



# APPENDIX R: HISTORIC HERITAGE IMPACT ASSESSMENT REPORT





INSITE HERITAGE  
PTY LTD

# **Deep Creek Hard Rock Quarry**

Historic Heritage Assessment Report

**Prepared by:**  
Christopher Carter

**For:**  
Kleinfelder Australia Pty Ltd

May, 2021

## Table of Contents

Executive Summary .....	3
Introduction.....	4
Background.....	4
Project Location.....	4
Project Summary .....	8
Existing Heritage Items.....	10
Previous Heritage Assessments/Report .....	10
Environmental Context.....	11
Historical context.....	11
Aboriginal Settlement.....	11
European Exploration & Settlement .....	11
Transport.....	14
Timber.....	14
Mining.....	15
Cadastral Context .....	15
Site Inspection .....	17
Landscape.....	17
Potential Evidence of Historic Activity .....	17
Heritage Significance .....	20
Statement of Significance.....	21
Conclusion .....	21
<b>References.....</b>	<b>22</b>

## Executive Summary

Ironstone Developments Pty Ltd propose to develop a hard rock quarry, associated facilities and roads to provide crushed rock for civil construction works. The proposed quarry is located off or on a property currently accessible off Deep Creek Road, Limeburners Creek, NSW.

This report contains an assessment of the historic (non-Indigenous) heritage significance of the area particularly examining any issues that may impact on the development of the quarry.

The report has concluded that the area contains no items of heritage significance within the study area and that there are no issues that would constrain the approval of the quarry.

## Introduction

Ironstone Developments Pty Ltd propose to develop a hard rock quarry, associated facilities and roads to provide crushed rock for civil construction works.

The project proposes:

- A new private access road and intersection on The Bucketts Way approximately 200m south of Witt Road.
- Construction of an access road with two creek crossings to the proposed quarry.
- An area of an office, workshop and stockpiles.
- The extraction area and process area with a primary stockpile.
- A main stock pile area.
- A water supply.

The quarry is proposed to extract rock for use primarily in road works, a project overview is in Table 1.

The primary objectives and tasks of this assessment were to:

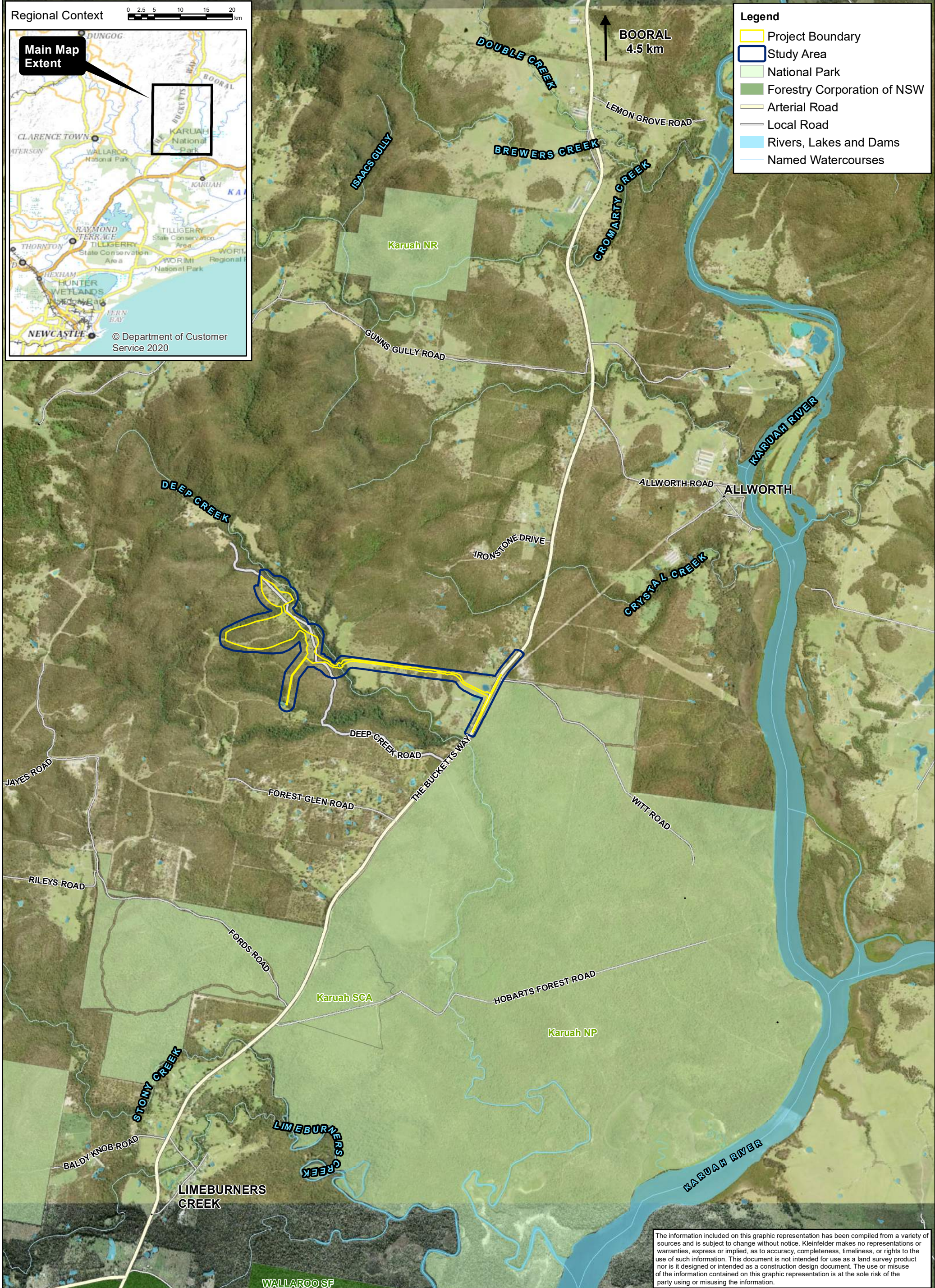
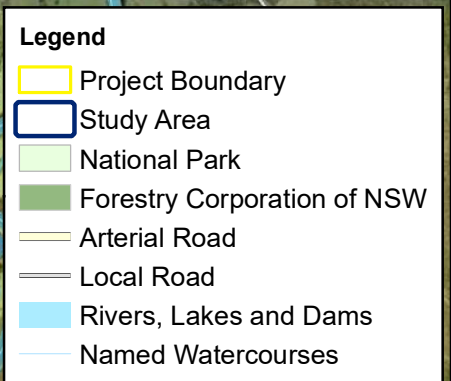
- Undertake searches of the databases likely to contain records of heritage items including Office of Environment and Heritage (OEH) database;
- Undertake background research into the archaeological, historical and environmental context of the study area;
- Undertake an inspection of the study area to identify and record any visible or potential items of European heritage significance;
- Prepare a report addressing these issues consistent with the Heritage Council of NSW guidelines including 'Assessing Significance for Historical Sites and Relics 2009' identifying any potential constraints or opportunities for the project or further approvals or requirements in relation to its historic heritage.

This assessment has been prepared by Christopher Carter, an archaeologist with a Master of Arts degree in historical archaeology and a PhD in archaeology and over 20 years' experience in the conduct of survey, assessment and excavation of historical sites throughout New South Wales.

## Background

### Project Location

Specifically, the proposed Deep Creek Quarry (DCQ) is to be located at Lots 472/DP1162208, Lot 48/DP753178, Lot 551/DP1238818, Lot 552/DP1238818, and Deep Creek Road and The Bucketts Way Road reserves at Limeburners Creek, Parish of Karuah, County of Gloucester, 279 Deep Creek Road, NSW 2324, within the Mid Coast Council LGA. Figures 1-3 contain location maps and plans of the proposed works.



The information included on this graphic representation has been compiled from a variety of sources and is subject to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a land survey product nor is it designed or intended as a construction design document. The use or misuse of the information contained on this graphic representation is at the sole risk of the party using or misusing the information.

PROJECT REFERENCE: 20203112  
 DATE DRAWN: 4/06/2021 15:32 Version 1  
 DRAWN BY: BDeane  
 DATA SOURCE:  
 NSW DFSI - 2018  
 NSW DPIE - 2020

**Locality**

Ironstone Developments Pty Ltd  
 Deep Creek Quarry  
 The Bucketts Way, Limeburners Creek, NSW












FIGURE:  
**1**

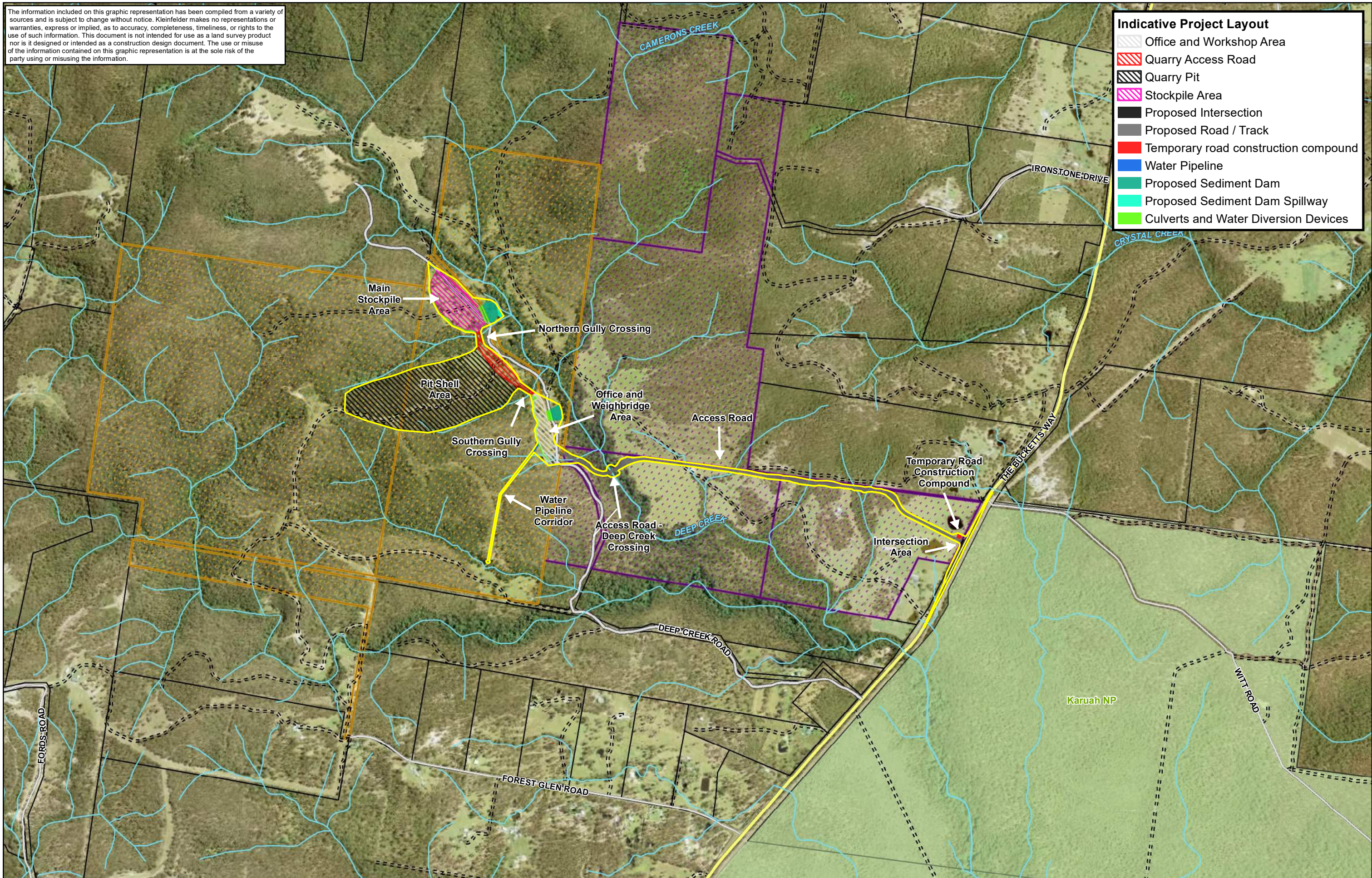


www.kleinfelder.com

The information included on this graphic representation has been compiled from a variety of sources and is subject to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a land survey product nor is it designed or intended as a construction design document. The use or misuse of the information contained on this graphic representation is at the sole risk of the party using or misusing the information.

**Indicative Project Layout**


-  Office and Workshop Area
-  Quarry Access Road
-  Quarry Pit
-  Stockpile Area
-  Proposed Intersection
-  Proposed Road / Track
-  Temporary road construction compound
-  Water Pipeline
-  Proposed Sediment Dam
-  Proposed Sediment Dam Spillway
-  Culverts and Water Diversion Devices



**Legend**


-  Project Boundary
-  Ironstone Development Pty Ltd Owned
-  Agreement with Ironstone Development Pty Ltd
-  Lot Boundaries
-  National Park
-  Named Watercourse
-  Unnamed Watercourse
-  Arterial Road
-  Local Road
-  Track

0 0.125 0.25 0.5 0.75 km



**KLEINFELDER**  
Bright People. Right Solutions.

www.kleinfelder.com



PROJECT REFERENCE: 20203112  
 DATE DRAWN: 3/06/2021 11:06 Version 1  
 DRAWN BY: BDeane  
 DATA SOURCE:  
 NSW DFSI - 2018  
 NSW DPIE - 2020

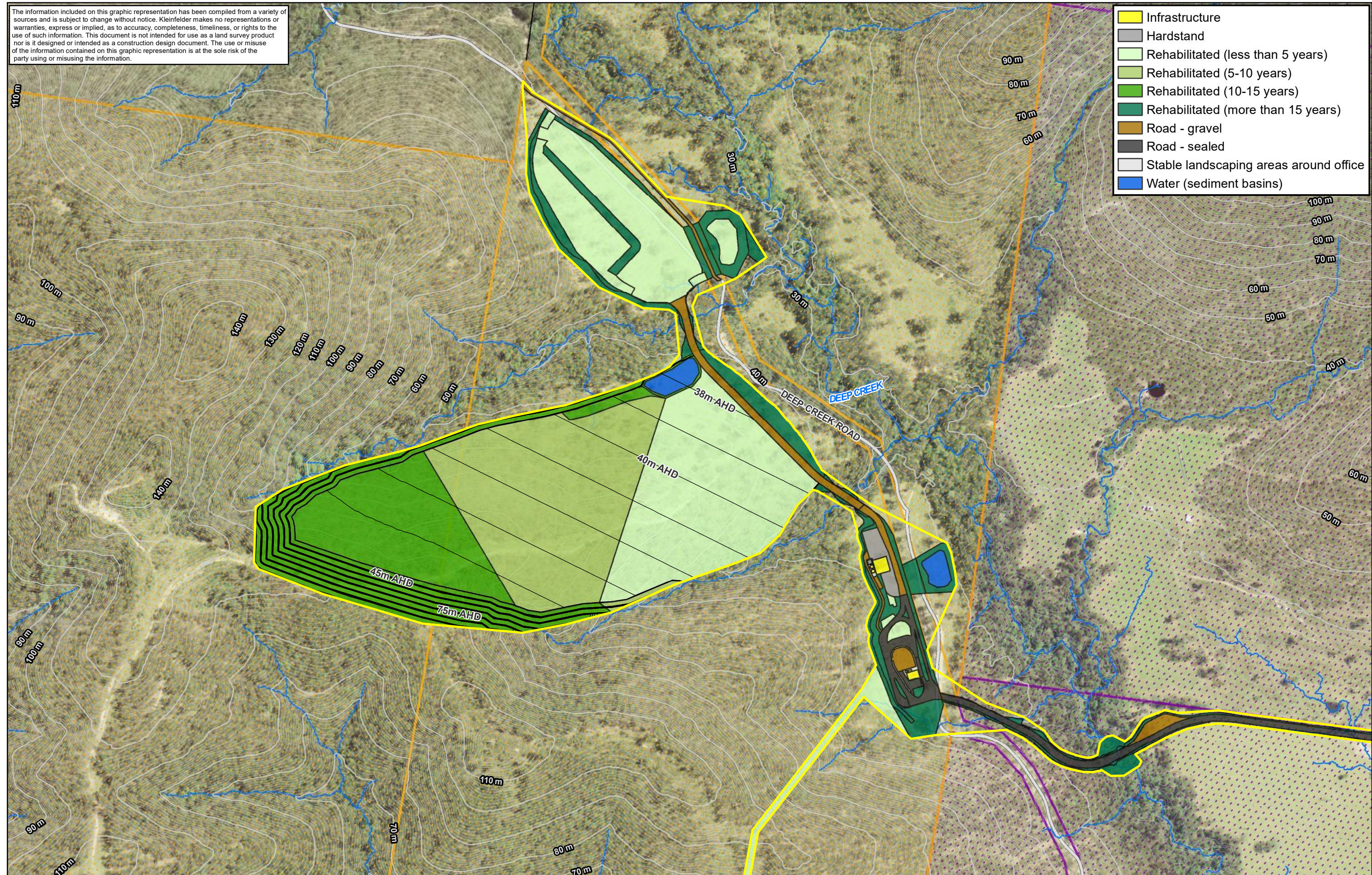
**Proposed Deep Creek Quarry**

Ironstone Developments Pty Ltd  
 Deep Creek Quarry  
 The Bucketts Way, Limeburners Creek, NSW

FIGURE:  
**2**

The information included on this graphic representation has been compiled from a variety of sources and is subject to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a land survey product nor is it designed or intended as a construction design document. The use or misuse of the information contained on this graphic representation is at the sole risk of the party using or misusing the information.

- Infrastructure
- Hardstand
- Rehabilitated (less than 5 years)
- Rehabilitated (5-10 years)
- Rehabilitated (10-15 years)
- Rehabilitated (more than 15 years)
- Road - gravel
- Road - sealed
- Stable landscaping areas around office
- Water (sediment basins)



- Legend**
- Project Boundary
  - Local Road
  - Ironstone Development Pty Ltd Owned
  - 1m Contours
  - Agreement with Ironstone Development Pty Ltd
  - 10m Contours
  - Lot Boundaries
  - DEM Derived Creek Lines

0 25 50 100 150 200 250 Metres

N

**KLEINFELDER**  
Bright People. Right Solutions.

www.kleinfelder.com

PROJECT REFERENCE: 20203112  
 DATE DRAWN: 3/06/2021 12:24 Version 1  
 DRAWN BY: BDeane  
 DATA SOURCE: NSW DFSI - 2018  
 NSW DPIE - 2020  
 Wedgetail - 2021  
 Engeny - 2021

**DCQ Stage Plans -  
Final Landform**

Ironstone Developments Pty Ltd  
Deep Creek Quarry  
The Bucketts Way, Limeburners Creek, NSW

FIGURE:  
**3**

## Project Summary

The key details of the Project are shown within Table 1 below.

**Table 1 Key aspects of the proposed Deep Creek Quarry Project.**

Aspect	Key Aspects of the Project
<b>Key elements</b>	Hard rock quarry extracting up to 500,000 tonnes per annum over a period of up to 30 years including a sealed access road, site office, workshop, weighbridge and stockpile area with associated water management infrastructure. Progressive rehabilitation of quarried land returning to pasture and native vegetation.
<b>Location</b>	279 Deep Creek Road, Limeburners Creek, NSW 2324, within the Mid-Coast local government area.
<b>Property Titles</b>	Lots 472/ DP1162208, 48/ DP753178, 551/ DP1238818, 552/ DP1238818, and Deep Creek Road and The Bucketts Way Road reserves at Limeburners Creek, Parish of Karuah, County of Gloucester, 279 Deep Creek Road, Limeburners Creek, NSW 2324.
<b>Land Owner</b>	Ironstone Developments Pty Ltd (access road corridor under option to Ironstone Developments from local private landholder).
<b>Proponent</b>	Ironstone Developments Pty Ltd.
<b>Employment</b>	Up to 10 full-time staff, with further support for the local and regional construction industry and associated haulage contractors.
<b>Area</b>	<p>Total Project Area of approximately 30 hectares, comprising:</p> <ul style="list-style-type: none"> <li>• 18 ha of quarry extraction area.</li> <li>• 12 ha in supporting infrastructure and roads.</li> </ul> <p>from a proponent land holding of approximately 308 hectares.</p>
<b>Elevations</b>	<p>Approximate elevations relevant to the Project are:</p> <ul style="list-style-type: none"> <li>• Quarry located between 37 m to 115 m Australian Height Datum (AHD).</li> <li>• Workshop, office and stockpiles between 31 to 49 m AHD.</li> <li>• Access road between 22 to 59 m AHD.</li> </ul> <p>Quarry pit is sheltered to west by a ridge 125 m to 145 m AHD high and is above the nearby Deep Creek that has an elevation of 28 m AHD.</p>
<b>Project Life</b>	Up to 30 years.
<b>Extraction Rate</b>	Maximum of 500,000 tonnes per annum, and maximum daily rate of 4,000 tonnes.
<b>Resource and products</b>	Approximately 13 Mt of rhyolite, arenite and weathered rock, crushed, screened and sized for various products including road construction and landscaping purposes. High proportion of product to meet Transport NSW specifications for high grip to improve road safety.

Aspect	Key Aspects of the Project
<b>Operating Hours</b>	<p>Construction of access, bunds, workshop and office:</p> <ul style="list-style-type: none"> <li>• 7:00 am to 5:00 pm Monday to Friday.</li> <li>• 8:00 am to 1:00 pm Saturday.</li> <li>• No works on Sunday or public holidays.</li> </ul> <p>Quarrying Operations:</p> <ul style="list-style-type: none"> <li>• 7:00 am to 5:00 pm Monday to Friday.</li> <li>• 8:00 am to 1:00 pm Saturday.</li> <li>• No quarrying on Sunday or a Public Holiday.</li> </ul> <p>Loading and dispatch of trucks:</p> <ul style="list-style-type: none"> <li>• 6:00 am to 6:00 pm Monday to Friday.</li> <li>• 6:00 am to 1:00 pm Saturday.</li> <li>• No haulage on Sunday or a Public Holiday.</li> </ul>
<b>Transport Rate</b>	<ul style="list-style-type: none"> <li>• Up to 25 laden trucks per hour at peak rates.</li> <li>• Maximum daily extraction rate of 4,000 tonnes per day.</li> <li>• On average, this equates to 55 laden trucks per day in order to meet peak production.</li> <li>• Up to 10 vehicles of employees would be expected to arrive and depart within 1 hour of opening and closing.</li> </ul>
<b>Extraction</b>	<ul style="list-style-type: none"> <li>• Maximum extraction rate of 500,000 tonnes per annum.</li> <li>• Weathered rock stripped by bull dozer or excavator.</li> <li>• Blasting of hard rock.</li> <li>• Excavator and articulated trucks to feed mobile crusher and screen on pit floor.</li> <li>• Conveyors, articulated trucks, and excavator or front-end loader to distribute materials between processing and stockpile areas.</li> <li>• Front-end loader to load road registered haulage trucks for saleable products.</li> </ul>
<b>Support facilities and utilities</b>	<ul style="list-style-type: none"> <li>• Site office, weighbridge, workshop, stores, car parking.</li> <li>• New intersection on The Bucketts Way with private sealed access road.</li> <li>• Power supply from diesel generators and or connection to the mains network via a new underground electrical line adjacent to the access road.</li> <li>• Water supply sourced from rainwater, onsite dams, surface water runoff, groundwater seepage and imported potable water as needed.</li> </ul>
<b>Rehabilitation</b>	<ul style="list-style-type: none"> <li>• On completion of extraction, benches will be revegetated with native trees consistent with surrounding vegetation with a free draining quarry floor consisting open grassland and scattered woodland the may provide a dwelling site generally consistent with the existing approved subdivision of the property.</li> </ul>

## Existing Heritage Items

In order to establish whether any heritage items have been previously recorded within the study area, searches were undertaken of statutory and non-statutory heritage registers and schedules including the State Heritage Inventory, *Environment Protection and Biodiversity Conservation Act 1999* (National Heritage List, Commonwealth Heritage List), Australian Heritage Database (Department of the Environment), *Great Lakes Local Environmental Plan 2014* (LEP) and the non-statutory Register of the National Estate and Register of the National Trust of Australia (NSW).

The Register of the National Estate (RNE) was closed in 2007 and is no longer a statutory list. The RNE is maintained on a non-statutory basis as a publicly available archive and educational resource. The existence of an entry for a place in the RNE does not in itself create a requirement to protect the place under Commonwealth law. Nevertheless, information in the register may continue to be current and relevant to statutory decisions about protection and their place on the register indicates how a group or community may view their heritage value and the significance of such items.

The [NSW] State Heritage inventory lists heritage items classified in three sections:

Section 1 - contains Aboriginal Places declared by the Minister for the Environment under the *National Parks and Wildlife Act*.

Section 2 - contains heritage items listed by the Heritage Council of NSW under the NSW . This includes listing on the State Heritage Register, an Interim Heritage Order or protected under section 136 of the NSW *Heritage Act*.

Section 3 - contains items listed by local councils on Local Environmental Plans under the *Environmental Planning and Assessment Act 1979* and State government agencies under s.170 of the *Heritage Act*.

These searches did not result in finding any heritage items within or in the immediate vicinity of the study area. The closest recorded items are listed on the *Great Lakes Local Environmental Plan 2014* and include dwellings, bridges, community facilities, mills and wharves. None of these recorded items are within ten kilometres of the study area. Booral is located approximately ten kilometres north-east of the study area and thirteen items are listed on the LEP (including Gundayne House which is listed on the State Heritage Register). Carrington is located approximately sixteen kilometres south-east of the study area and has six items listed on the LEP (including Tahlee Estate which is listed on the State Heritage Register). Karuah is located thirteen kilometres south of the study area and has three items listed on the Port Stephens LEP.

## Previous Heritage Assessments/Report

In 2007 the Great Lakes Shire Council, in partnership with the NSW Heritage Office, commissioned a community-based heritage study of the shire area. The final report covered areas surrounding the study area but did not identify any heritage items within it. The Great Lakes Shire Council area is now administered by the Mid-Coast Council.

## Environmental Context

The study area includes an area river valley formed by Deep Creek on the southern margins of Ironstone Mountain. Low spur lines abut the valley to the west. Karuah River is a major watercourse and is located approximately 5.5 km east of the quarry site.

Deep Creek is a tributary of the Karuah River. The upper reaches of Deep Creek (west of Bucketts Way) flow through cleared or partially cleared farmland. The creek continues to the south-east of Bucketts Way flowing through the Karuah National Park to its confluence with the Karuah River, some eight kilometres (straight line measurement) south-east of the study area.

The quarry is on the western side of a tributary of Deep Creek. The access road from The Bucketts Way is located on the broader side of the valley track on the eastern side of the tributary to Deep Creek.

The area generally can be described as subtropical. Rainfall is in the 1000 mm to 1400 mm range over much of the area with a summer or summer-autumn maximum and a winter-spring drier season. The nature of the forest cover varies according to rainfall, soil fertility, aspect, water logging and the past level of Aboriginal burning. The dominant cover is wet or dry eucalyptus forest, but areas of swamp forest (Casuarina forest on water logged ground) and rainforest are to be noted. Early reports of the Karuah - Avon River valley spoke of areas of open forest or woodland with a grassy understorey suitable for grazing, a result probably achieved by frequent Aboriginal burning. Rainforest varies according

The study area includes cleared areas used as for grazing, with the toe slopes and flats cleared of vegetation, and remnant shade trees remaining. The upper slopes remain vegetated with native trees and shrubs, dissected by existing tracks.

The access point is located approximately 12km north from the Pacific Highway on The Bucketts Way. The access route is generally confined to open grazing paddocks, under agreement with the property owner and uses a section of existing road over the low ridge.

## Historical context

The purpose of this section is not to provide a detailed history but to summarise the historical development of the project area in terms of a conceptual framework. It may also highlight the likelihood of the existence of heritage items within or adjacent to the site.

### Aboriginal Settlement

Aboriginal people have lived in this area for many thousands of years. This assessment does not cover the period of Aboriginal history, such detail is contained in the Aboriginal Heritage Assessment that has been undertaken concurrently with this report.

### European Exploration & Settlement

The earliest mention of the area was when Captain Cook sailed passed Port Stephens, recording in May, 1770, 'Friday 11th, Winds southerly in the day and in the night westerly and gentle breeze and clear weather. At 4 p.m. passed 1 mile low rocky point which I name Point Stephens. On the northern side of this point is an inlet which I call Port Stephens that appeared to me from the north head to be sheltered from all winds. At the entrance lay 3 small islands, two of which are of a tolerable height and on the main near the shore are some high round hills that make it (something) like hills. In passing this bay at the distance of 2 or 3 miles from the shore our soundings were from 33 to 27 fathoms from which in 1770.'

In late in 1791 a convict transport, the *Salamander*, visited the harbour to conduct a preliminary survey. In March 1795, the area was further explored and followed the Karuah River as far north as where Allworth now stands.

Governor Macquarie considered Port Stephens in 1811 with a view to forming a settlement north of Newcastle, however, he found the land barren and did not proceed (*Regional Histories*, 1996).

From 1816 onwards the area was a centre of cedar-getting activity and the industry was well established by 1823, with cedar being shipped to England from the port at Sawyers Point (later to become known as Karuah) (Great Lakes Heritage Study, 2007). The cedar cutters were not interested in permanent settlement and resided in camps associated with the timber stands they were working. Once the timber was cut out, they moved on.

It was not until nearly 1820 that upper Port Stephens began to be settled by Europeans. The European settlement of the area is closely associated with the development of the Australian Agricultural Company (AACo).

Having received the Bigge reports on the status of the Australian colony in 1822 and 1823, the British Parliament commenced its colonial plans and incorporated the Australian Agricultural Company (AACo) in 1824 (Bairstow, 2003). The first of Australia's large-scale agricultural companies, the AACo was allocated one million pounds to take up one million acres of land outside and beyond the limits of the settled area of the Australian colony. Funded largely by prominent wealthy and enterprising British gentlemen, who in-turn became shareholders in the company, the AACo was tasked with using the first major influx of private capital into the colony to raise fine wool sheep, breed cattle and horses for company use and cultivate agricultural crops to export to Britain and sustain the colony.

A mammoth proposal with strong financial backing, the AACo received direction from a Court of Directors in Britain, was supervised by a Colonial Committee in Australia and run by a resident manager on the company estate.

In 1825 the unsettled land north of the Hunter Valley was selected to establish the AACo settlement. Port Stephens had already been recorded and the deep water was considered suitable for the development of a safe port. Under some pressure to clear land quickly and commence construction of facilities for the new company estate, the first to observe the area did so at the height of a good season, without flooding and when fresh water rivers ran freely. Correspondence recorded that much of the area looked like the "gentleman's park and grounds" of Britain and was suited to the objectives of the new company, the area of Port Stephens and the land to the north was soon recommended to the Colonial Committee as the prospective company estate. Keen to commence the company's activities, the Colonial Committee accepted these recommendation and selected one million acres of land between Port Stephens to the south, the Manning River to the north, the Great Dividing Range to the west and the Pacific Ocean to the east (Great Lakes Heritage Study, 2007).

In early 1826, the appointed manager, Dawson, led the first major party of AACo staff and supplies from Sydney to Port Stephens to begin construction of the company's headquarters and their first town at Carrington. The AACo headquarters, a rudimentary system of roads and land was being cleared within a few short months. Tahlee House was built for Dawson, in 1826 and subsequently added to by later superintendents.

By 1828 Carrington had a population of almost 600 and this included convict labour, many of whom were employed in the larger Carrington to Stroud area. (Great Lakes Heritage Study, 2007). Carrington gradually became less important to the AACo during the 1830s and Stroud, the company's second company town and extensive farm, was established in 1827 and, shortly thereafter, it was pronounced that Stroud possessed "advantages for every purpose of Agriculture, whether arable or grazing" (Bairstow, 2003 p346). A small settlement between Carrington and Stroud, later to be known as Booral, was at the head of navigation on the Karuah River and the wharf there was a loading point for the AACo.

Mainly due to hasty and poorly considered observations, the selection of the company's one large land grant proved to be misjudged. The coastal landscape, with poor soil quality and relatively high humidity, was unsuitable for agricultural pursuits and sheep grazing.

Before long, the Company Board determined that the Port Stephens Estate did not suit the overall objectives of the company. The Board decided to dispense with the Colonial Committee and appointed a resident commissioner to manage the company affairs. By late 1829, Captain Parry RN was appointed to restore order and management to the estate and improve its future returns. As Stroud was progressing as the principal town and possible future centre of the AACo, Parry chose to live there with his family.

Stroud's early growth became stunted as the Australian economy became depressed in the 1840s. AACo objectives were reviewed and focus shifted elsewhere. Much of the company's one million acres remained uncultivated and as labour was difficult to come by, the company turned to land sales to generate another income stream.

In 1854 the road from Port Stephens to the New England estate was improved, and a twice monthly steamer service from Booral to Sydney began. The Company's store at Stroud became a retail outlet. Despite these efforts land sales were very low. During the period 1850 – 1856 only 24 farmers were found and were given prime alluvial land on the banks of the Karuah River. Another 19 bought allotments in the towns.

In 1856, the new company commissioner took decisive action and made Stroud a 'public town' with a Court of Petty Sessions, a retail centre and an area covered by the *Towns Police Act* (Great Lakes Heritage Study, 2007). It was thought that settlers would be more inclined to move to Stroud rather than to other towns as purchasing crown land was easier than purchasing land from the AACo. AACo then began to divest itself of both property and stock. In 1857 all of the Port Stephens flocks were advertised for sale and in 1858 all the AACo houses were advertised for sale. By 1864 nearly all the land in the vicinity of Stroud had been either leased or sold.

In the meantime, the AACo negotiated the surrender of its coastal land in exchange for prime pastoral acreage on the Liverpool Plains. The AACo finally withdrew from Stroud in 1873. Despite this, agriculture, and in particular the grazing of livestock, continued along the Karuah River Valley.

There were several factors that affected land use patterns in the study area during second half of the nineteenth century - the beginning of small acreage settlement after about 1856 - 1860, the beginning of hardwood milling about 1860 following the introduction of steam powered saws and the commencement of the dairy industry after about 1890. The period of first settlement and agricultural endeavour is, therefore, the period to about 1856 (Great Lakes Heritage Study, 2007).

The Karuah River Valley was part of the wider National and State post-war settlement scheme of the 1950s (Great lakes Heritage Study, 2007). The scheme set aside land for selection for use by serving or discharged members of the Defence Force. Ex-servicemen who took up the selections were expected to comply with the Government Standards for farming and land development. They were expected to 'improve' the land by clearing or draining it, and they were also required to abide by the 'use the land or lose it' principle. The success of the scheme varied considerably in the region, factors affecting success ranged from the quality of the land selected through to the skill and determination of the selector.

The 1960s saw further change to the agricultural sector with the commencement of large-scale chicken production. This change resulted in a number of dairy farms converting to chicken or beef production. The poultry industry continued to expand, with significant increases in both egg and poultry meat production. Later deregulation of the dairy industry saw the number of dairy farms in the catchment decline further. Today, agriculture within the Karuah River Catchment is dominated by both the poultry industry (both egg and broiler production) and the beef industry. The dairy industry continues on small holdings, along as do several other small boutique industries.

### Transport

The most conspicuous feature of road transport during the area's early years was the general lack of trafficable roads. The AACo's estates were initially serviced by a road system of sorts but for the first few decades saw reliance on the river systems for shipping goods in and out of the area (Great Lakes Heritage Study, 2007). Both the Williams and Karuah Rivers were navigable for some distance from Port Stephens. Clarence Town became an important settlement on the Williams River and Booral was the head of navigation on the Karuah River. The AACo. Stone wharf at Booral (circa 1834 – 37), at the head of navigation, remains approximately seven kilometres north east of the study area. Constructed by Dumaresq, the wharf, was constructed at the time of increased tobacco production (Bairstow, 2003). By the 1860s, regular coach services connected the steamer services of Clarence Town with Dungog, Stroud and other rural towns.

A mail road ran from Raymond Terrace through Limeburners Creek to Stroud in 1866 and provided 'easy riding' to Stroud where a track provided access to the upper Myall and Bulahdelah. The Raymond Terrace - Stroud road then proceeded north to Gloucester, to Wingham via Larry's Flat and on to Port Macquarie, passing to the north of Taree but providing access to Taree and the Lower Manning Valley. Other than that, local roads consisted of tracks radiating from village ports to surrounding farms. Local roads initially were a feeder and distribution system associated with water transport.

An early parish map (Parish of Karuah) shows a track running along Deep Creek through the study area (Portion 48) to continue in roughly a south-easterly direction to link with the main road running north to Allworth and Booral (this road is now known as The Bucketts Way). The Booral Cemetery is shown on the map at this junction, on the western side of The Bucketts Way to the south of Deep Creek (see Figure 5).

### Timber

The timber industry has been a major feature in the landscape of the Karuah River catchment since the very early days of European settlement. The first permit for timber cutting was issued for cedar harvesting in the Port Stephens area in 1816. A flourishing cedar cutting industry was established by 1823 but was substantially cut out within a few more years (Engel et al, 2000). Reasonable quantities were cut in the Karuah and Myall River valleys.

The timber trade increased rapidly with rosewood as well as cedar being felled. The timber was shipped from Sawyers Point on the western bank of the Karuah River. Timber was brought to Sawyers Point from a bread, floating logs downstream on the myriad of streams that flooded regularly. At first, the timber cutters with bullock teams, worked the river flats and brush gullies, and later penetrated deeper into the valleys of the catchment as the readily accessible and most prized timber from the lowlands was taken. The early timber cutting was confined to water-side locations for ease of transport, a feature consistent with the development of timber milling along the New South Wales coast. The timber industry continued to expand beyond the 1800s well into the 1900s.

There is no remaining evidence of the early 1860s mills that established mechanised timber milling and set the Great Lakes area on the path of becoming a major supplier of hardwood timber. (Great Lakes Heritage Study, 2007).

### Mining

As in other parts of Australia, the mining of various minerals has occurred or been attempted within the Karuah River Catchment. Many mines were unsuccessful because of the lack of capital and their location in difficult, steep and remote country (Great lakes Heritage Study, 2007).

Small shows of gold were found in the region during the latter half of the 19<sup>th</sup> century and the Gloucester Gold Field was proclaimed in June 1879 (see Figure 4, excerpt from Parish of Karuah Map). This goldfield covered a large area to the west of the Karuah River including the study area, however there are no records of gold mines operating in the near vicinity.

Coal deposits were identified on AACo land north of Stroud in 1855 and pits were subsequently established in 1858 along the Mammy Johnsons River. Today there is open-cut mining between Stroud and Gloucester.

In 1890, a magnetite mine was established at Iron Stone Mountain immediately to the north of Deep Creek close to the study area. One load carrying magnetite was sent to the United Kingdom but there is no evidence that this venture was successful and on-going (Great Lakes Heritage Study, 2007). A mining lease surrounding Iron Stone Mountain is shown on the 1<sup>st</sup> Edition Parish of Karuah map (undated) (see Figure 4). Later editions of this parish map show that the mining lease was located within Portion 41, to the north of the study area (see Figure 5).

### Cadastral Context

The first alienation of land that encompassed the study area was included in the grant made to the AACo in 1824. Their initial grant stretched north to the Manning River and extended westward from the coast to the Karuah - Avon Valley (Chadban, 1970). The First Edition of the Parish of Karuah Map (undated) shows that study area surrounded by the original AACo land grant of 464,640 acres (188,033 hectares).

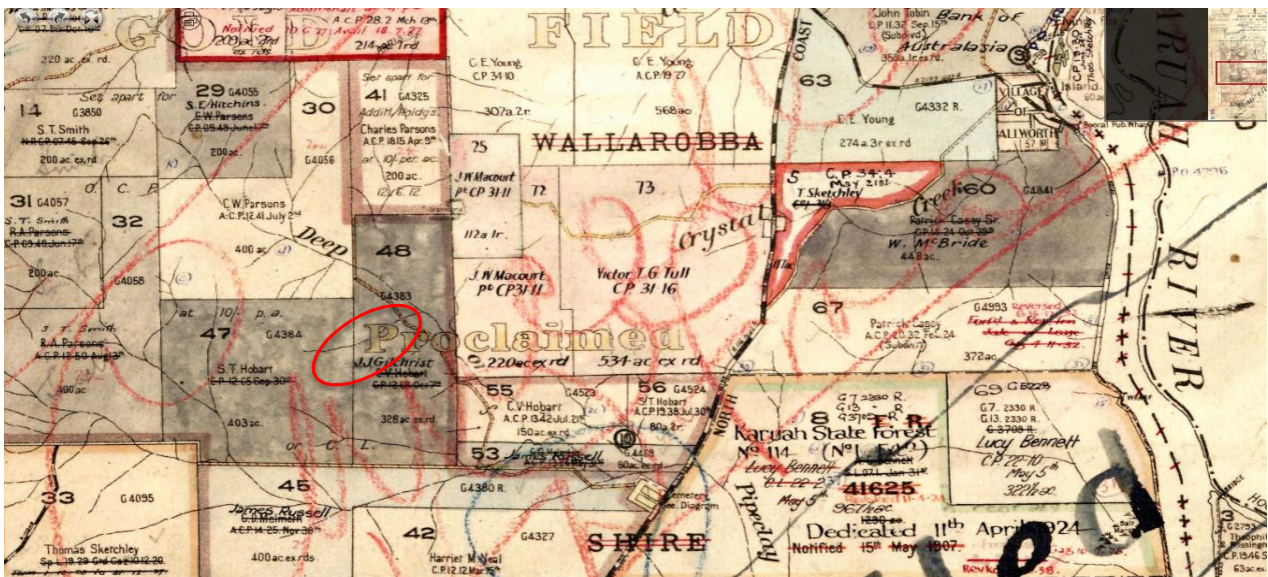
The 1840's was a period of severe economic hardship for the colony and the AACo, with droughts and rising costs. Part of the original charter of the AACo was to encourage emigration to the colony. After much negotiation between the Directors, the Colonial Committee and NSW Governor, effective title deeds were available in 1847. Hoping for an increased flow of emigration to New South Wales following the end of transportation, the AACo decided to sell off parts of its original land grant and a prospectus for 'The Port Stephens Colony' appeared in January 1849 offering unimproved land at one pound per acre. The plan, however, attracted

very few buyers (Birrell, 1987). Land sales were sporadic, largely due to the isolated nature of much of the company's land lying beyond existing colonial settlements.

The pattern of alienation of these lands is atypical of much of rural NSW. Figure 4 shows the first alienations following the original land grant. The portions around the study area are larger and more irregular than portions taken up typically under the *Crown Lands Occupation Act* during the latter half of the 19<sup>th</sup> century (Carter, 1994). These early 'Settlement Leases' were replaced early in the 20<sup>th</sup> century with the more regular pattern of land selection. Figure 5 shows the change in alienation patterns with smaller portions being more common.



**Figure 4: Excerpt from Parish of Karuah Map - Edition 1 – undated.**  
Approximate location of quarry outlined in red.



**Figure 5: Excerpt from Parish of Karuah Map - Edition 4, 1921.**  
Approximate location of quarry outlined in red

## Site Inspection

### Landscape

The study area is a valley floor to 150 to 250m wide, and side slopes on the western side to the approximately 100m below the ridge crest. The valley and slopes are orientated to the north-west and drained by Deep Creek to the south east. The area has been cleared of vegetation on the lower slopes and valley floor for grazing purposes.



Plate 1 View north west over the valley courtesy of Wedgetail Consulting.

### Potential Evidence of Historic Activity

Based on the history of the area surrounding the study area, activities that may have been carried out in the vicinity include agriculture and farming, mining, timber cutting and milling along with the dwellings of those involved in these activities.

The following table itemises the different phases of industry and settlement and the types of evidence that may still be extant. Given that the historic record and previous heritage studies have not included an items in or around the study area, the potential of locating evidence of historic activities was assessed as being low.

Table 2 Summary of potential historic activities that may be evident within the study area.

Phase	Activity	Relic or site type	Assessed potential
Timber cutting	- logging	stumps, tools, camps	low
	- carting	tracks, tramways, bridges, wharfs	low

	- milling	plant, equipment, sawmills, housing, tools  The dam associated with 'The Mill Paddock' (located south west of the study area) is known to remain in the study area.	low
Mining	- extraction - processing - transport	Pits, drives, shafts, mullock heaps, plant and equipment, tracks & bridges, housing	low
Farming	- pastoralists	fencing, yards, housing, gardens, implements	low
	- agriculture	fencing, sheds, housing, gardens, processing plants, implements	low
Transport	- road	embankments, cuttings, tracks, bridges, culverts, drains	low
Social & Communal	- schools - churches - cemeteries - post offices - police stations - halls - inns/hotels	buildings & grounds	low

### Local Historic Information

Conversations with local landholders by the proponent identified two features in the vicinity of the proposed quarry. The 'Mill Paddock' located south west of the proposed quarry, with the water pipeline sourcing water from a dam associated with the former mill. This dam is located within the study area and will be used to pump water via surface poly pipe to a header tank for servicing the infrastructure of the quarry (Tim Mullaney pers comm).

A former diary was known to be located to the north west of the quarry on the eastern side of Deep Creek (ibid).



Plate 2 View north across cleared grazing land



Plate 3 View east along the access track to be upgraded to service the quarry- courtesy of Wedgetail Consulting

## Heritage Significance

The Heritage Council of NSW recognises only four levels of significance for heritage in NSW:

- Local
- State
- National
- World

The four levels of heritage are the places and objects worth keeping. Levels indicate the context in which a heritage place is important – within the local area, state-wide, Australia-wide or worldwide. ‘Local’, ‘state’, ‘national’ and ‘world’ significance is not about ranking, it concerns context.

A heritage place may have one or more level of significance. Most heritage items in NSW are of local significance, meaning it is important to the heritage of the local area or region. Place - specific by nature, local heritage is no less important because comparable heritage of similar or different qualities exists in another area. The area or region of local heritage can cross local government area boundaries, contain more than one local government area, or only part of a local government area, such as the suburb, group of suburbs, ward, parish, county, catchment area, river basin or historic region.

Heritage places that are rare, exceptional or outstanding beyond the local area may be state significant. Unique or outstanding heritage in a national or international context may reach the national or world levels of significance.

An item has local heritage significance when it is important in the local area for one or more of the following criteria:

1. a) It is important in the course, or pattern, of the State or local area’s cultural or natural history – known as historic significance.
2. b) It has strong or special association with the life or works of a person or group of persons, of importance in the cultural or natural history in the State or local area – known as historic associations.
3. c) It is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the State or local area – known as aesthetic or technical significance.
4. d) It has strong or special association with a particular community or cultural group in the area for social, cultural or spiritual reasons – known as social significance.
5. e) It has potential to yield information that will contribute to an understanding of area’s cultural or natural history – known as research potential or educational significance.
6. f) It possesses uncommon, rare or endangered aspects of the area’s cultural or natural history – known as rarity.
7. g) It is important in demonstrating the principal characteristics of a class of the area’s cultural or natural places or cultural or natural environments – known as representative significance.

Informed by an assessment using these criteria, the responsible listing authority determines the level of heritage significance of an item:

8. Local significance by local councils – on advice of the local council heritage advisor.
9. State significance by NSW government – on advice of the Heritage Council of NSW.
10. National significance by Australian government – on advice of the Australian Heritage Council.
11. World significance by UNESCO World Heritage Committee – on the advice of international expert organisations.

## Field inspection results

No heritage items or structures or potential deposits were located during the field inspection. No evidence of any other activity other than historical grazing was found during the onsite inspection. The dam associated with 'The Mill Paddock' remains within the study area however it will not be impacted by the proposed quarry activity.

## Statement of Significance

Given that no heritage items or evidence of historic activity were known or located within the area, the study area has been assessed as having no heritage significance.

## Conclusion

Based on the historic record of the study area and its immediate surrounds, along with a physical inspection, the study area has been assessed as being of no heritage significance. As such, there are no constraints relating to the area's heritage that would hinder the development of the proposed quarry and its attendant structures.

Christopher Carter  
BA(Hons), MA, PhD

## References

- Bairstow, D., 2003, *A Million Pounds, A Million Acres: The Pioneer Settlement of the Australian Agricultural Company*, Cremorne.
- Birrell, W., 1987, *The Manning Valley: Landscape and Settlement 1824-1900*, Jacaranda Press.
- Carter, C., 1994, *The Archaeology of the Robertson Land Acts*, unpublished Honours thesis, ANU.
- Chadban, J., 1970, *Stroud and the A.A. Co.*, Great Lakes Shire Council.
- Engel, B., J. Win & J. Wark, 2000, *Tea Gardens Hawks Nest and Northern Port Stephens*, New Lambton.
- Great Lakes Council, 2007, *Great Lakes Council Heritage Study*.
- NSW Heritage Office, 1996, *Regional Histories*, NSW Govt. Publ.