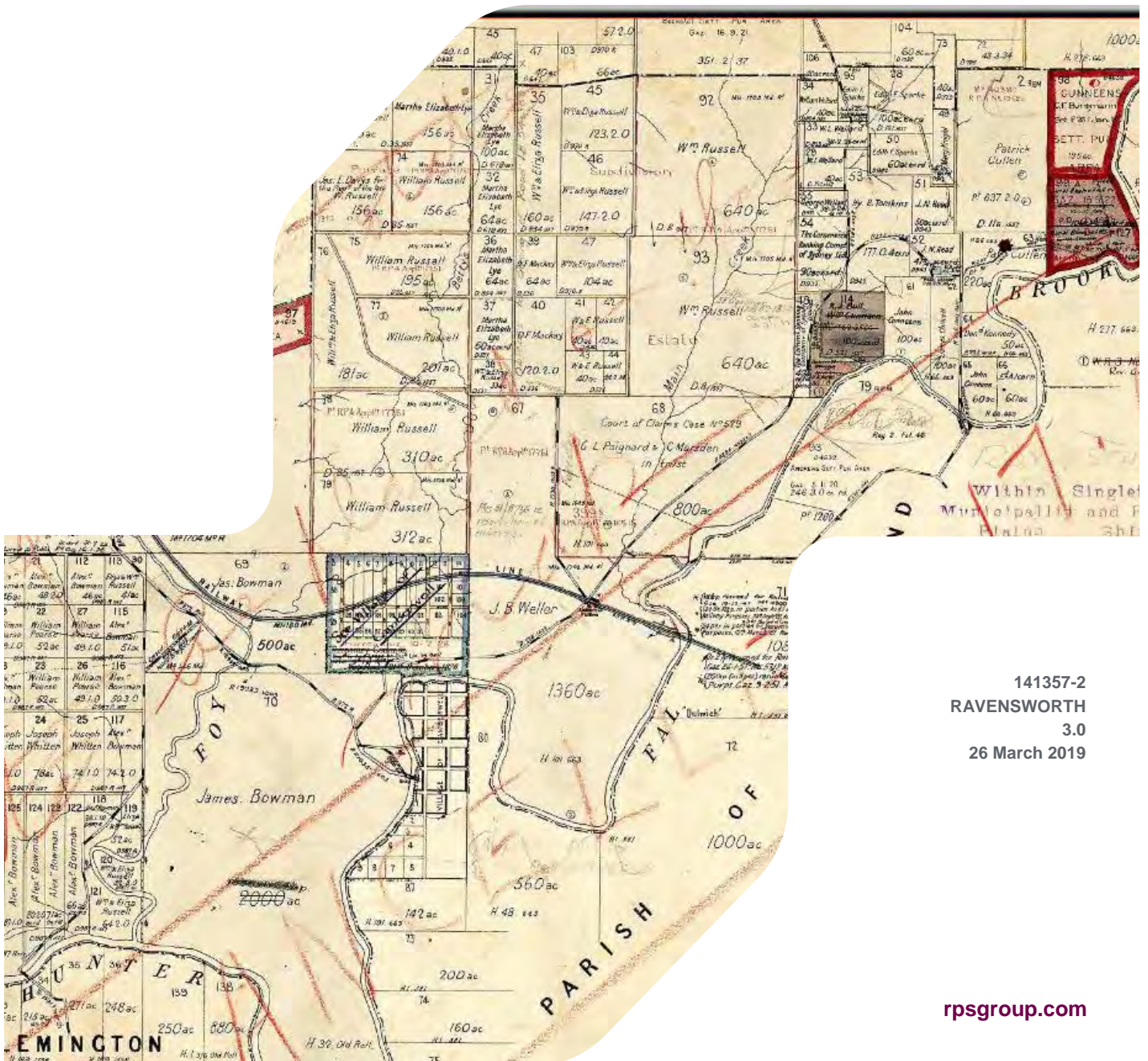


Appendix O

Historic Heritage Assessment

RAVENSWORTH

Historic Archaeological Assessment



141357-2
 RAVENSWORTH
 3.0
 26 March 2019

REPORT

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
1.0	Internal review	Dragomir Garbov	Alex Byrne	Alex Byrne	22/02/2019
2.0	Client draft	Dragomir Garbov	Alex Byrne	Alex Byrne	22/02/2019
3.0	Final	Dragomir Garbov	Alex Byrne	Alex Byrne	18/03/2019

Approval for issue

Alex Byrne  26 March 2019

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EXECUTIVE SUMMARY

RPS Australia East (RPS Heritage) have been commissioned by Bettergrow Pty Ltd to prepare a Historic Heritage Assessment Report to support an Environmental Impact Statement (EIS) for a State Significant Development application (SSD 9418) to the NSW Department of Planning and Environment (DP&E).

The Project Area is located at Ravensworth No. 2 mine, 74 Lemington Road, Ravensworth, NSW (Lot 10 DP1204457). The applicant is proposing to undertake the expansion and operation of an existing nutrient recycling facility.

This report has reviewed the heritage listings and considered the historic background of the Project Area. A field inspection was undertaken by an RPS archaeologist. It has been concluded that:

- No listed historic heritage items were identified within the Project Area;
- From 1820 to 1972 the Project Area constituted farmland and since 1972 the Project Area was part of mining lease;
- There is nil potential for historic heritage resources to be present within the Project Area;
- There is nil potential for surface or subsurface historic archaeological resources to be present within the Project Area; and
- There are no identified impacts to historic heritage as a result of the proposal.

The following recommendations have been made for the proposed development:

Recommendation 1

All relevant staff and contractors must be made aware of their statutory obligations for heritage under the *National Parks and Wildlife Act 1974* and the *Heritage Act 1977*, which may be implemented as a heritage induction.

Recommendation 2

In the unlikely event that unsuspected archaeological resources as defined under the *Heritage Act 1977* (as amended) are uncovered, the proposal within that area must cease. The Heritage Division of the Office of Environment and Heritage must be notified as required under Section 146 of the Act. The archaeological relic must be avoided. If it is not practicable to avoid the archaeological relic, additional approvals would be required under the Act.

Recommendation 3

With regards Aboriginal heritage - if unrecorded Aboriginal sites or object/s are identified in the Project Area during works, then all works in the immediate area must cease and the area cordoned off. OEH must be notified via the Enviroline 131 555 so that the site can be adequately assessed and managed. Refer to the Aboriginal Cultural Heritage Assessment Report (RPS 2019).

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1 INTRODUCTION

RPS Australia East (RPS Heritage) have been commissioned by Bettergrow Pty Ltd to prepare an Historic Heritage Assessment Report to support an Environmental Impact Statement (EIS) for a State Significant Development application (SSD 9418) to the NSW Department of Planning and Environment (DP&E).

An assessment of Aboriginal heritage has been undertaken and is provided in a separate document.

1.1 The Project Area

The Project Area is located at Ravensworth No. 2 mine, 74 Lemington Road, Ravensworth, NSW (Lot 10 DP1204457). The site lies approximately 20 km north of the township of Singleton, New South Wales, within the Singleton Council Local Government Area (LGA). It has an approximate overall area of 57 ha (Figure 1).

1.2 The Proposal

The applicant is proposing to undertake the expansion and operation of an existing nutrient recycling facility. Current composting operations at the site are approved by DA140/2016 to receive up to 76,000 tonnes per annum (tpa) of biosolids and garden organics. The subject application seeks to authorise the receipt of up to 200,000 tpa of organic materials, including new feed sources of food waste, to facilitate the sale of a portion of the composted material to third parties.

1.3 Objectives of this Assessment

A request for Secretary's Environmental Assessment Requirements (SEARs) for the nutrient recycling facility expansion was submitted to DP&E on 14 June 2018. The SEARs were subsequently issued by the DP&E on 11 July 2018. A requirement of the SEARs is that:

- 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, trees should be assessed. Where impacts to State or locally significant heritage items are identified, the assessment shall:
 - i. 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),
 - ii. 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),
 - iii. include a statement of heritage impact for all heritage items (including significance assessment),
 - iv. 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), and
 - v. 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.

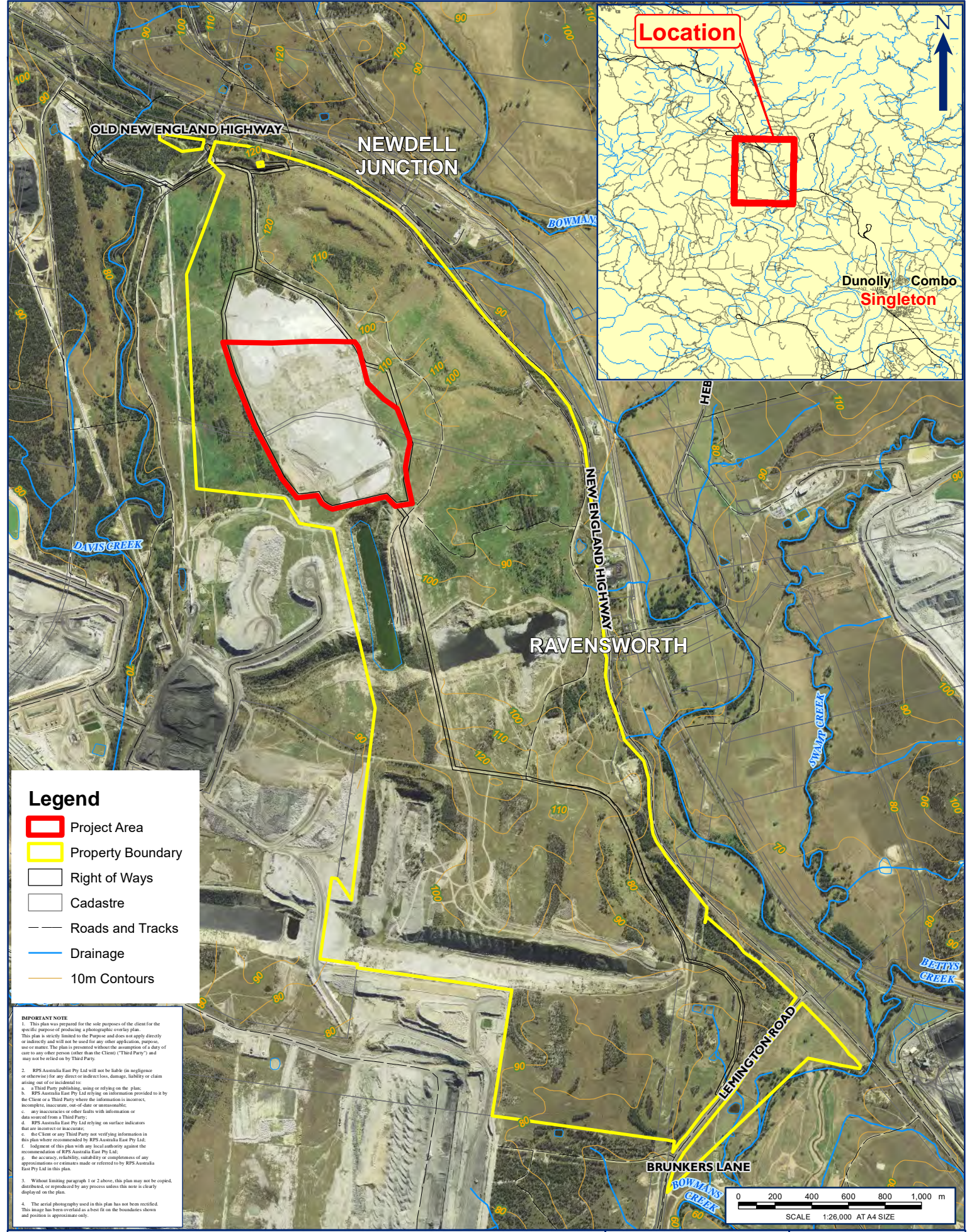
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1.5 Authorship and acknowledgements

This report has been prepared by RPS Senior Archaeologist Dr Dragomir Garbov with contributions by RPS Heritage Consultants Lucy Irwin and Nicola Hirschhorn and was reviewed by RPS Newcastle Heritage Manager Alex Byrne. All relevant mapping was prepared by RPS Senior GIS Consultant Natalie Wood.



Legend

- Project Area
- Property Boundary
- Right of Ways
- Cadastre
- Roads and Tracks
- Drainage
- 10m Contours

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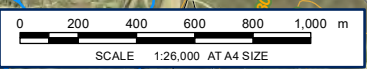


FIGURE 1: SITE LOCATION

LOCATION: RAVENSWORTH	DATUM: GDA94
JOB NO.: PR141357	PROJECTION: MGA Zone 56
PURPOSE: HERITAGE	Data Sources: RPS, Client
Technician: Natalie.Wood	Land and Property 2017
Date: 22/01/2019	

CLIENT: BETTERGROW PTY LTD

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2 LEGISLATIVE CONTEXT

The NSW *Heritage Act 1977* and the *Environmental Planning and Assessment Act 1979* are relevant to the assessment.

2.1 NSW Heritage Act 1977

The *Heritage Act 1977* (NSW) provides for the identification and registration of the State's environmental heritage and interim protection of items of State significance and constitutes the Heritage Council of NSW. In addition to the State Heritage Register (SHR), the Act includes provisions for Section 170 Heritage and Conservation Registers and Interim Heritage Orders.

2.2 State Heritage Register

The State Heritage Register is a list of places and objects important for the whole of NSW. Items listed on the State Heritage Register:

- are of particular importance to the people of NSW and enrich our understanding of our history and identity
- are legally protected as heritage items under the NSW Heritage Act 1977
- require approval from the Heritage Council of NSW for major changes; and
- owners and /or managers? are eligible for financial incentives from the NSW and Commonwealth governments.

In addition to built heritage, archaeological resources or 'relics' as defined under the *Heritage Act 1977* may be listed on the SHR.

2.3 Section 170 Heritage and Conservation Register

Section 170 of the *Heritage Act 1977* requires government agencies to establish a Heritage and Conservation Register that identifies all assets of environmental heritage that it owns or occupies. Government agencies are required to provide the NSW Heritage Council notice of any intention to remove an asset from a Section 170 Heritage and Conservation Register, transfer ownership of an asset included on a Section 170 Heritage and Conservation Register, cease to occupy an asset on a Section 170 Heritage and Conservation Register or demolish an item included on a Section 170 Heritage and Conservation Register and assets must be maintained with due diligence in accordance with the *State-Owned Heritage Management Principles* and NSW Heritage Council asset management document. Proposals to alter or demolish assets of State significance must be referred to the NSW Heritage Council through the Heritage Division.

2.4 The Relics Provision

The Project Area demonstrates potential for associated archaeological resources or 'relics' as defined under the *Heritage Act 1977*. The relics provision applies to all archaeological relics that form part of the State's environmental heritage, but which are not identified on the SHR or protected through under an Interim Heritage Order.

A 'relic' is defined under the Act as:

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 of State or local significance

It should be noted that not all archaeological resources are considered relics under the *Heritage Act 1977*. Important archaeological resources often comprise a number of different elements including archaeological 'relics' of significance in the form of archaeological deposits, artefacts and objects, but also other material associated with demolition or a work. A work is defined as a form of infrastructure including a culvert, drain, abutment or similar.

If substantial intact archaeological relics of State or local significance are uncovered in the course of a development operating under an exception, that are not identified in an archaeological assessment or statement, as required by the exception, all activity must cease in the affected area and Heritage Division must be notified in writing in accordance with Section 146 of the Act. Depending on the nature of the archaeological relic, additional assessment and approvals may be required prior to the recommencement of any activity in the affected area.

2.5 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) regulates a system of environmental planning and assessment for NSW. Land use planning requires that environmental impacts are considered, including the impact on cultural heritage. Assessment documents prepared to meet the requirements of the EP&A Act including Reviews of Environmental Factors, Environmental Impact Statements and Environmental Impact Assessments, should address cultural heritage where relevant. Statutory planning documents such as Local Environment Plans and State Environmental Planning Policies often contain provisions for heritage.

The EIS of which this document forms a part has been prepared under Part 4 of the Act which provides for assessment and determination of State Significant Developments.

3 HERITAGE REGISTER SEARCHES

Acknowledged heritage items and places are recorded in statutory and non-statutory registers held at the Federal, State and local level depending on their level of significance. Internationally significant sites of ‘outstanding universal value’ are inscribed in the World Heritage List (WHL) and in turn, such sites are usually recognised through their inclusion on Federal and state-level registers.

Federal designations include the National Heritage List (NHL) and the Commonwealth Heritage List (CHL) created by the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). Both registers are maintained by the Commonwealth Department of the Environment and are available to view on an online database, the Australian Heritage Database. The NHL includes natural, historic and Indigenous places that are of outstanding national heritage value to the Australian nation. The CHL protects natural, Indigenous and historic heritage places on land owned or leased by the Commonwealth or a Commonwealth Authority. To reach the threshold for the NHL, a place must have ‘outstanding’ heritage value to the nation whereas to be entered on the CHL, a place must have ‘significant’ heritage value.

Heritage places of State significance are included on the State Heritage Register (SHR) maintained by the Heritage Branch. Places included on the SHR are available on an online database, the NSW Heritage Inventory database. In order to reach the threshold for inclusion in the SHR, a place needs to meet one of more of the heritage criteria identified by the Heritage Council of NSW. The ultimate decision on whether a place is included on the State Heritage Register is made by the Minister for Heritage.

Places of local significance are included in the heritage schedules in Local Environmental Plans (LEPs). Both local and State heritage listings can also include areas that contain archaeological potential or significance, and controls regarding these areas are included in the SHR and LEP.

3.1 World Heritage List, National Heritage List and Commonwealth Heritage List

Searches of the WHL, NHL and CHL were under taken on 10 January 2019 using the Protected Matters Search Tool. There are no items registered on any of these lists located within the Project Area.

3.2 State Heritage Register

A search of the SHR was undertaken on 10 January 2019. One item of State significance was identified within 10 kilometres of the Project Area, detailed in Table 1 below, however this item is not within or near the proposed works.

Table 1: State Heritage Items

As of 10 Jan 2019		
Name #	Address	Distance from Project Area
Chain of Ponds Inn and Outbuildings (SHR00242)	Old New England Highway, Chain of Ponds, NSW	2 km north

3.3 Section 170 Heritage Registers

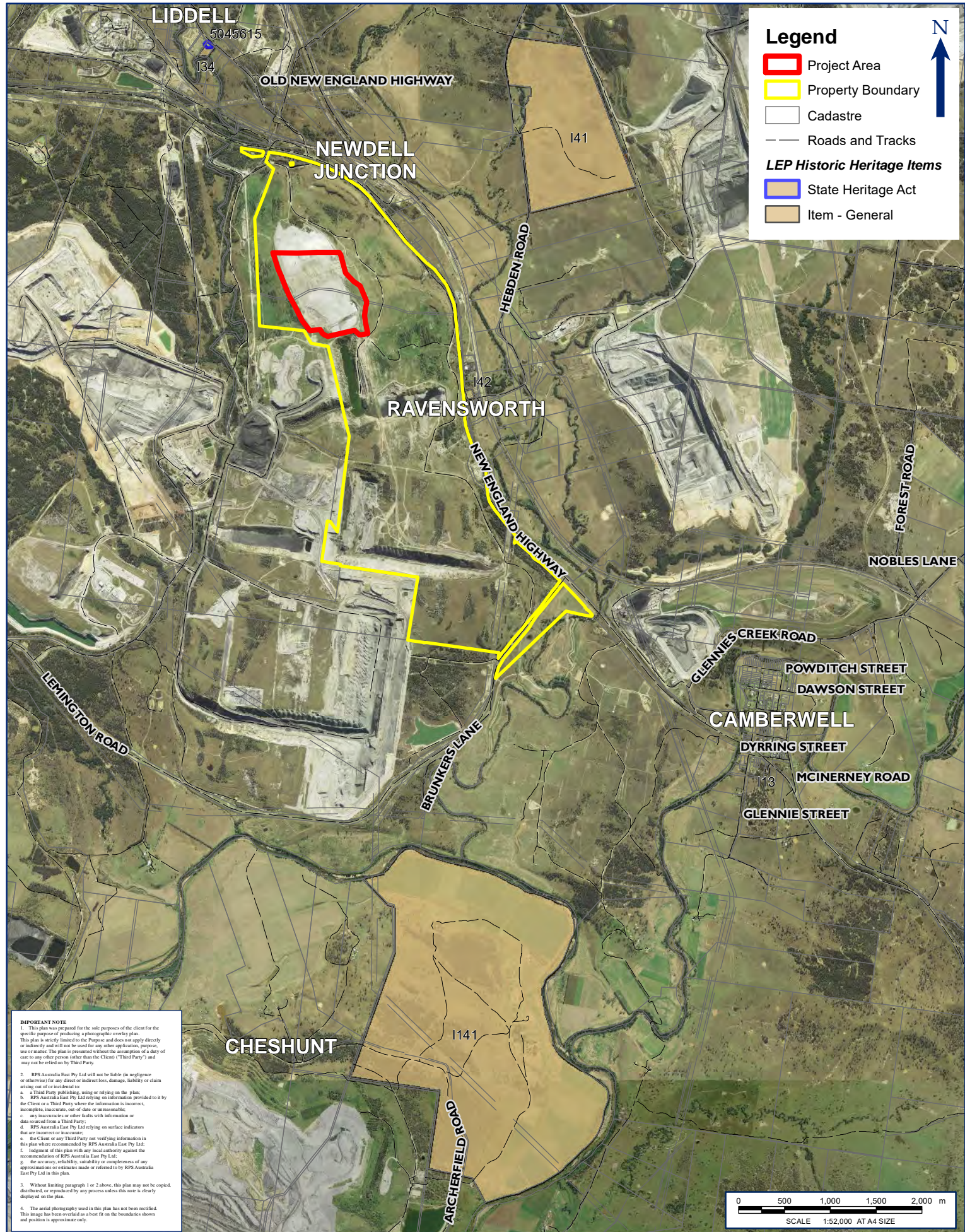
Under Section 170 of the Heritage Act, State Government agencies are required to identify, conserve and manage heritage assets owned, occupied or managed by that agency. Each agency maintains a register of their heritage assets, commonly known as the S.170 Register. A search of S.170 Registers was undertaken for the Project Area. No items listed on any S.170 Registers within proximity of the Project Area were identified.

3.4 Singleton Local Environmental Plan 2013

A search of the Singleton LEP was conducted on 10 January 2019. Two heritage items of local significance were identified in Schedule 5 of the LEP, within the vicinity of the Project Area (Table 2). None of these items is within the impact zone of proposed works (Figure 2).

Table 2: Locally listed heritage items

As of 10 Jan 2019		
Name #	Address	Distance from Project Area
Ravensworth Homestead (I41)	463 Hebden Road, Singleton	3 km north east
Former Public School (I42)	Hebden Road, Singleton	2.5 km south east



Legend

- Project Area
- Property Boundary
- Cadastre
- Roads and Tracks

LEP Historic Heritage Items

- State Heritage Act
- Item - General



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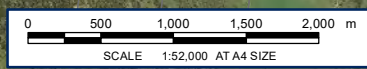


FIGURE 2: LEP HISTORIC HERITAGE

LOCATION: RAVENSWORTH	DATUM: GDA94 PROJECTION: MGA Zone 56
JOB NO.: PR141357	Data Sources: RPS, Client Land and Property 2017
PURPOSE: HERITAGE	
Technician: Natalie.Wood	Date: 22/01/2019

4 HISTORICAL CONTEXT

4.1 Historic Settlement of the Singleton Region

In 1820, 23 years after the Hunter River was discovered by Lieutenant John Shortland, the Hunter Valley was opened for free settlement. In 1821 Henry Dangar was employed to conduct a survey of the valley in order to assess the potential and suitability for farming and cattle grazing. The survey was conducted in two stages and completed in 1826 (Brayshaw 1986).

Settlement followed soon after 1820 with settlers reaching the Singleton area by October 1821. The discovery of the overland route to the Hunter Valley in 1823 meant that stock could be brought overland into the area from the Cumberland Plain (Heritage Office and Department of Urban Affairs and Planning 1996). Between 1820 and 1826 over 300,000 acres of land were allotted to settlers. By 1828, 50,000 sheep and 11,000 cattle grazed in the Singleton area. From 1867 the allotments increased to 500,000 acres. Farming of wheat, wool, dairy and cattle were the predominant industries with dairy gradually increasing in economic importance. By 1896 there were 360 registered dairies in the Singleton district (Umwelt 2011).

Coal mining in the Singleton – Muswellbrook region increased in the early 1900s with the establishment of local mining companies such as the Kayuga Coal-Mining Company (1906) and the Muswellbrook Coal Company (1909). By 1944 the first open-cut mines were established in Muswellbrook. Open cut coal mining expanded over the next three decades as an increasing number of farming properties were purchased and converted by mining companies or individuals interested in the development of coal mining.

Coal mining in the Ravensworth area first began in 1972 at the Ravensworth No.2 Open Cut mine to supply coal under contract to Pacific Power (previously known as the Electricity Commission of NSW) (Ravensworth Operations 2008:1). Development to facilitate the open cut mine included an area of approximately 300 hectares being mined for coal using open-cut methods and required both a realignment of Lemington Road and a diversion of Bayswater Creek (Godwin 1987).

4.2 Listed Heritage Items in Proximity to the Project Area

The Project Area is located within the vicinity of the following heritage items (in order of construction chronology):

- Ravensworth Homestead / Ravensworth Estate (c.1840);
- The Great Northern Railway / Ravensworth Railway Station (1863-1869);
- Ravensworth Public School (1879);
- Chain of Ponds Inn and Outbuildings (c.1840s).

4.2.1 Ravensworth Homestead / Ravensworth Estate

Ravensworth is located approximately midway between the towns of Singleton and Muswellbrook on the New England Highway approximately 88 km north west of Newcastle. One of the earliest non-Aboriginal settlements in the region was the Ravensworth Estate homestead granted in 1824 to Dr James Bowman. With additional purchases, the Ravensworth estate exceeded 12,000 acres (Gray 1966) (Plate 1).

Bowman had a Georgian single-story bungalow constructed in c1840 for his foreman, James White, who managed the property in Dr Bowman's absence.

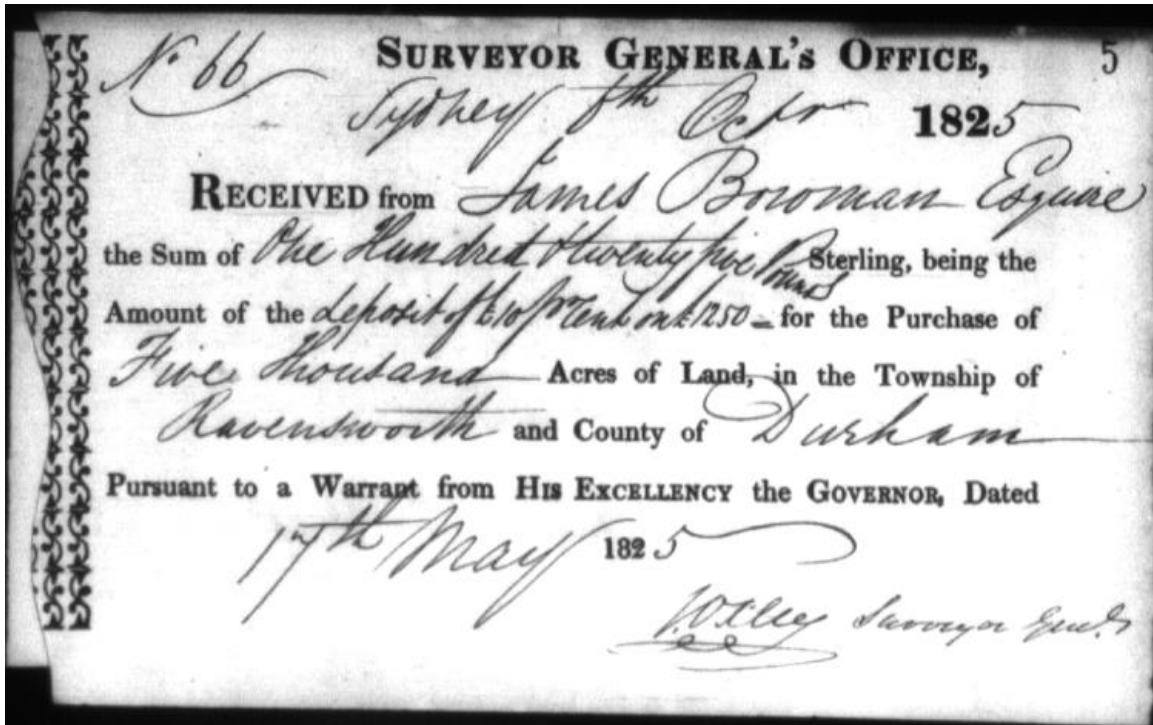


Plate 1 Deposit receipt from Surveyor General on land purchased by Bowman in 1825 (5000 acres). James Bowman Estate Papers, A4250, Mitchell Library, NSW (<https://hunterlivinghistories.com/2018/06/13/ravensworth-land-grants-1/>)

The Ravensworth estate ran both sheep and cattle. Dr Bowman's wife Mary, the second daughter of John and Elizabeth MacArthur, brought 2,000 sheep and more than 200 head of cattle with her to the marriage as her dowry. Dr Bowman did not live at the property until 1838, but appointed James White as the overseer of the property. However, Dr Bowman returned to Ravensworth when business dealings in connection with the Australian Agricultural Co and John McArthur had soured. He retired at Ravensworth on his naval pension. Drought and a resultant economic depression led to heavy financial losses, and Dr Bowman died suddenly in 1846 at Ravensworth, leaving an invalid wife and five children. Mary Bowman's brother, William MacArthur, lent his financial assistance (Gray, 1966).

At the time of Dr Bowman's death, Ravensworth comprised 30,000 acres and ran horses as well as cattle and sheep. Captain William Russell purchased Ravensworth in 1847 and remained in possession until 1882. Russell had a number of properties in the Upper Hunter, including Glenridding near Singleton, Waverley and Chestnut Park and never resided at Ravensworth. The Ravensworth property was used chiefly for the fattening and marketing of livestock (Umwelt, 2010:28).

Russell died in England in 1866. In 1875, G N Griffiths was instructed by the executors of Captain Russell's estate to sell Ravensworth. The advertisement, in the Queenslander newspaper, described the property as being made up of about 40,000 acres of freehold land and 63,000 acres of leased land. It comprised about 19,000 well-bred sheep, 5,000 of which were lambing, 4,300 highly-bred cattle, 160 horses and stores and working plant. The advertisement continues to advise that the Great Northern

Railway intersects the property for approximately 15 miles (approximately 24 kilometres) with Glennie's Creek and Camberwell (Ravensworth) station located on the property. The property also boasted 100 miles of post and rail fencing, enclosing 30 paddocks, a post office and pound and the Ravensworth homestead (The Queenslander, 16/10/1875).

Evidently, the sale did not proceed. Part of the Ravensworth property was subdivided and advertised for sale again in 1882, with much more success (Plate 2).



Plate 2 Ravensworth homestead, main house, circa 1890s. Courtesy of Tim Duddy and the Marshall family.

The Ravensworth homestead is now owned by Glencore, who operates the nearby Ravensworth mine complex. The homestead is also listed on Schedule 3 of the Singleton LEP 1996 as a locally significant item.

4.2.2 Great Northern Railway (down line) and Ravensworth Station

The Great Northern Railway (or Main North Railway Line), commenced construction in 1854 and ran from Newcastle to Maitland. This line was extended to Singleton in 1863, Muswellbrook and Murrurundi in 1872, Werris Creek and Tamworth in 1878, Armidale in 1883 and Wallangarra in Queensland in 1888. A subdivision plan from 1889 clearly shows the Ravensworth Estate and the railway station and the station building was depicted in a photograph from 1907 (Plate 3).

The construction of the Singleton to Muswellbrook line between 1863 and 1869 included Ravensworth. Initially called "Camberwell", Ravensworth railway station was opened on 1 June 1869 and closed in January 1975. It comprised a timber building and island platform on or adjacent to the well and tank.

An advertisement for the sale of the Ravensworth Estate notes that the railway station had "accommodations for the trucking of cattle, sheep, etc" and was located within two miles of the Ravensworth homestead (The Queenslander, 16/10/1875). Reports of the poor drainage at Ravensworth

Station in the 1950s, suggest that drainage of the area had been a challenge from the outset of settlement (Singleton Argus, 29/02/1952:5).

A New South Wales Rail map from 1951 of the watering places for locomotives in NSW shows Ravensworth as a watering place (Plate 3).

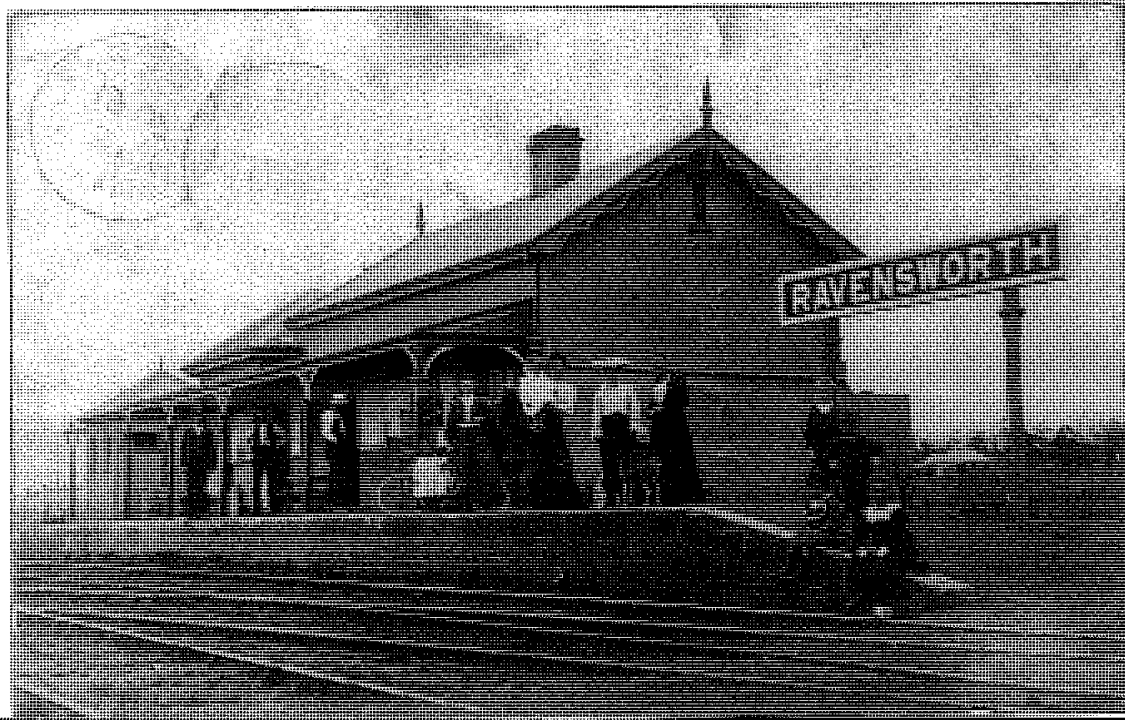


Plate 3 Ravensworth Station c.1907 (Courtesy State Library of NSW)

4.2.3 Ravensworth Public School

The Ravensworth Public School was initially conducted in a small building near the Ravensworth Estate homestead in 1876. The parents of the children who attended the school were either workers on the Ravensworth Estate or on the railway. The overseer on Ravensworth Estate, Mr John Moss, approached the Council of Education in 1876 requesting a teacher for the school and provided a building on the Estate for that purpose. As there were not enough students for a full time school, Ravensworth Public School was initially a “half-time” school, with the teacher provided by the Council of Education splitting his time between Ravensworth and the nearby settlement of Chilcott Plains, near today’s Liddell and Bayswater power stations (Ravensworth Public School).

In 1879 a portion of the Ravensworth Estate was conveyed to the Council of Education and in 1880 a brick school house and attached teacher’s residence was built and opened. This was the primary school building until 1971, when a new school was opened adjacent to the old one. Records of the school note that in the new building, “The roofing was wooden shingles that were beginning to rot. *The rain water coming off them into the tanks had an unpleasant taste*” (author’s italics) (Ravensworth Public School).

This school operated until closing in 1986. The school site is now listed in Schedule 5 of the Singleton LEP 2013 as a locally significant heritage item (I42).

4.2.4 Chain of Ponds Inn and Outbuildings

The Chain of Ponds and Outbuildings complex is listed on the State Heritage Register and comprises three core buildings, including the inn, a convict lock-up and stables, located on what was the main overland route between Singleton and Muswellbrook.

Constructed on the site in 1842 was a sandstone lock-up, which was leased to the government for the confinement of convicts in transit. The location of the inn at a supply of reliable water and at a halfway point is typical of inns established at this time. Nowland was an important pioneer in the Muswellbrook Singleton area and established a coaching enterprise that for a time had a virtual monopoly on routes north. The inn was an integral part of the Nowland coaching system; and provides an example of vertical integration of aspects of a business operation.

The inn and the coaches flourished until the railways were established when both declined, the coaches were made redundant and the inn was by-passed. After serving almost four decades as a wine shop and homestead the inn became essentially a homestead c.1912, although it maintained a reputation for hospitality to travellers. The McMahon family purchased the site in 1898 from which time its primary function was that of wool production. The day to day operation of the property was overseen by a manager, and after Edward McMahon's death in 1916, for the benefit of seven beneficiaries of his will. In 1960 the McMahon holding was divided into seven lots and sold at auction. Jack Cavanagh, manager of the property, bought the homestead block (Thorpe 1990).

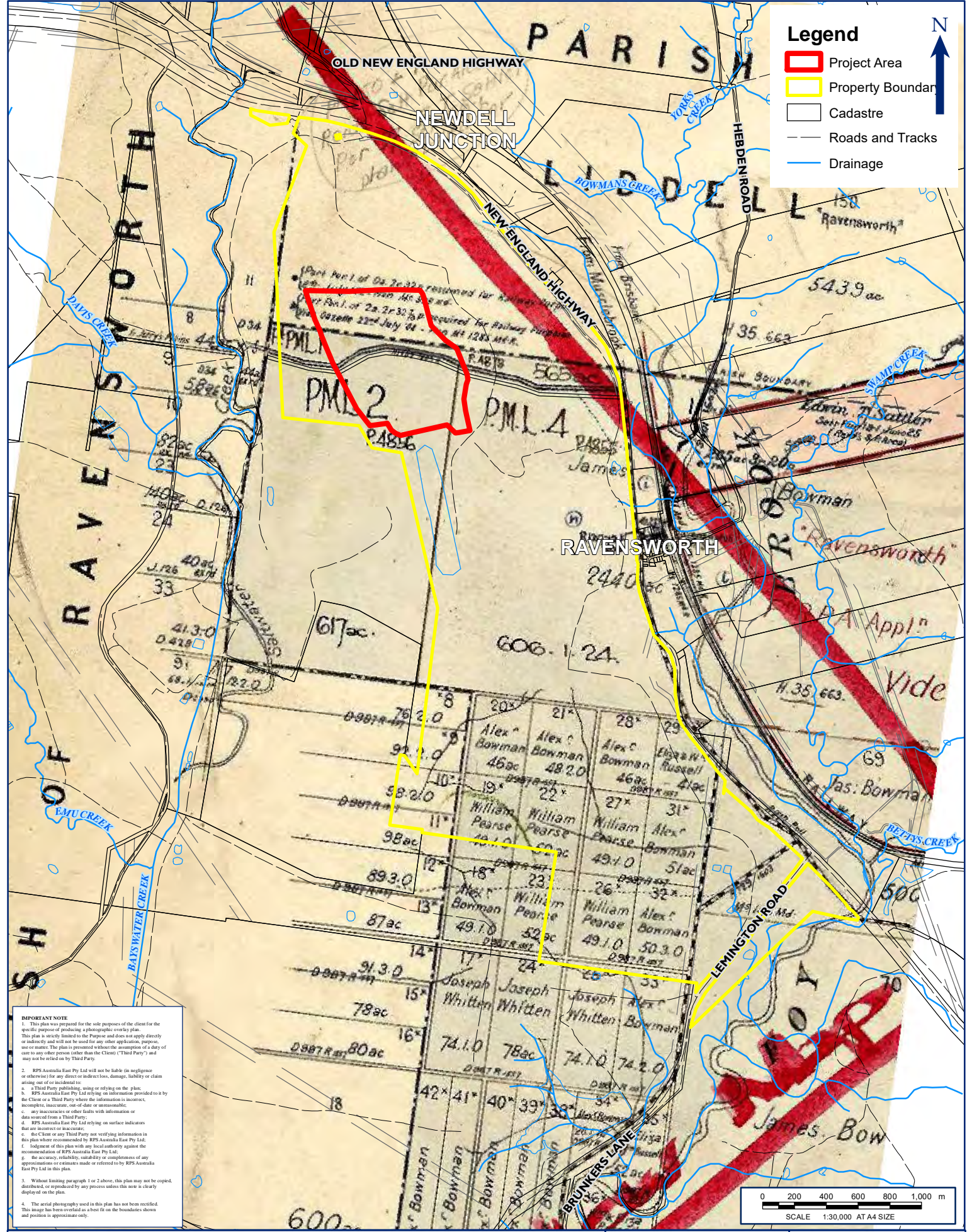
The property was acquired by the New South Wales Electricity Commission in 1966. When tenancing of the property ceased in the mid-1970s its physical condition deteriorated rapidly as vandals scavenged historic fixtures and fittings. The placing of a permanent conservation order on the property by the Heritage Council in 1982 has failed to stop the decline of the buildings on the site (Thorpe 1990).

4.3 Land Use Context

European settlement of the Hunter Valley commenced in 1820 as the region was pronounced open to free settlement. The earliest land grant in the Ravensworth region was that of Dr James Bowman. By the 1850s European communities in the area were expanding and significant farming estates existed in the region until the 1970s. Coal mining in the Ravensworth area first began in 1972 at the Ravensworth No.2 Open Cut mine to supply coal under contract to Pacific Power (previously known as the Electricity Commission of NSW). Expansion of workings occurred progressively until the late 1990s.

The Project Area constituted farmland within the Parish of Vane from 1820 until 1972. GIS overlays of the Project Area on historic parish maps from 1912 (Figure 3) and 1920-1923 (Figure 4) indicate that the Project Area constitutes farming land in James Bowman's Bayswater Estate, traversed by an access road. Disturbance can be expected as a result of long-term farming.

Since 1972 the Project Area has been part of Ravensworth mine. Major disturbance has occurred as a result of mining activities.



Legend

- Project Area
- Property Boundary
- Cadastre
- Roads and Tracks
- Drainage



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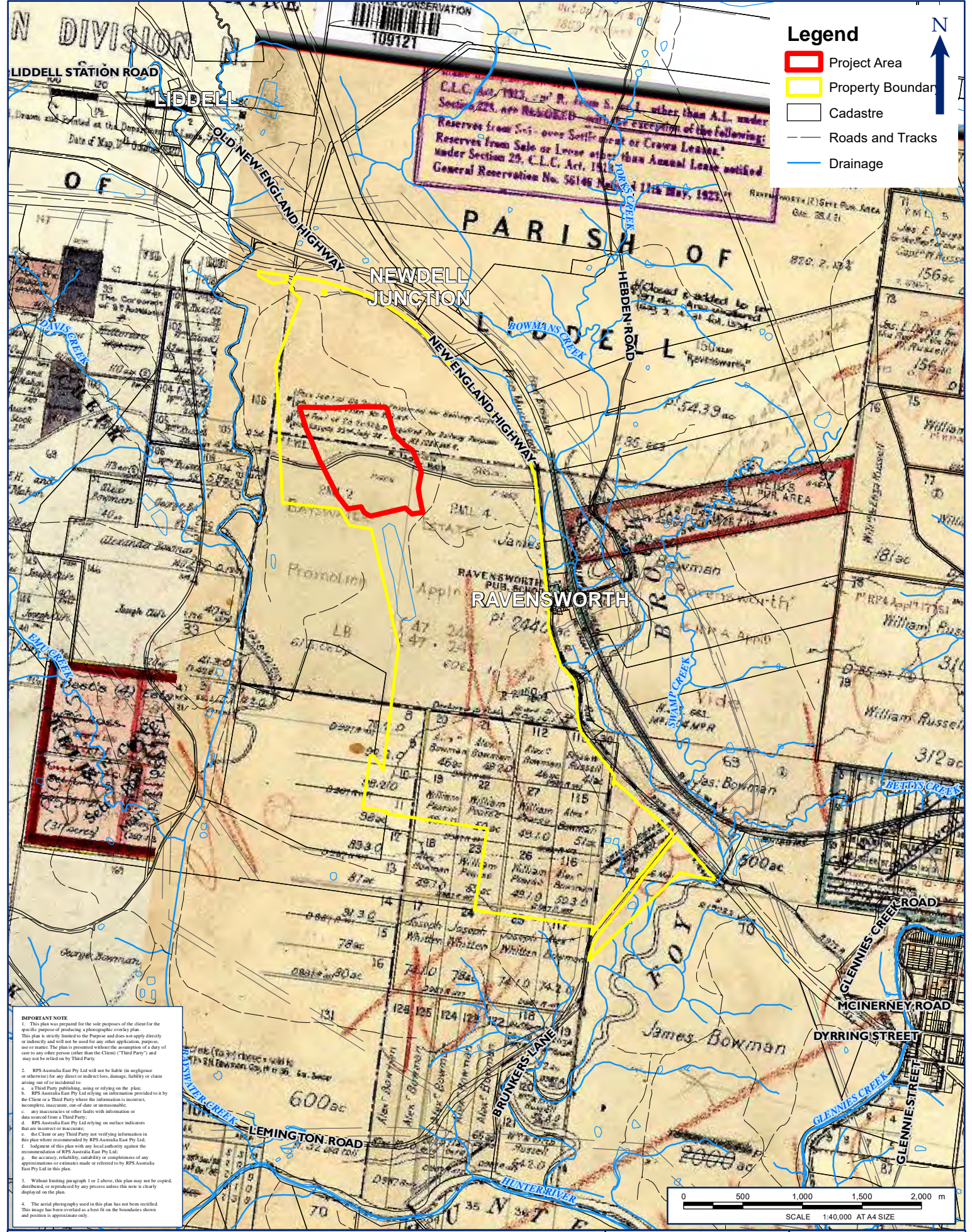
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0 200 400 600 800 1,000 m

SCALE 1:30,000 AT A4 SIZE

FIGURE 3: HISTORIC PARISH MAPS 1912

LOCATION: RAVENSWORTH	DATUM: GDA94
JOB NO.: PR141357	PROJECTION: MGA Zone 56
PURPOSE: HERITAGE	Data Sources: RPS, Client
Technician: Natalie.Wood	Land and Property 2017
Date: 22/01/2019	



Legend

- Project Area
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FIGURE 4: HISTORIC PARISH MAPS 1920 AND 1923

LOCATION: RAVENSWORTH	DATUM: GDA94
JOB NO.: PR141357	PROJECTION: MGA Zone 56
PURPOSE: HERITAGE	Data Sources: RPS, Client
Technician: Natalie.Wood	Land and Property 2017
Date: 22/01/2019	

5 ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

Historical archaeological potential is the potential for an area to contain material evidence related to an earlier phase of European occupation of the area and the associated archaeological resources. The historical archaeological potential has been assessed based on an analysis of documentary and archaeological resources and potential disturbance. The assessment included an inspection of the Project Area.

5.1 Analysis of Documentary Resources

The Project Area is likely to have been associated with early historic settlement of the Hunter Valley since 1824. It is unlikely that historic settlement of the Upper Hunter Valley is represented in the archaeological record within the Project Area.

As part of Ravensworth estate, the Project Area is closely associated with historic farming in the Upper Hunter since 1824 and appears as farmland on historic parish maps from 1912 and 1920-23. The Project Area remained in use as farmland until it was purchased for mining in 1972. It is unlikely that historic farming in the Upper Hunter is represented in the archaeological record within the Project Area.

5.2 Project Area Inspection

The Project Area was inspected on Wednesday 29 January 2019 by RPS Senior Archaeologist Dr Dragomir Garbov. The inspection was conducted on foot (pedestrian survey) and from a vehicle (reconnaissance survey). The Project Area was found to represent a partially remediated mine open cut and as a result identified as disturbed land. No historic heritage resources were identified. There is nil potential for subsurface archaeological resources to be present within the Project Area.



Plate 4 Project Area, view to east showing disturbed land

5.3 Assessment of Historical Archaeological Potential

There are no listed heritage items identified within the Project Area. The documentary resources indicate that from 1824 to 1972 the Project Area has been used as farmland. Since 1972 the Project Area has been used for mining or mining related activities. The inspection of the Project Area revealed that the Project Area consists of disturbed land. There is nil potential for historic heritage resources to be present within the Project Area. There is nil potential for subsurface historic archaeological resources to be present within the Project Area as the entire area is filled with fly-ash and imported capping material.

6 SIGNIFICANCE ASSESSMENT

In NSW significance is assessed against the criteria set by the NSW Heritage Council for assessing cultural and/or natural significance:

- Criterion (a): An item is important in the course, or pattern, of NSW's (or the local area's) cultural or natural history
- Criterion (b): An item has a strong or special association with the life or work of a person, or a group of persons, or importance in NSW's (or the local area's) cultural or natural history
- Criterion (c): An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)
- Criterion (d): An item has strong or special association with a community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons
- Criterion (e): An item has the potential to yield information that will contribute to an understanding of NSW's (or the local area's) cultural or natural history
- Criterion (f): An item possesses uncommon, rare or endangered aspects of NSW's (or the local area's) cultural or natural history
- Criterion (g): An item is important in demonstrating the principle characteristics of a class of NSW's (the local area's) cultural or natural places; or cultural or natural environments.
- Section 4A of the *Heritage Act 1977* distinguishes between items of local and State significance:
- State significance refers to significance to the State in relation to the historical, archaeological architectural, cultural, social, natural or aesthetic value of an item.
- Local significance refers to significance to an area in relation to the historical, archaeological, architectural, cultural, social, natural or aesthetic value of an item.

6.1 Significance Assessment

No listed heritage items were identified within the Project Area. There is nil potential for historic heritage works or relics to be located within the Project Area. There is nil potential for subsurface historic archaeological resources to be present within the Project Area.

7 IMPACT ASSESSMENT

The impact of the proposed project is assessed based on the information provided, the archaeological field observations and the assessment of archaeological potential and significance.

7.1 The Proposal

The applicant is proposing to undertake the expansion and operation of an existing nutrient recycling facility. Current composting operations at the site are approved by DA140/2016 to receive up to 76,000 tonnes per annum (tpa) of biosolids and garden organics. The subject application seeks to authorise the receipt of up to 200,000 tpa of organic materials, including new feed sources of food waste, to facilitate the sale of a portion of the composted material to third parties.

7.2 Impact Assessment

There is nil potential for impact to listed heritage items, historic heritage works or relics and subsurface historic archaeological resources to be incurred by the proposed activity.

8 CONCLUSIONS AND RECOMMENDATIONS

This report was prepared to support an EIS for a State Significant Development application (SSD 9418) to the NSW Department of Planning and Environment (DP&E).

8.1 Conclusions

This report has reviewed the heritage listings and considered the historic background of the Project Area. A field inspection was undertaken by an RPS archaeologist. It has been concluded that:

- No listed historic heritage items were identified within the Project Area;
- From 1820 to 1972 the Project Area constituted farmland and since 1972 the Project Area was part of mining lease;
- There is nil potential for historic heritage resources to be present within the Project Area;
- There is nil potential for surface or subsurface historic archaeological resources to be present within the Project Area; and
- There are no identified impacts to historic heritage as a result of the proposal.

8.2 Recommendations

The following recommendations have been made for the proposed development:

Recommendation 1

All relevant staff and contractors must be made aware of their statutory obligations for heritage under the *National Parks and Wildlife Act 1974* and the *Heritage Act 1977*, which may be implemented as a heritage induction.

Recommendation 2

In the unlikely event that unsuspected archaeological resources as defined under the *Heritage Act 1977* (as amended) are uncovered, the proposal within that area must cease. The Heritage Division of the Office of Environment and Heritage must be notified as required under Section 146 of the Act. The archaeological relic must be avoided. If it is not practicable to avoid the archaeological relic, additional approvals would be required under the Act.

Recommendation 3

With regards Aboriginal heritage - if unrecorded Aboriginal sites or object/s are identified in the Project Area during works, then all works in the immediate area must cease and the area cordoned off. OEH must be notified via the Enviroline 131 555 so that the site can be adequately assessed and managed. Refer to the Aboriginal Cultural Heritage Assessment Report (RPS 2019).

9 REFERENCES

Brayshaw, H. (1986). Aborigines of the Hunter Valley: A Study of Colonial Records, Scone and Upper Hunter Historical Society.

Godwin, L. (1987). A Preliminary Archaeological Survey of a Proposed Open-cut Coalmine at Ravensworth in the Hunter Valley of NSW, Croft and Associates Pty Ltd.

Gray, N. (1966). "Dumaresq, Henry (1792–1838)", Australian Dictionary of Biography." from <http://adb.anu.edu.au/biography/dumaresq-henry-2003/text2447>.

Heritage Office and Department of Urban Affairs and Planning (1996). Regional Histories: Regional Histories of New South Wales. Sydney, DUAP.

Ravensworth Public School Centenary of Education 1876 to 1976.

RPS (2019) Aboriginal Cultural Heritage Assessment Ravensworth Mine Complex, Report to Bettergrow.

Thorp, W. (1990) Archaeological Report. Chain of Ponds Inn, Liddell, Report to Dawson Brown Ackert.

Umwelt (2011). Ravensworth Mine Complex Historical Heritage Management Plan, Ravensworth Mine Complex.