



# Report

## Historic Heritage Assessment

Meppem Quarry

Regional Group Australia

29 September, 2020

Rev 3 (Revised Issue)

## Report Details

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## 1. INTRODUCTION

Advitech Pty Limited (trading as Advitech Environmental) was engaged by Groundwork Plus Pty Ltd (GroundworkPlus) on behalf of Regional Group Australia to undertake an Historic Heritage Assessment on the proposed hard rock quarry site located north east of Bellata on the land formally identified as Lot 10 DP 751753 and Lot 110 DP 257328. Regional Group Australia propose to operate the quarry for the land owner and proponent, John Meppem. This Heritage Impact Assessment has been prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) dated 24 August, 2018. This report aims to provide an assessment of historic heritage of the proposed hard rock quarry against the criteria set out in the SEARS.

It should be noted that this report was prepared by Advitech Pty Limited for Regional Group Australia ('the customer') in accordance with the scope of work and specific requirements agreed between Advitech and the customer. This report was prepared with background information, terms of reference and assumptions agreed with the customer. The report is not intended for use by any other individual or organisation and as such, Advitech will not accept liability for use of the information contained in this report, other than that which was intended at the time of writing.

## 2. QUALIFICATIONS OF THE INVESTIGATORS

Jake Brown is an archaeologist who has four years of experience in archaeological assessments, research, reporting, analysis and consultation. This experience has included cataloguing stone artefacts from the Hunter region, and conducting field surveys, and monitoring of potential find sites during surface/subsurface disturbance across central and northern Queensland. Jake's educational qualifications include a *Bachelor of Social Science (Hons)* in Sociology and Anthropology, University of Newcastle 2015, and a *Graduate Certificate of Archaeology* from Flinders University 2017. Jake is a member of the Australian Archaeological Association.

## 3. BACKGROUND AND OBJECTIVES OF THE ASSESSMENT

### 3.1 The Proposed Meppem Quarry

The proposed Meppem Quarry is located along Manamoi Road, approximately 10 kilometres north east of the township of Bellata, midway between Narrabri and Moree in northern New South Wales. The proposed quarry lies on Lot 10 DP751753 and Lot 110 DP 257328 within the Moree Plains Local Government Area on land zoned RU1 Primary Production. The lots comprise about 143 hectares, although the footprint of the quarry would be 8.34 hectares, with an additional approximate 1.6 hectares for the haul road (see **Figure 1**). The haul road connects to the Newell Highway via Manamoi Road and Boo Boo Road. A water dam is located to the east of the footprint and will be created for the proposed quarry.

The locality of the proposal site is considered to be rural in nature, with farming (cropping) making up the predominant land use within the region. It is proposed that the hard rock quarry will extract and process a maximum of 490,000 tonnes per annum over a five year period. The material extracted from the quarry will comprise overburden and hard rock, which will be processed through a mobile crushing and screening plant before being stockpiled. The quarry will produce a number of products suitable for the needs of the Inland Rail Project. Upon completion of supply of material to the project, the area of operation of the quarry would be rehabilitated to a suitable landform for continuing rural activities.

### 3.2 Purpose of this Assessment Report

The purpose of this report is to assess potential historic heritage issues from the operation and construction of the proposed quarry and, where required, identify feasible and reasonable mitigation measures. The proposal is designated development under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) and, as such, this statement has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs).

### 3.3 Secretary's Environmental Assessment Requirements

This report will be appended to an Environmental Impact Statement (EIS) which must comply with the requirements of Clause 6 and 7 of the Environmental Planning and Assessment Regulation 2000, and which addresses environmental considerations identified in the Secretary's Environmental Assessment Requirements (SEARs) (EAR1247) relevant to heritage. The SEARs state that the heritage assessment should be undertaken with a view to the:

- *identification of Historic heritage in the vicinity of the development and an assessment of the likelihood and significance of impacts on heritage items, having regard to the relevant policies and guidelines listed in Attachment 1.*

Those relevant policies and guidelines listed in Attachment 1 of the SEARs are:

- The Burra Charter (The Australia ICOMOS charter for places of cultural significance);
- NSW Heritage Manual (Heritage NSW); and
- Statements of Heritage Impact (Heritage NSW).

Further, in regards to historic heritage, the Office of Environment and Heritage provided recommendations to inform the SEARs:

- The EIS must provide a heritage assessment including but not limited to an assessment of impacts to State and local heritage including conservation areas, natural heritage areas, places of Aboriginal heritage value, buildings, works, relics, gardens, landscapes, views, and trees. Where impacts to State or locally significant heritage items are identified, the assessment shall:
    - *outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the NSW Heritage Manual (1996).*
    - *be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria).*
    - *include a statement of heritage impact for all heritage items (including significance assessment).*
    - *consider impacts including, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, landscape and vistas, and architectural noise treatment (as relevant).*
- where potential archaeological impacts have been identified, develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations (terrestrial and maritime as relevant) and include the results of these test excavations.*



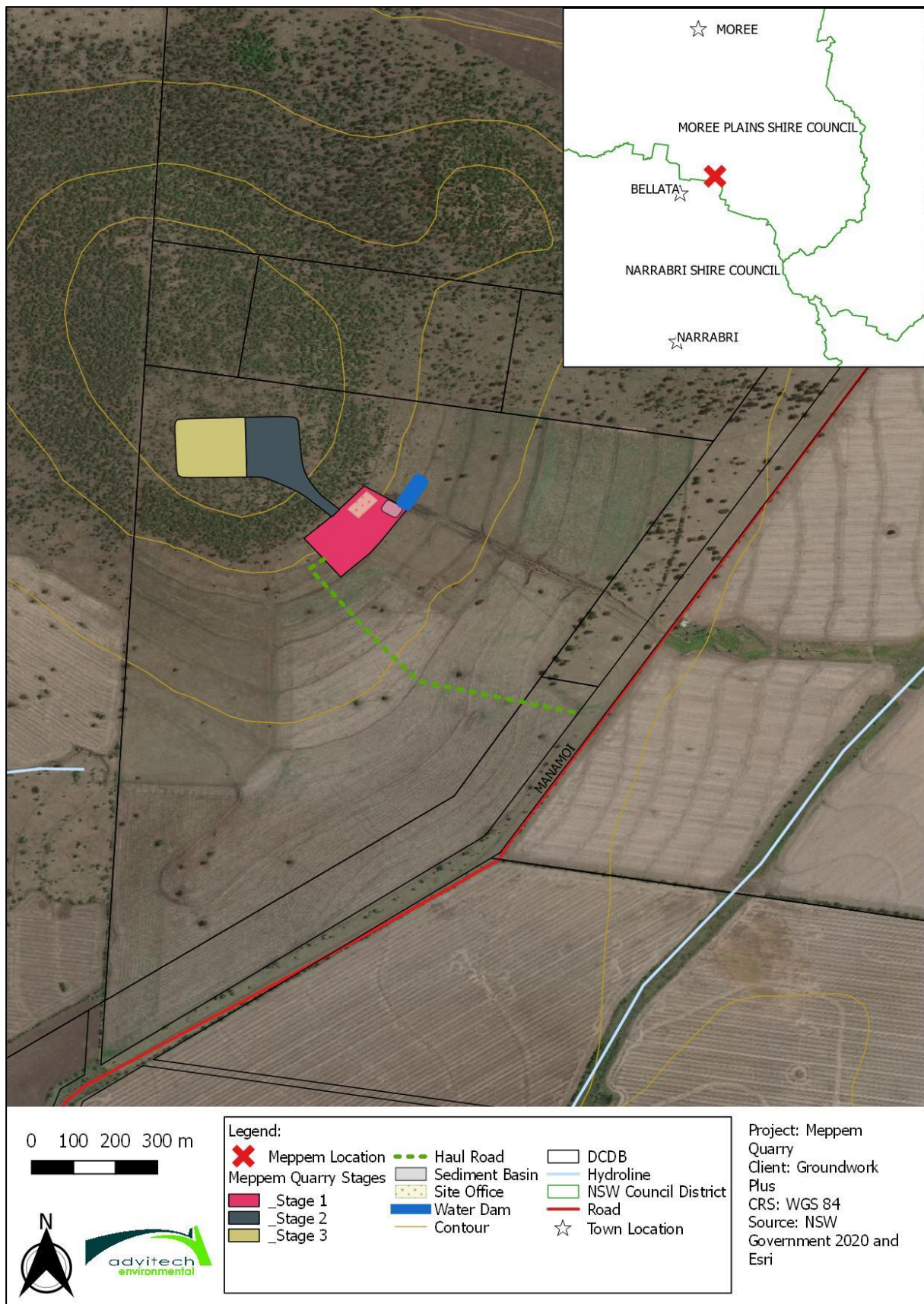


Figure 1: Site Location Map

## 3.4 Planning Context

### 3.4.1 New South Wales legislation

#### 3.4.1.1 *Environmental Planning and Assessment Act 1979*

Development in NSW is subject to the requirements of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and its associated regulations and planning instruments. Developments requiring consent, such as the Meppem Quarry proposal, are assessed under Part 4 of the EP&A Act. As the proposed quarry is designated development, the application for development must be accompanied by an environmental impact assessment in the form prescribed by the accompanying regulations, and as stipulated in the SEARs detailed above. Where extractive industries, including quarries, generate more than 30,000 cubic metres per year and or disturb greater than 2.0 ha of land, consent under Schedule 3 (Part 19) of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) is also required.

#### 3.4.1.2 *Heritage Act 1977*

The *Heritage Act 1977* (the Heritage Act) aims to conserve and manage the State's heritage, whether they are places, buildings, works, relics, moveable objects or precincts of local or State heritage significance. A property is a heritage item if it is listed in the heritage schedule of the Local Council's Local Environmental Plan or on the State Heritage Register, a register of places and items of particular importance to the people of NSW. If an item of heritage value was identified, then consultation would be undertaken with Moree Plains Shire Council and an assessment undertaken in accordance with Heritage NSW guidelines for *Assessing Heritage Significance* (Heritage Office, 2001). The heritage statement is the basis for policies and management structures that will affect an item's future.

#### 3.4.1.1 *Local Planning Instruments*

Development at the site is regulated under the Moree Plains Shire Council Local Environmental Plan 2011 and the Development Control Plan 2013. These policies determine which development is permissible, prohibited, exempt or complying. As the proposed quarry is on land zoned RU1 Primary Production, an extractive industry located at the proposal site would be permissible with development consent. Further, Schedule 5 lists all items of environmental heritage. No heritage item is listed within proximity to the proposal site.

### 3.4.2 Commonwealth legislation

Under the Federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), referral is required to the Australian Government for proposed actions that have the potential to significantly impact on Matters of National Environmental Significance (MNES) or the environment of Commonwealth land. The assessment of the proposal's impact on MNES and the environment of Commonwealth land found that there is unlikely to be a significant impact on relevant MNES or on Commonwealth land. Accordingly, the proposal does not need to be referred to the Australian Government Department of Agriculture, Water and the Environment (DAWE) under the EPBC Act.

### 3.4.3 The Project

The historic heritage assessment has been prepared in accordance with:

- *Environmental Planning and Assessment Act 1979* (NSW) (EPA Act);
- *Heritage Act 1977* (NSW) (Heritage Act);
- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act);



- The Burra Charter (The Australia ICOMOS charter for places of cultural significance);
- NSW Heritage Manual; and
- All relevant Local and State policies and guidelines, including the Environmental Planning and Assessment Regulation 2000, State Environmental Planning Policy 55 - Remediation of Land, State Environmental Planning Policy 44 - Koala Habitat, State Environmental Planning Policy (State and Regional Development) 2011, State Environmental Planning Policy (Infrastructure) 2007, and State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

## 4. PHYSICAL CONTEXT

### 4.1 Topography

The topography of the area slopes away from the proposed extraction area. The extraction area situated on a hill is approximately 340m above sea level and at the entrance to the haul road is approximately 280m above sea level (see **Figure 1**).

### 4.2 Hydrology

The development site is situated at the northern end of the Brigalow Belt South Bioregion within the Northern Basalts sub region. Myall Hollow Creek borders the northern border of Lot 10 DP 751753. The site has watercourses surrounding it; however, none are within the lot and the proposed extraction area. The area is a part of the Gwydir catchment which covers 26,600 km<sup>2</sup> (Green et al 2011).

### 4.3 Geology/Soils/Geomorphology

The Great Soil Group map of NSW (OEH 2017) indicates lithosols occur at the site and just within the intended extraction area. The rest of the site is characterised by black earths (see **Figure 2**). The Northern Basalts subregion is characterised by black loams on basalt ridges, deep sands on sandstone and texture contrast soils on slopes. Heavy grey clay exists on alluvial flats (NPWS 2003, pp. 136).

The Brigalow Belt South Bioregion contains large volcanic attributes such as the Liverpool Range and Warrumbungles (NPWS 2003, pp. 132). The subregion is the Northern Basalts which geologically contain tertiary basalts over Jurassic quartz sandstone and alluvial sediments and characterised by undulating low stony hills, long slopes with sandy wash and heavy clays in the valley floors (NPWS 2003, pp. 136).



**Figure 2: Soil Map with DCDB and Footprint**

#### 4.3.1 Flora and Fauna

The majority of the landscape in the study has been cleared for agricultural purposes. The Subregion of Northern Basalt in the Brigalow Belt South Bioregion is classified as having flora including:

*Brigalow, belah, whitewood, wilga, budda and poplar box on basalt hills. Silverleaved ironbark, spotted gum and smooth-barked apple on stony hills. River red gum, belah myall and poplar box on basalt flats. Silver-leaved ironbark and white cypress pine in sandstone rocks, smooth-barked apple, white cypress, Blakely's red gum, Moreton Bay ash, poplar box, wilga, rough-barked apple, bull oak, on lower sandstone slopes. White box, with silver-leaved ironbark, white wood, bull oak and brigalow on alluvial clays. River red gum on all streams. (NSW NPWS 2003 136).*

The fauna include both endemic and introduced species. Introduced species such as pigs, goats, foxes, rabbits, wild dogs, feral cats and carp have been noted in the bioregion (Bastin 2008, pp. 4-5). An EPBC search (5/12/2018) with a 10km radius search found:

- 22 listed threatened species;
- 9 migratory species;
- 15 listed marine species;
- 5 listed threatened ecological communities; and
- 22 invasive species.

#### 4.4 Landscape history, uses and disturbances

The history of the landscape and its past and present uses and disturbances are important to the interpretation of archaeological evidence and what may remain. Occupation of Australia by Aboriginal people is currently thought to have commenced at least 20,000 to 60,000 years prior to arrival of the European settlers. The environments of five broad time periods can be reconstructed within which the archaeological resources of the eastern coast of Australia can be evaluated:

- The Late Pleistocene (>40,000 years ago) is thought to overlap with the time Aboriginal people first settled in the Hunter Valley;
- The Last Glacial Maximum (LCM) (peaked around 20,000 years ago) during which people adapted to significant climatic and environmental change;
- The Holocene (the last 10,000 years) that saw sea levels and positions stabilise at their current positions;
- The landscape in c.1790 as it was immediately prior to European colonisation; and
- The last 200 years when the landscape was dramatically altered by European settlement and land use practices.

There are very few direct lines of evidence (archaeological, ecological, and geomorphic) that document what the landscape at Bellata was like prior to European settlement. The regional history connects to pastoralism, with cattle, sheep and wheat the main industries recorded (HO and DUAP 1996, pp. 78-87). In Bellata, employment in the 2016 census (ABS 2018) is still mainly based in agriculture with grain growing being the main occupation reported with 37.2 %. Farming of cattle/grain and sheep/grain made up another 13.2%.

## 5. HISTORIC HERITAGE ASSESSMENT

Heritage places and landscapes can include natural resources, objects, customs and traditions that individuals and communities have inherited and wish to conserve for future generations. Cultural heritage comprises places and items that may have historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance at a local, State, National or International level.

Under Sections 139 and 140 of the NSW *Heritage Act 1977* (Heritage Act), a person may not disturb or excavate land to discover, expose or move a relic without first obtaining the permission of the Heritage Council.

The Heritage Act defines a relic as being any deposit, object or material evidence:

- a) which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement; and
- b) which is fifty or more years old.

The historical archaeological context refers to any remaining physical evidence of the past. This can include below ground evidence such as building foundations, occupation deposits, features and artefacts and above ground evidence including buildings that are intact or ruined, or landform features such as retaining walls or drainage lines. Once an item is considered to be a relic, its significance is then assessed (see **Section 5.6**).

This historical research is based upon the use, occupation and development of the study area and its surrounds. Research has concentrated upon facets relevant to heritage and archaeological study and has been compiled from primary source material and secondary source literature.

### 5.1 Methodology

The methodology undertaken for this heritage assessment included:

- Undertaking primary and secondary research on the study area in order to provide a referenced historic summary (see Sections 5.3 and 5.4);
- Conducting statutory and non-statutory heritage database searches;
- Conducting a site inspection of the study area;
- Undertaking heritage assessments of any potential heritage items, if any, identified through the research and site inspection; and
- Providing a statement of significance for each heritage item assessed, if any.

### 5.2 Heritage registers and inventories

Heritage registers and inventories are lists of identified heritage items that record known archaeological resources at local, State and National levels. The registers may provide information on comparative sites which can be used to assist in the interpretation of archaeological evidence and the evaluation of the relative significance of historical/archaeological heritage material.

Statutory and non-statutory heritage database searches included the NSW State Heritage Register (SHR), NSW State Heritage Inventory (SHI), Narrabri and Moree Plains Local Environmental Plan 2011 (LEP), Relevant Section 170 Registers (S170), Commonwealth Heritage List and National Trust Heritage List (NT). These searches revealed that there are no items of heritage at either Local, State

or National level within 1 kilometre of the study area. These searches were completed in 2019 and again in 2020 for the revised report. Based on these searches, the following previously identified heritage sites were noted as existing in the wider local vicinity:

**Table 1: Statutory Desktop Searches**

Statutory Authority	Are there any Heritage objects or places within the project area	Comment
NPW Act - Schedule 14	No	Nil
NSW State Heritage Register	No	Terry Hie Hie (approximately 27km) closest state heritage item (Aboriginal)
S.170 Heritage and Conservation register	Bellata Police Station and Official residence	In town
Commonwealth Heritage List	No	Nil
National Heritage List	No	Nil
World Heritage List	No	Nil
Register of the National Estate	No	Terry Hie Hie (Aboriginal) (approximately 27km)
EPBC Act Protected Matters Report	No	Nil
Local Environmental Plan (Council)	No	7 places in Bellata or outside of town not with 5 km radius (Narrabri council). Berrigal and Terry Hie Hie (approximately 27km) (Moree Plains council)

### 5.3 Regional Historical Context

The regional history connects to pastoralism with cattle, sheep and wheat the main industries recorded (HO and DUAP 1996, pp. 78-87). Moree and Narrabri were important towns that developed in the late 19<sup>th</sup> century. Moree was a link to the Great Artesian Basin with the water used in the wool-scouring industry until the trade declined, while Narrabri was also an important water point and connection to the railway (HO and DUAP 1996, p.84).

The area was explored by Sir Thomas Mitchell and John Oxley in the 19<sup>th</sup> Century in their role as surveyors general. Oxley explored the Liverpool Plains in 1818 (Dunlop 1967). Mitchell explored the area as part on the exploration/mapping of the Darling River in 1831, 1835, 1836 and 1845 (Baker 1967), and Captain James Sturt explored the region in 1828 including the Castlereagh River, Macquarie marshes, Darling River and Bogan River (Gibbney 1967). The Darling Downs was also explored by botanist Allan Cunningham in 1827 (Perry 1966) and naturalist Charles Coxen in 1834-1835 and around the Darling Downs before the 1850's (Chisholm 1969).

Squatting on Crown lands was also prominent in the early 19<sup>th</sup> century as the known boundaries of the colony were changing due to exploration and desirable pastoral land being sought. The expansion often followed colonial explorers after reports of the suitability of the land were received (Royal Historical Australian Society n.d.). Legislation such as the *Crowns Lands Encroachment Act 1833* were aimed to solidify the government's position in affirming their rights (Royal Historical Australian Society n.d. Australasian Legal Information Institute 1833). The term squatting according to the Royal Historical Australian Society (n.d.) originated in the United States of America where it was a negative term; however, in Australia was less negative as squatting was seen as a lucrative occupation.



According to Pickard (2008, p.76) the term persisted after legislation changed to grant licences to occupy the land.

The Australian Agricultural Company was formed under an Act of British parliament in 1824. The company received one million acres at Port Stephens and later sold some of this land when it was realised that the area was not suitable for Merino sheep farming (State Library NSW 2018). The land was replaced by grants in 1833 on the Liverpool Plains on the Peel River near Tamworth (Goonoo Goonoo Estate) and near Murrurundi (Warrah Estate). The company still exists holding seven million acres across Queensland and the Northern Territory for cattle farming (State Library NSW 2018).

Bellata was a small rural centre in the early to mid-twentieth century (Jacobs and RMS 2018, pp. 139-140). This town is the closest to the proposed quarry and is on the border of the Narrabri and Moree Plains council areas. The Local Environmental Plan (LEP) for Narrabri Shire Council has listed seven locations as having heritage significance:

- Bellata Cemetery;
- “Dobikin” Homestead;
- Bellata Police Station;
- Oldhams Smallgoods;
- Bellata Post Office;
- AB Meppem and Co.; and
- LS Row Stock and Station Agents.

According to NSW Land Registry service, Historical records viewer the Village of Bellata was first proclaimed as Woolabra in 1898 (see **Figure 3**) and the name changed to Bellata in 1909 (see **Figure 4**). The neighbouring parish of Boo Boo, county Courallie, is the location that holds Meppem quarry.

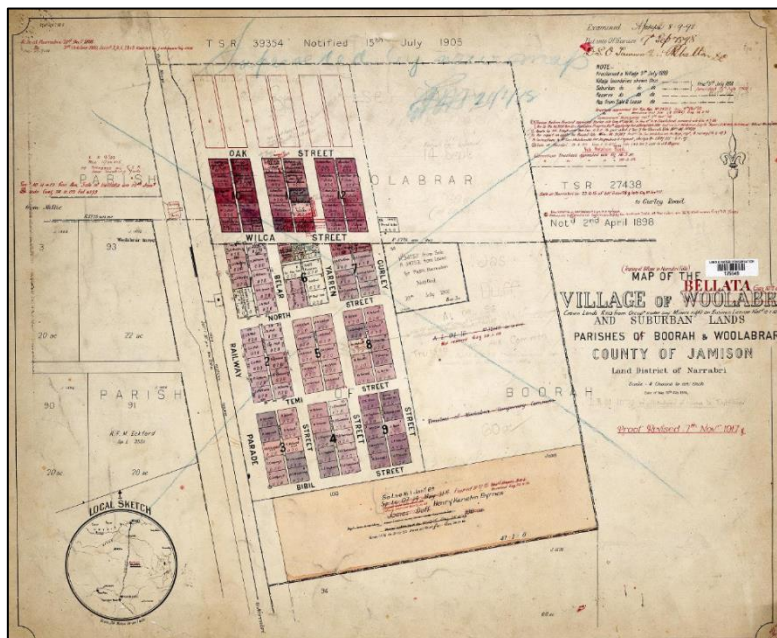


Figure 3: 1898 NSW Land Map

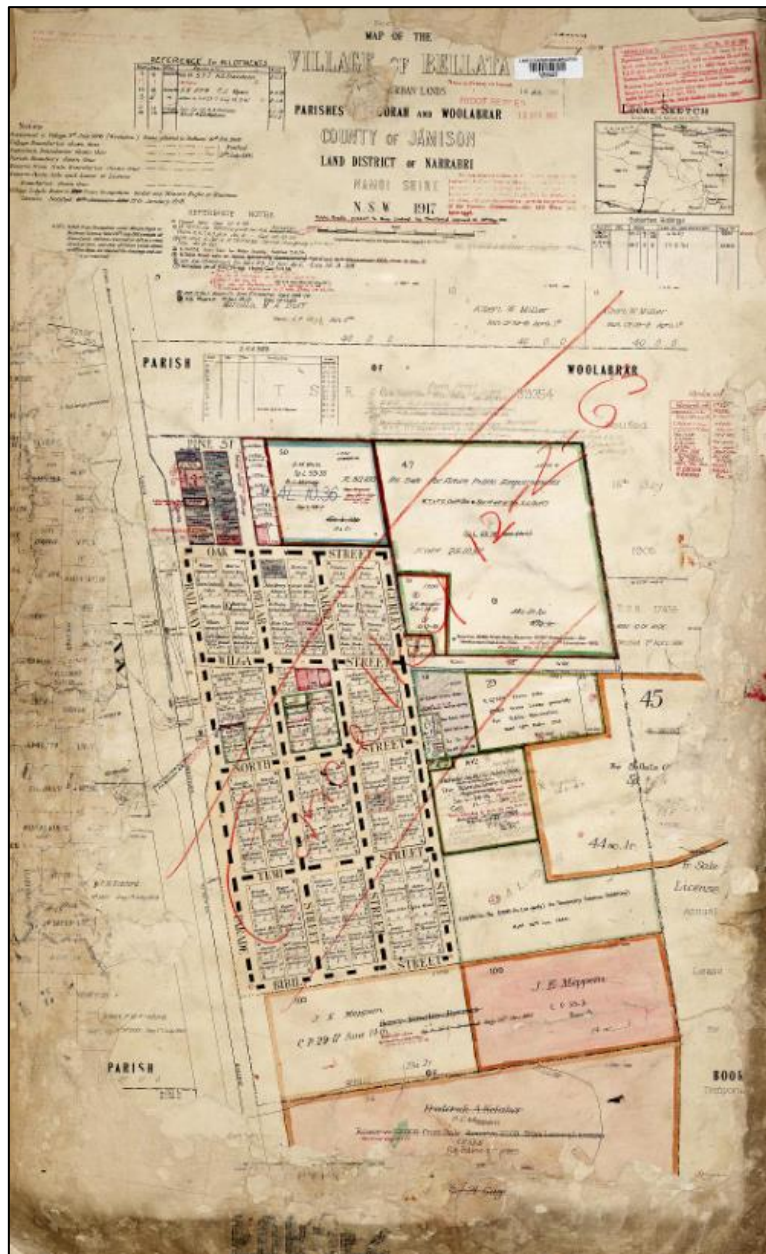


Figure 4: 1917 NSW Land Map

## 5.4 Local historical context

The study area exists within the County of Courallie, the Parish of Boo Boo and in the locality of Bellata. Research has revealed little information about the naming of Bellata other than the name changing in 1898 from Woolabra. The Village is located in the Parishes of Boorah and Woolabrar. A Map of Boo Boo Parish displaying the current configuration of Lot 10 (location of proposed quarry) and leased to A.W. Meppem in 1905 with a rent of 5 pounds 2 shillings and 5 pence can be seen in **Figure 5**). The 1881 map shows a different lot configuration until 1905 and the writing is too faded to be legible within the desired lot (see **Figure 7**). In 1923, the land had been changed to a home grant in the name of A.D. McKenzie (see **Figure 9**). The parish map in 1963 still lists A.D. McKenzie as the landholder. **Figures 6, 8 and 10** show the 1881, 1905 and 1923 parish maps georeferenced with the quarry footprint.



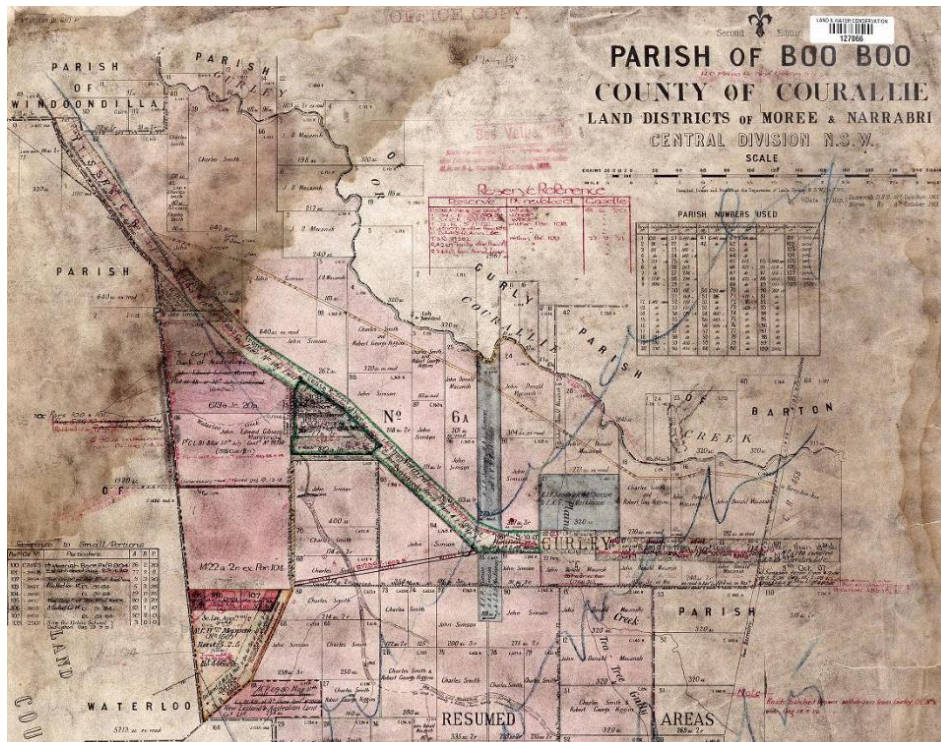


Figure 5 1905 Map of Boo Boo Parish

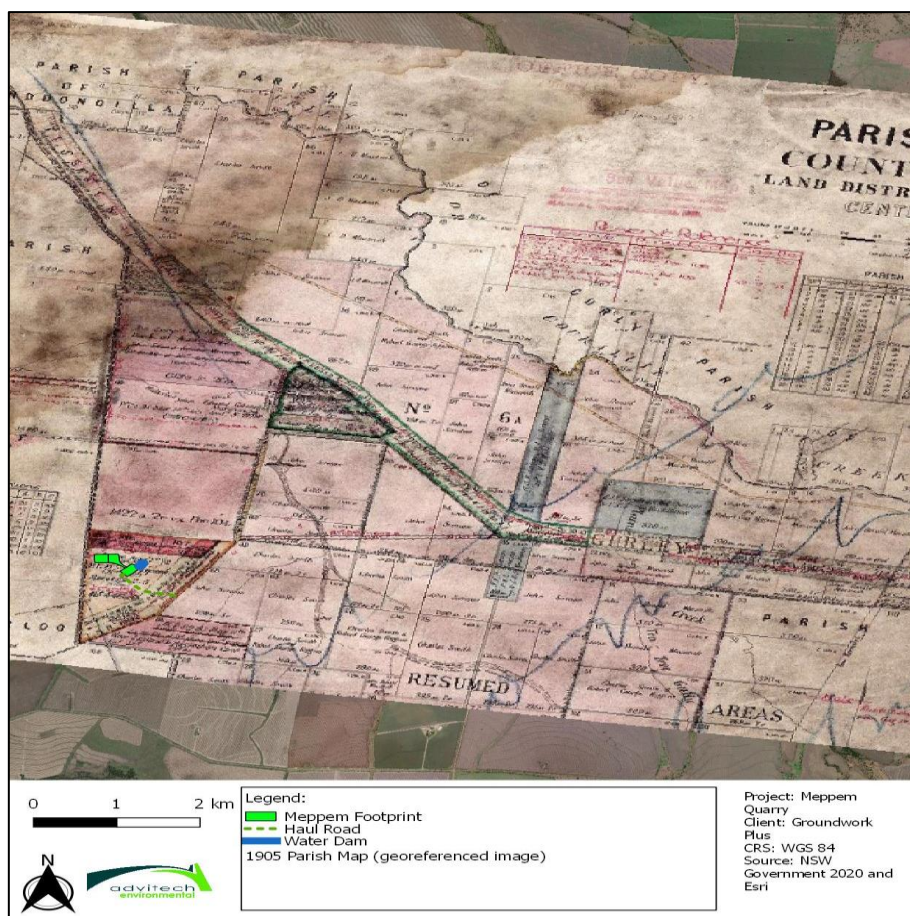


Figure 6: 1905 georeferenced Parish Map with Quarry Footprint



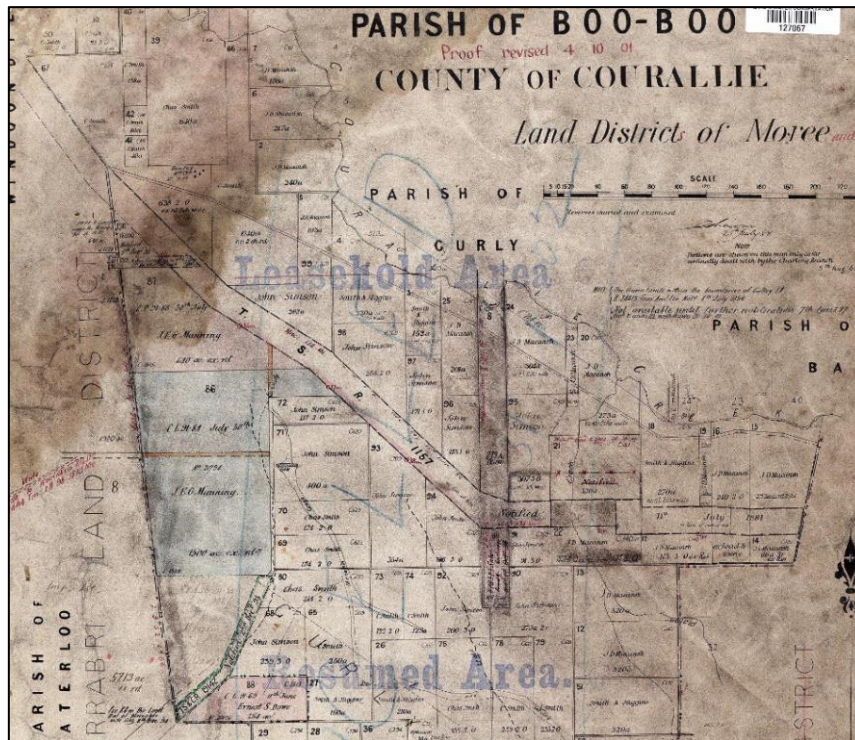


Figure 7 1881 Map of Boo Boo Parish



Figure 8: 1881 Georeferenced Parish Map with Quarry Footprint



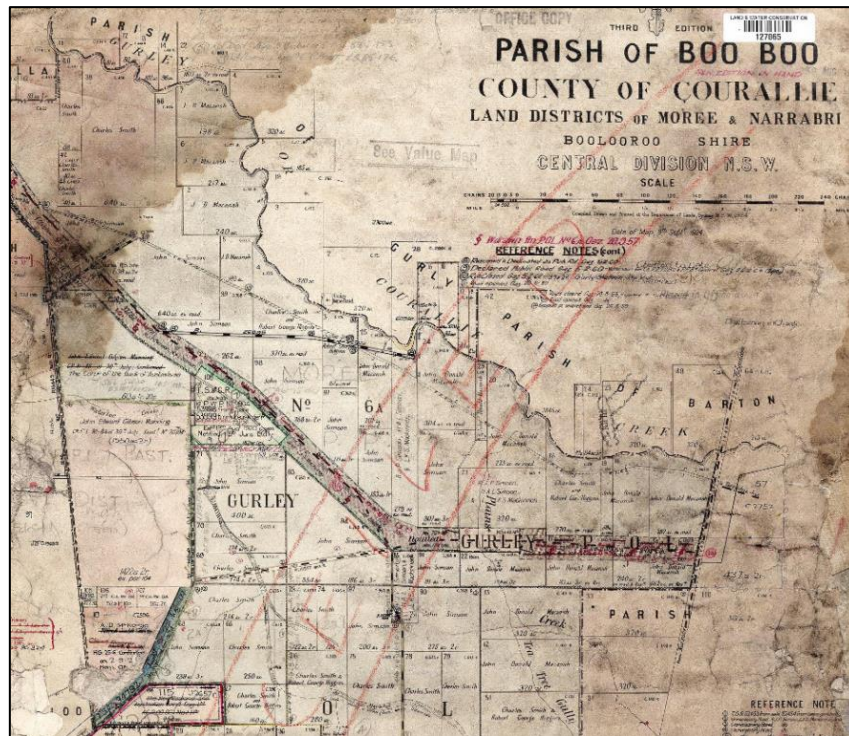


Figure 9 1923 Map of Boo Boo Parish

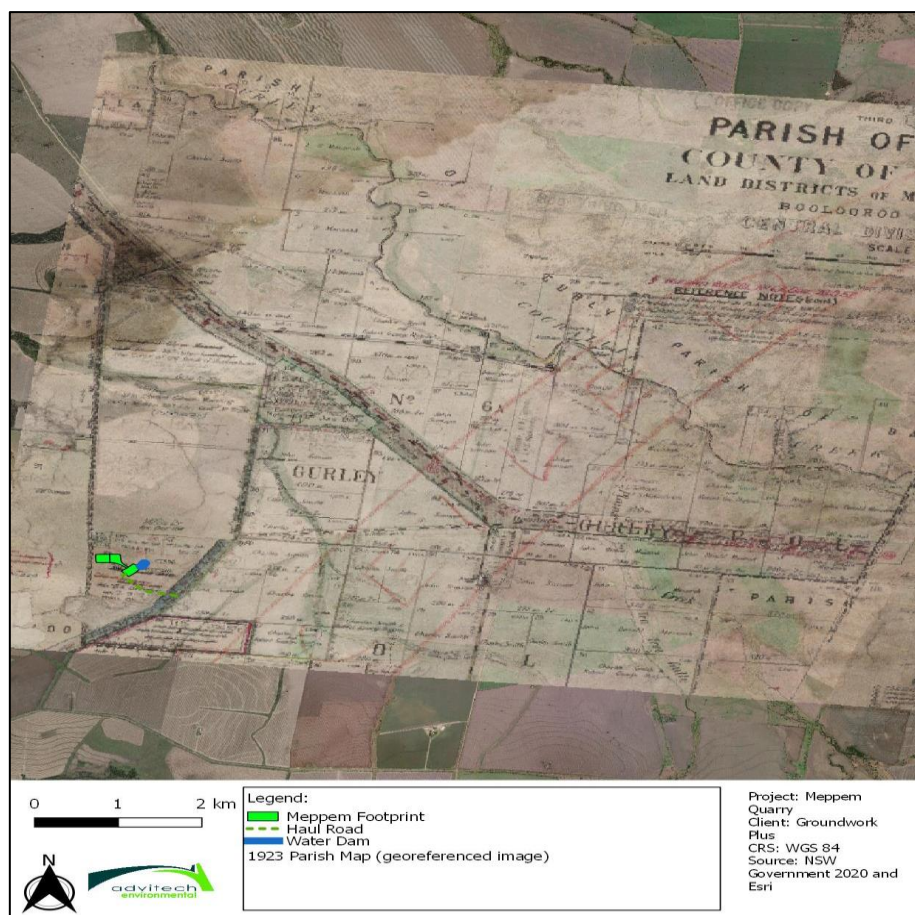


Figure 10: 1923 Georeferenced Parish Map with Quarry Footprint



The railway was proposed through the NSW Parliament Committee of Public Works in 1898 and ran from Woolabra (Bellata) to Collarenebri (Gunn 1989, pp. 234-235). This was a connection of the existing railway from Narrabri to Moree which was opened in 1897 (NSWrail.net n.d.).

No items of historical significance were found within the study area and there is no historical evidence to suggest the presence of a potential archaeological deposit from previous historical use of the property.

## 5.5 NSW Heritage Office assessment criteria

The NSW heritage assessment criterion encompasses the four values in the Australia ICOMOS Burra Charter and these four broad values are used to assess the heritage significance of an item. It is important for items to be assessed against these values to ensure consistency across the State. While all four values should be referred to during an assessment, in most cases items will be significant under only one or two values. The four values are:

- Historic significance;
- Aesthetic significance;
- Scientific significance; and
- Social significance.

In order to apply a standardised approach to the assessment of these four values, the NSW Heritage Office (2001) has defined a series of seven criteria that will be used by the Heritage Council of NSW as an assessment format within NSW. To be assessed as having heritage significance, an item must meet at least one of the criteria detailed below:

- **Criterion (a)** the importance of an item in the course or pattern of the cultural or natural history of NSW or a local area [historical].
- **Criterion (b)** the existence of a strong or special association between an item and the life or works of a person or group of persons important in NSW or local cultural or natural history [historical].
- **Criterion (c)** the importance of an item in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW or a local area [aesthetic].
- **Criterion (d)** the existence of a strong or special association between an item and the social, cultural or spiritual essence of a particular community or cultural group within NSW or a local area [social].
- **Criterion (e)** the potential of an item to provide information that will contribute to an understanding of the cultural or natural history of NSW or a local area [scientific].
- **Criterion (f)** the quality of an item to possess uncommon, rare or endangered aspects of the cultural or natural history of NSW or a local area [rare degree of significance].
- **Criterion (g)** the demonstration by an item of the principal characteristics of a class of cultural or natural place or cultural or natural environment within NSW or a local area [representative degree of significance].

The assessment of an item's significance depends upon its identifiable cultural, community, historical or geographical context:

- Local level identifies the item as being significant within an identifiable local and/or regional cultural and/or community group and/or historical/geographical heritage context;
- State level identifies the item as being significant within an identifiable State-wide cultural and/or community group and/or historical/geographical heritage context;
- National level identifies the item as being significant within an identifiable national cultural and/or community group and/or historical/geographical heritage context; and
- International level identifies the item as having implications of significance for an identifiable cultural and/or community group both nationally and abroad and/or a world-wide historical/geographical heritage context.

## 5.6 Assessment of heritage items in the study area

This Section provides a discussion and explanation of the significance of the study area in relation to the criteria specified by the NSW Heritage Council as detailed above.

Criteria (a) and (b) relate to the study area and its historical beginnings. The study area has not been identified as being associated with any important item or persons important to local or State history. The study area is not considered to be significant at a local, State, National or International level.

Criterion (c) relates to aesthetic significance and is not demonstrated within the study area: The current improvements are of modern construction and the vistas and views afforded are limited due to its agricultural position in the surrounding landscape. In the context of the overall study area, aesthetic significance is not demonstrated.

Criterion (d) relates to the social significance of the study area. This criterion is not met as there is no known association with an identifiable social group nor is the study area known to contribute to any community sense of place.

Criterion (e) relates to the scientific potential of the study area. The study area is considered to have no remaining evidence of historical development and has been modified. The study site is considered to have no significant archaeological or research potential.

Criterion (f) relates to rarity and is not relevant to the study area. The surrounding lots to the study area are also representative of rural subdivisions.

Criterion (g) relates to the study area and its position in a cultural rural landscape. The Burra Charter (1999) defines place as "site, area, land, landscape, building or other work, groups of buildings or other works, and may include components, contents, spaces and views". A setting is defined as "the area around a place, which may include the visual catchment" and may contribute to its significance. Cultural landscapes can include homesteads and farmlands, remnant vegetation, Aboriginal sites and places, wetlands, early settlements, parklands, disused cemeteries, defunct industrial complexes and so on. There are three categories of cultural landscape to consider:

- Designed - clearly designed and created intentionally by people. Embraces garden and parkland landscapes constructed for aesthetic reasons which are often (but not always) associated with religious or other monumental buildings and ensembles;

- Evolved - a result of the connection and/or interaction between an intentional design and the landscape in which it sits, its present form developed by association with and in response to its natural environment; and
- Associative - identifiable connection between religious, artistic or cultural associations and the natural landscape rather than material cultural evidence. As urban expansion occurs, and with the pressures to develop and redevelop, cities and towns are losing open spaces, cultural landscapes, green corridors and amenity. The NSW Heritage Office has identified the depletion of cultural landscapes as an important issue threatening the cultural values and lifestyles of our cities.

The study area is an evolved landscape resulting from housing, farming structures, vegetation clearing, the construction of dams and drainage lines, pastoralism, agriculture/market gardening, fencing and flooding. The landscape is not considered to be significant, rare or representativeness at local, State or National level.

## 5.7 Physical and Heritage Impact

As no items of historic heritage were located within the study area, there will be no impacts to historic heritage as a result of the proposed development.

## 6. RESULTS

A desktop assessment of the study area has determined that the impact to historical heritage would have minimal to no impact on historic heritage as no heritage items have been previously recorded on the site. A field assessment (see **Figure 12**) for Aboriginal and non-Aboriginal heritage did not recognise any particular vulnerabilities for heritage items. Direct and indirect impacts should be considered during planning and be kept to a minimum. Direct impacts can be defined as:

*As a result of the proposed project be carried out at the defined project area e.g. at quarry site, and as a result of the defined project for example removing ground material for construction purposes which may cause physical damage to a item with heritage value.*

Indirect impact can be defined as:

*An indirect impact from a secondary consequence, for example a truck damaging a building 5km away while transporting of goods to or from site. This could be through an accident or vibration further weakening a building.*

Thematic themes suggested by the Heritage Council of NSW that align with evidence from the research include:

- Developing local, regional and national economies - agriculture (rural landscape), pastoralism, exploration; and
- Building settlements, towns and cities - land tenure (subdivision pattern, land title document).

Evidence exists that the land has been occupied since colonial times with a local village proclaimed in 1898 and the land recorded in a similar layout to present in 1881. In addition to the local evidence, regional exploration and settlement connected to early Australian colonial history, and links to key colonial figures that were prominent in naming and shaping aspects of Australian life today are evident. This has local, State, National and International significance as the past colonial British

activities such as settlement, exploration and organisation methods still have a strong resonance today for example agriculture activities that were imported to Australian and still practiced in a similar fashion. The railway is another example which has helped to organise and establish the current layout of Australia. This was demonstrated through ability to transport goods, and in its influence over the development and location of towns and localities through occupation and job availability.

During the field survey conducted over the proposed footprint of the Meppem Quarry on the 9 January, 2019, no heritage values were located. The change of the haul road design in 2020 does not impact the findings of the desktop and field assessment. This is due to the area not having any recorded heritage items or associations as well as none being identified from the site visit (see **Figure 12**) for example. The new haul road design is located in **Figure 9** and shows the location in comparison to the recorded survey area. **Figure 11** provides a general landscape photograph of the study area looking towards the proposed quarry area.



Figure 11: View of Meppem Hill.



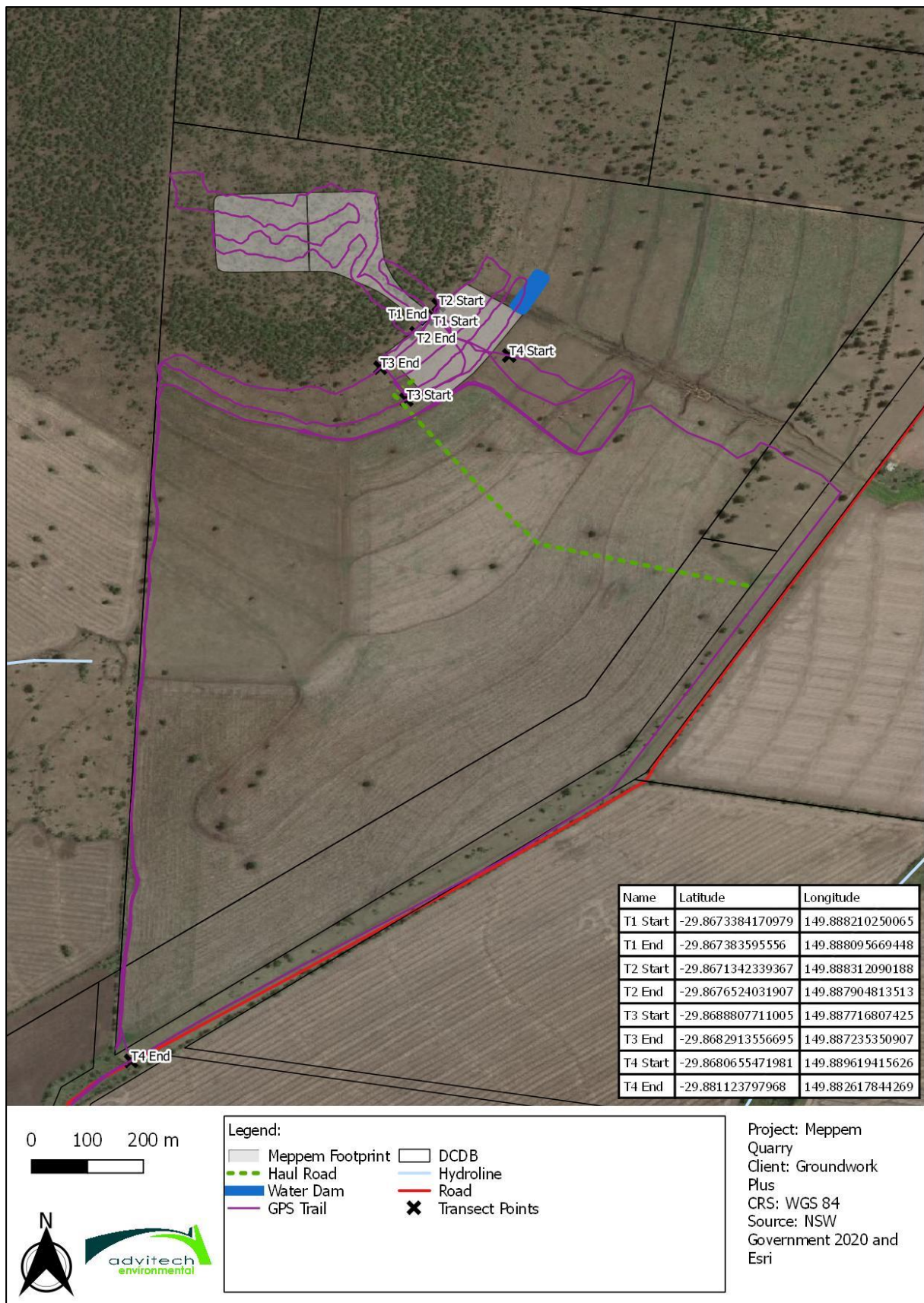


Figure 12: Field Survey 9 January 2019 GPS Trail.



## 7. CONCLUSION AND RECOMMENDATIONS

As part of the Inland Rail project, the proposed Meppem Quarry would have minimal to no impact on historic heritage items; this has been based on desktop research of the quarry site and the surrounding area and a field assessment of the quarry site. The town of Bellata has recorded historical items of local importance; however, this are not within a direct impact area of the quarry. ARTC (Umwelt 2017) has had an historical report commissioned and if concerned precautions from this report for Bellata historical items could be implemented. The field assessment did not locate any items which would require conservation. Care should still be taken in case unknown historic heritage items are discovered during operations.

### 7.1 Statement of Heritage Impact

No Statement of Heritage Impact is required due to the absence of any historic heritage in the study area that will be impacted by the proposed development.

It is recommended that care is taken when undertaking the proposed project in case unexpected heritage values are located on site.

In the unlikely event that unexpected archaeological remains or potential heritage items not identified as part of this report are discovered during construction of the proposed project, all works in the immediate area should cease; the find/s and potential impacts should be assessed by a qualified archaeologist or heritage consultant and, if necessary, the Heritage NSW notified in accordance with Section 146 of the Heritage Act.

If an archaeological relic is located as part of the proposal a S146 Discovery of a Relic notification form must be completed and submitted to the Heritage NSW.

In the unlikely event that a potential burial site or potential human skeletal material is exposed within the proposal site, the following procedure should be followed in accordance with the Policy Directive - Exhumation of Human Remains (NSW Department of Health 2008), Skeletal Remains - Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977 (NSW Heritage Office 1998) and the Aboriginal Cultural Heritage Standards and Guidelines Kit (NPWS 1997):

- As soon as remains are exposed, work is to halt immediately to allow assessment and management;
- Contact local police and Heritage NSW;
- A physical or forensic anthropologist should inspect the remains *in situ*, and make a determination of ancestry (Aboriginal or non-Aboriginal) and antiquity (pre-contact, historic or forensic);
- If the remains are identified as forensic the area is deemed as crime scene;
- If the remains are identified as Aboriginal, the site is to be secured and the Heritage NSW is to be contacted; and
- If the remains are non-Aboriginal (historical) remains, the site is to be secured and the Heritage NSW is to be contacted.

The above process functions only to appropriately identify the remains and secure the site. From this time, the management of the remains is to be determined through liaison with the appropriate stakeholders (NSW Police Force, forensic anthropologist, Heritage NSW, registered Aboriginal parties etc) and in accordance with the *Public Health Act 1991*.

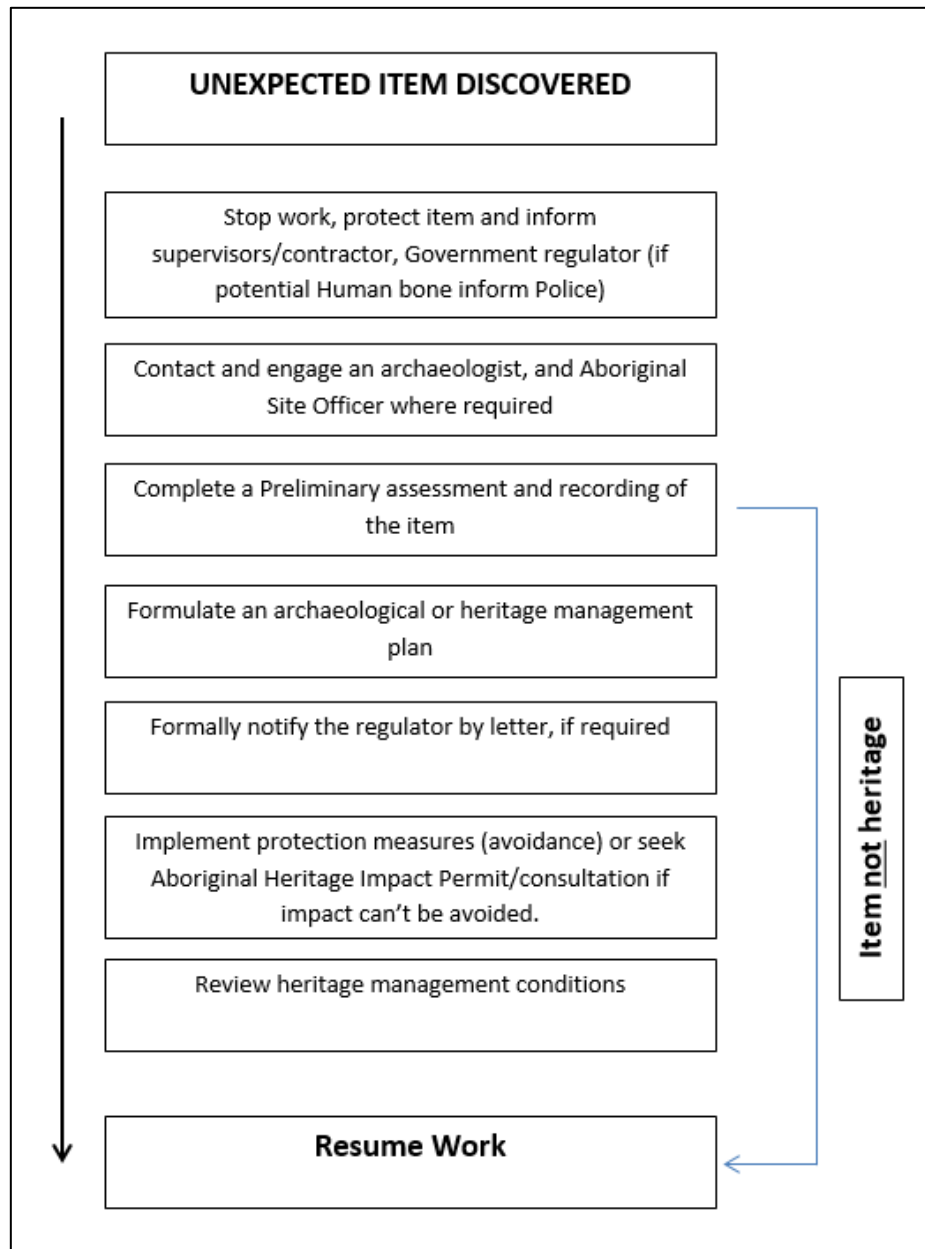


Figure 13: Unexpected Finds Flowchart

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