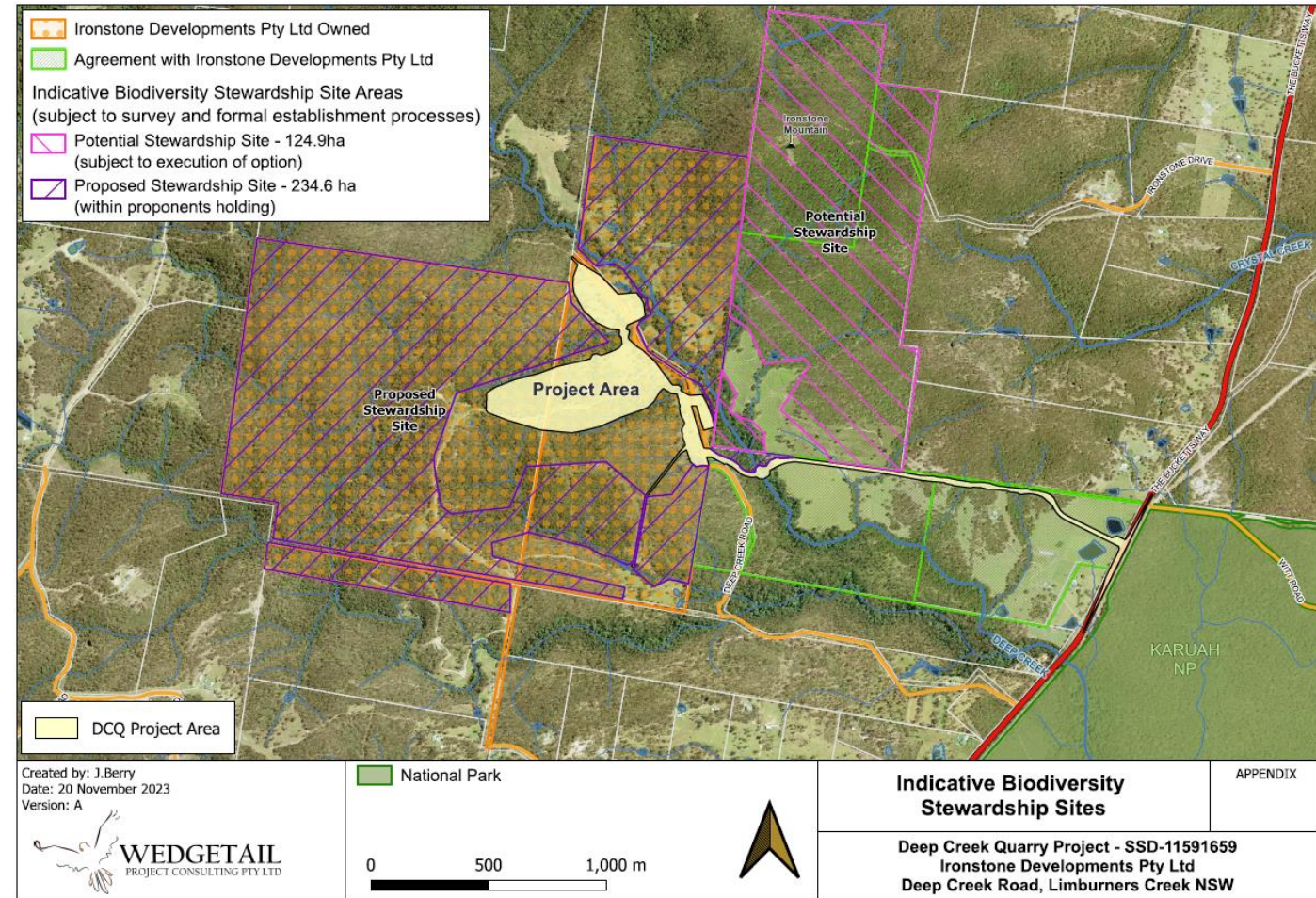
- New intersection on The Bucketts Way for quarry access road
- Max. haulage rate of 25 laden trucks per hour (50 laden / unladen movements per hour)
- Haulage for 12.5 km along The Bucketts Way before accessing Pacific Highway
- First 7.2 km heading south is MidCoast LGA remaining 5.3 km is Port Stephens LGA
- No change to the levels of service along The Bucketts Way
- Some deterioration in intersection and road network performance predicted, mostly due to broader regional traffic growth
- Some 'Moderate' road safety risks along haulage route, although most resolved prior to commencement of trucking
- No major road safety concerns raised by councils or Transport for NSW
- Applicant has agreed to pay road maintenance contributions to MidCoast Council and Port Stephens Council in accordance with each council's contributions plan.
- No objections to proposed contributions from either council
- The Department's recommended conditions require a traffic management plan and strict monitoring of road haulage rates





# Biodiversity

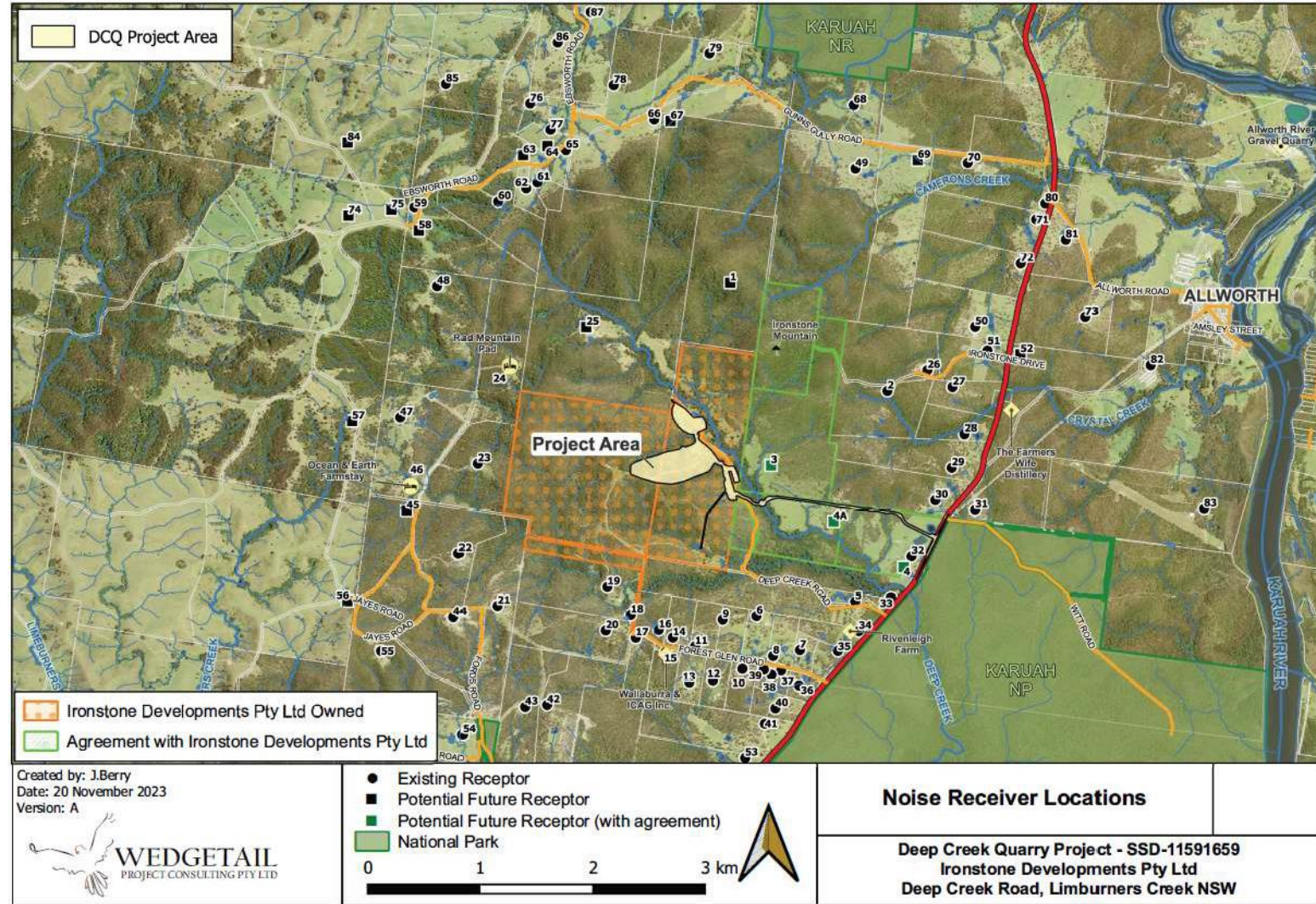
- Key impacts due to disturbance of approx. 30 ha native vegetation
- Controlled action due to impacts to MNES under the EPBC Act
- 2 threatened flora species and habitat for 3 threatened fauna species to be offset via retirement of 2,528 'species credits' due to direct impacts to individuals or loss of breeding habitat
- 14 fauna species to be offset via retirement of 544 'ecosystem credits' due to loss of foraging habitat
- No threatened ecological communities impacted
- No 'serious and irreversible impacts' under BC Act
- Unlikely to impact aquatic biota or downstream oyster aquaculture industry
- Two onsite offset areas proposed, approx. 235 ha and 125 ha respectively
- BCD has not raised any objections to proposed mitigation, management and offsetting
- The Department's recommended conditions require mitigation, management and offsetting in accordance with NSW Biodiversity Offsets Scheme





# Noise

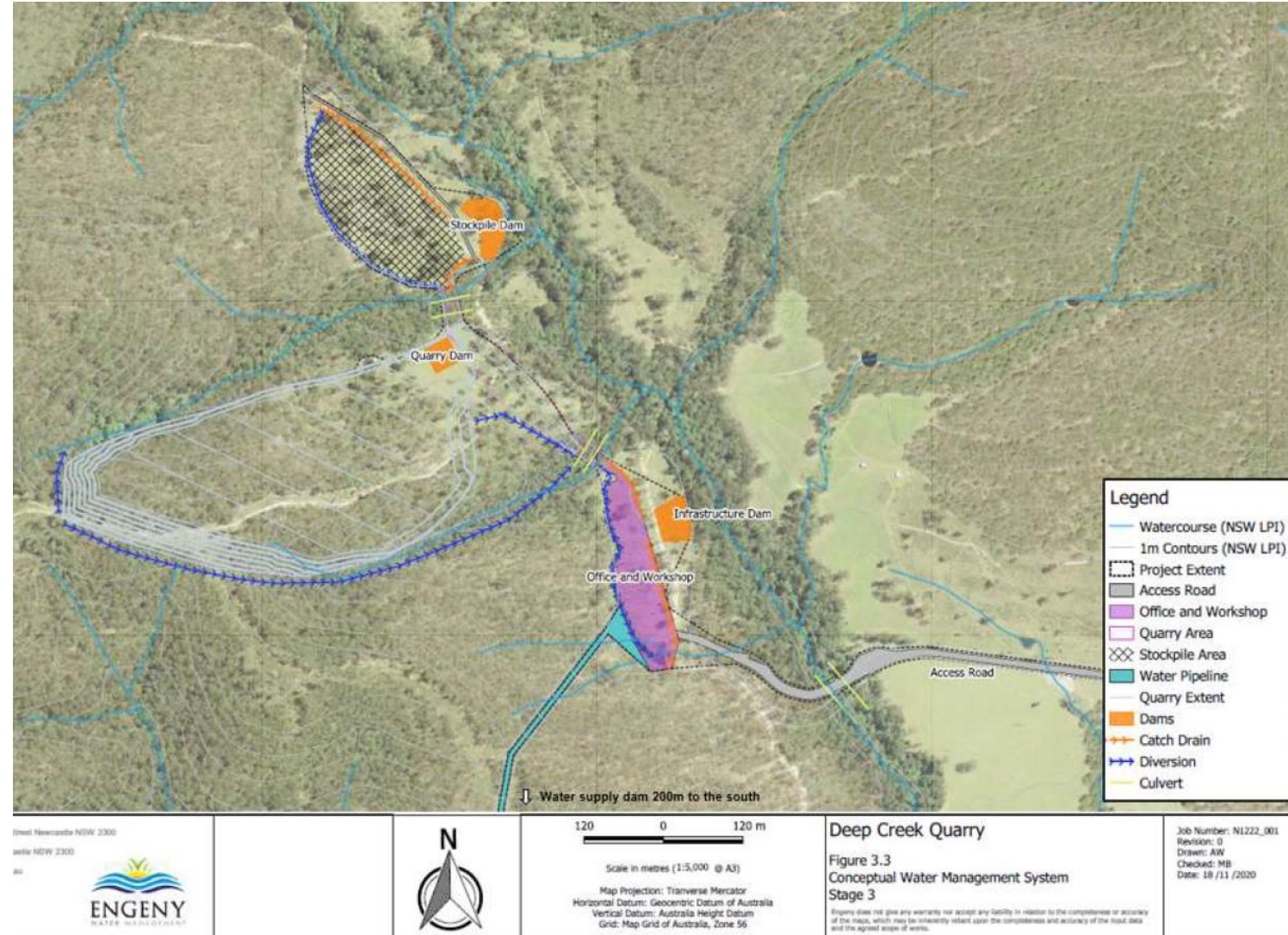
- Existing noise environment is typical of a rural and rural-residential land use setting
- Key noise sources are vehicles along The Bucketts Way
- Several features incorporated into Project design to minimise noise impacts:
  - locating extraction area in natural amphitheatre
  - quarrying from east to west to make use of the noise barrier
  - positioning the processing plant within the quarry pit
  - retaining the eastern extent of the extraction area to maintain a 4-5 m high barrier above the quarry floor
- Proposed daytime-only quarrying and processing also removes key noise sources during more sensitive night-time and evening periods
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- Predicted daytime noise levels below 40 dB(A) PNTL at all but two receivers
- Predicted night-time (6 am to 7 am) noise levels below 35 dB(A) PNTL at all but one receiver location
- No greater than ‘negligible impacts’ as defined under Voluntary Land Acquisition and Mitigation Policy (VLAMP)
- No exceedances of road noise, operational sleep disturbance or construction noise criteria
- The Department has recommended conditions that require Ironstone to operate a comprehensive noise management system to minimise noise impacts





# Water

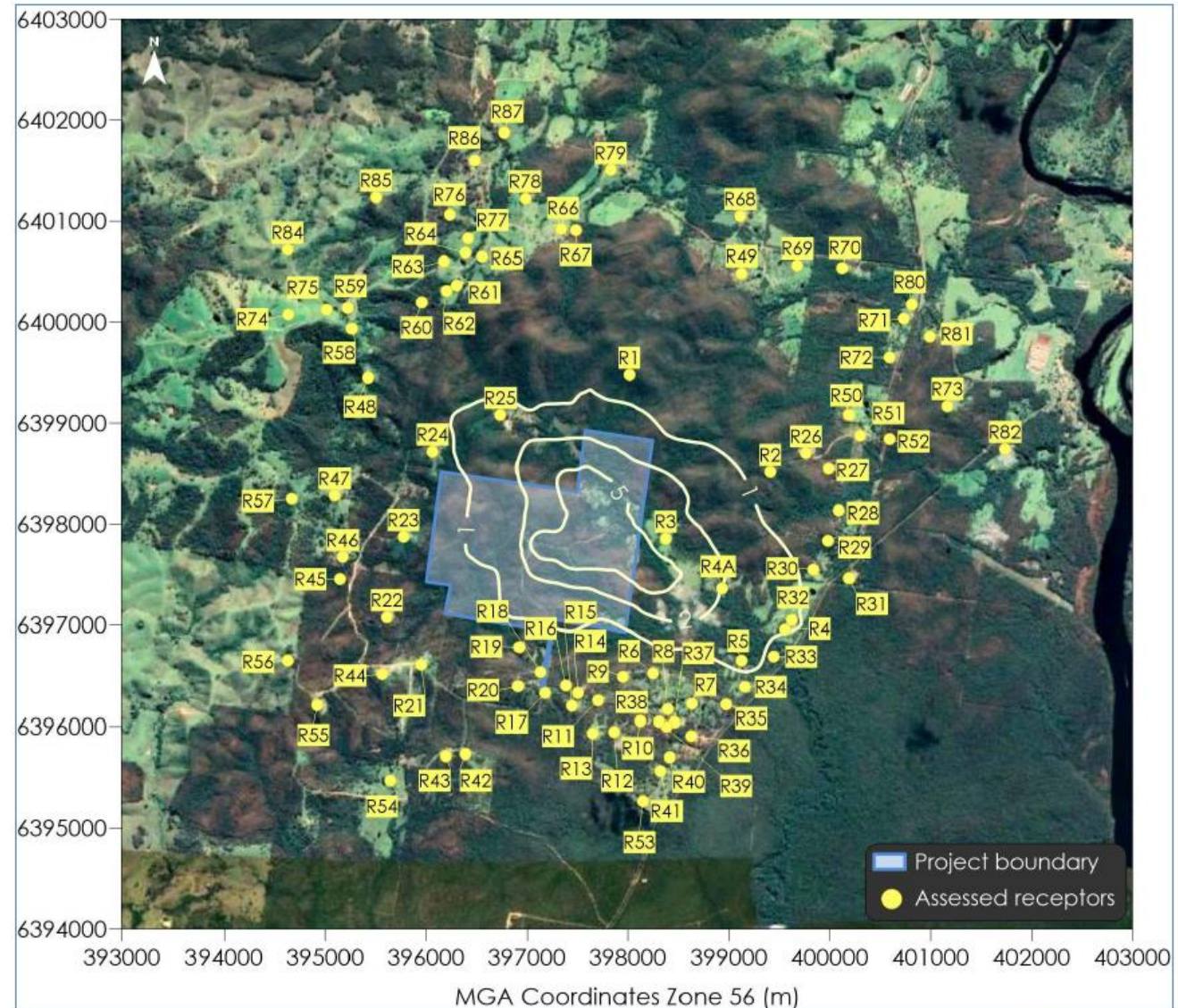
- Proposed site water management system comprises:
  - Dirty water system: including sediment dams, in-pit water storage, catch drains
  - Clean water system: including diversion drains, culverts and bridges over existing watercourses
- Captured water from sediment dams discharged via two licenced discharge points into tributaries of Deep Creek
- The Department considers the proposed water management system has been suitably designed to manage risks to hydrology, water quality and flooding
- Groundwater impacts would be very localised and limited to a 'less productive' aquifer.
- Importantly, predicted groundwater impacts are less than the Level 1 minimal impact considerations set out in the NSW Aquifer Interference Policy. DPE Water has not objected to these assessment findings
- Ironstone has demonstrated it can obtain sufficient entitlement to account for the quarry's water take.
- The Department has recommended that Ironstone be required to prepare a Water MP in consultation with DPE Water
- The Department's recommended conditions also include a requirement for Ironstone to validate the groundwater model for the Project after the first 5 years of quarrying operations, and complete at least annual comparison of monitoring results with modelled predictions





# Air quality / human health

- Key emission sources from the Project would include:
  - dust from extraction, processing and haulage activities
  - windblown dust from exposed areas and stockpiles
  - combustion-based emissions from quarry plant, equipment and product haulage trucks
- the air quality assessment indicated that incremental (this is – Project only) and cumulative (or total) emissions would comply with applicable impact assessment criteria at all assessment locations
- The Department engaged an independent expert (Dr Jackie Wright of Environmental Risk Sciences) to provide advice in relation to potential health impacts from diesel combustion emissions
- exposure to diesel particulates from the Project would be below guideline levels protective of adverse health effects, including for hypersensitive individuals
- The Department considers that the risk of Project-related adverse health impacts to residents is very low
- The Department’s recommended conditions require Ironstone to:
  - comply with contemporary air quality criteria
  - implement all reasonable and feasible measures to minimise dust emissions on site
  - operate an air quality monitoring system to identify and manage potential exceedances

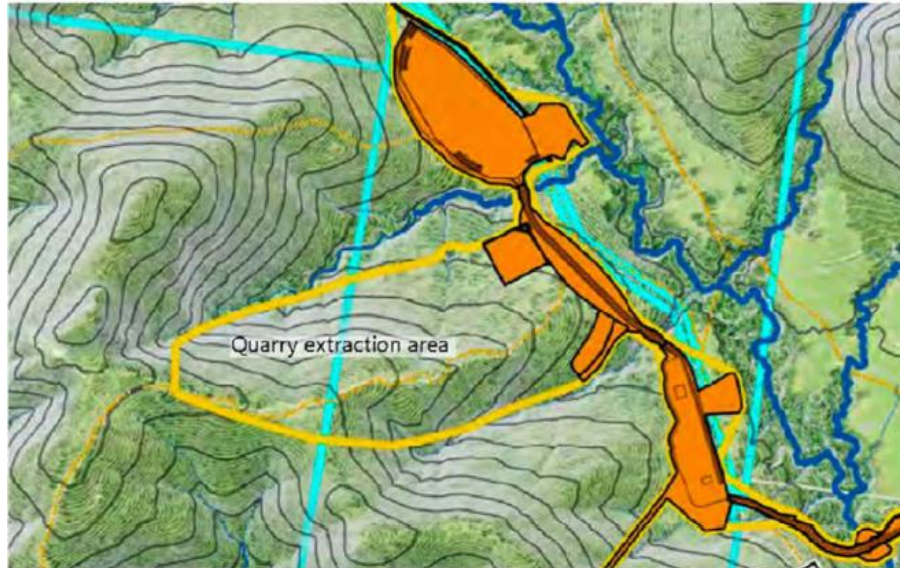




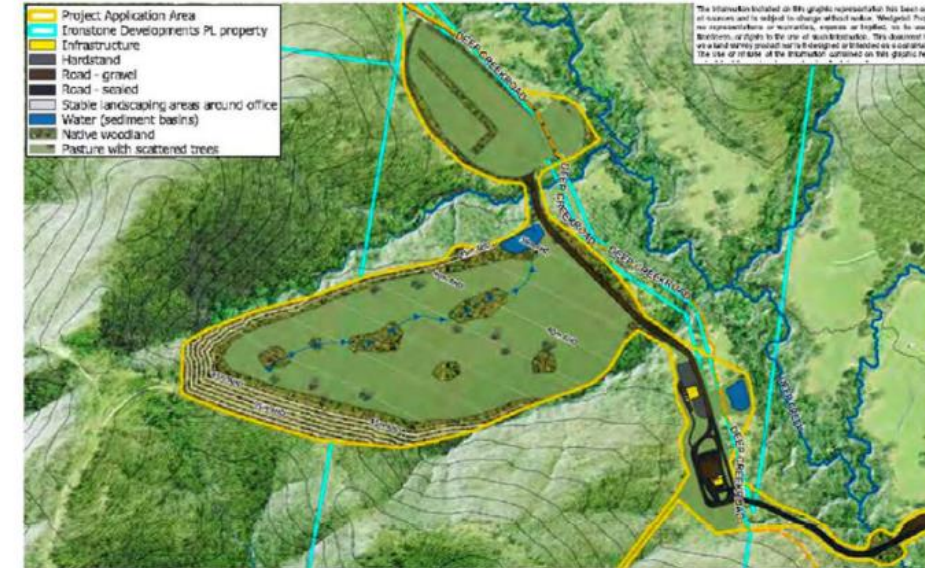
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- The Department:
    - acknowledges the public interest in the project and in particular the concerns regarding traffic. Biodiversity, noise, air quality and water impacts;
    - has carefully considered all the issues raised throughout its assessment process and feedback from government agencies;
    - considered the suitability of the site and whether it's in the public interest;
    - considers that the project has been designed to avoid key constraints, and any residual impacts would be relatively minor and can be managed through the recommended conditions of consent.
    - would contribute a range of high-quality construction materials to local and regional markets;
    - accepts there is a strategic need for hard rock quarry materials in the Hunter, Central Coast and Sydney regions;
    - Considers there would be economic benefits to the region and State of NSW;
    - Considers on balance that the benefits outweigh the residual costs, the site is suitable and that the project is in the public interest and is approvable, subject to the recommended conditions of consent.
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# Rehabilitation and final landform

- Key rehabilitation objective is to establish a stable, safe, non-polluting landform able to support self-sustaining native vegetation and agriculture in the form of pasture for grazing
- On completion of extraction, benches would be revegetated with native trees consistent with surrounding vegetation with a free draining quarry floor consisting of open grassland and scattered woodland
- The Department's recommended conditions include a requirement for Ironstone to prepare a Rehabilitation MP that includes:
  - a conceptual closure plan and specific rehabilitation performance and completion criteria
  - measures to meet the criteria
  - a program to monitor, review and report on the effectiveness of the rehabilitation



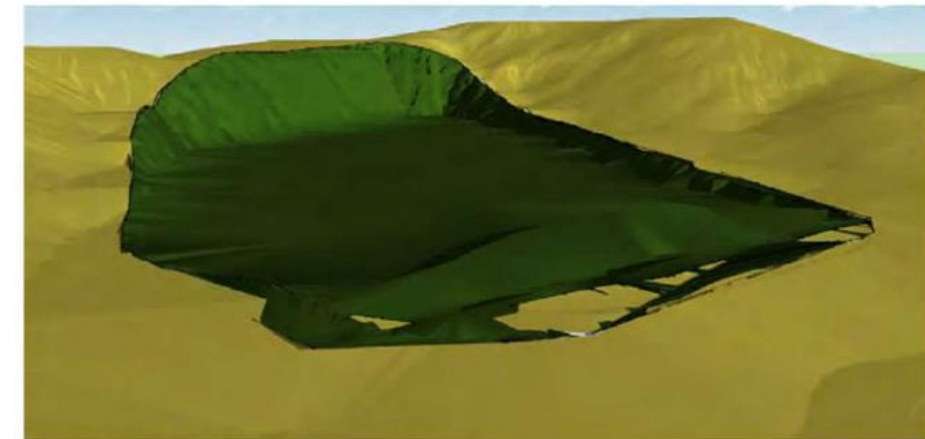
Initial phase of the project prior to any quarrying activity - 3d modelling below



Final condition of the site after rehabilitation - 3d modelling below



Existing landform void of vegetation - extraction area in green



Final landform after rehabilitation