

WATERMARK

COAL PROJECT

ENVIRONMENTAL IMPACT STATEMENT

February 2013

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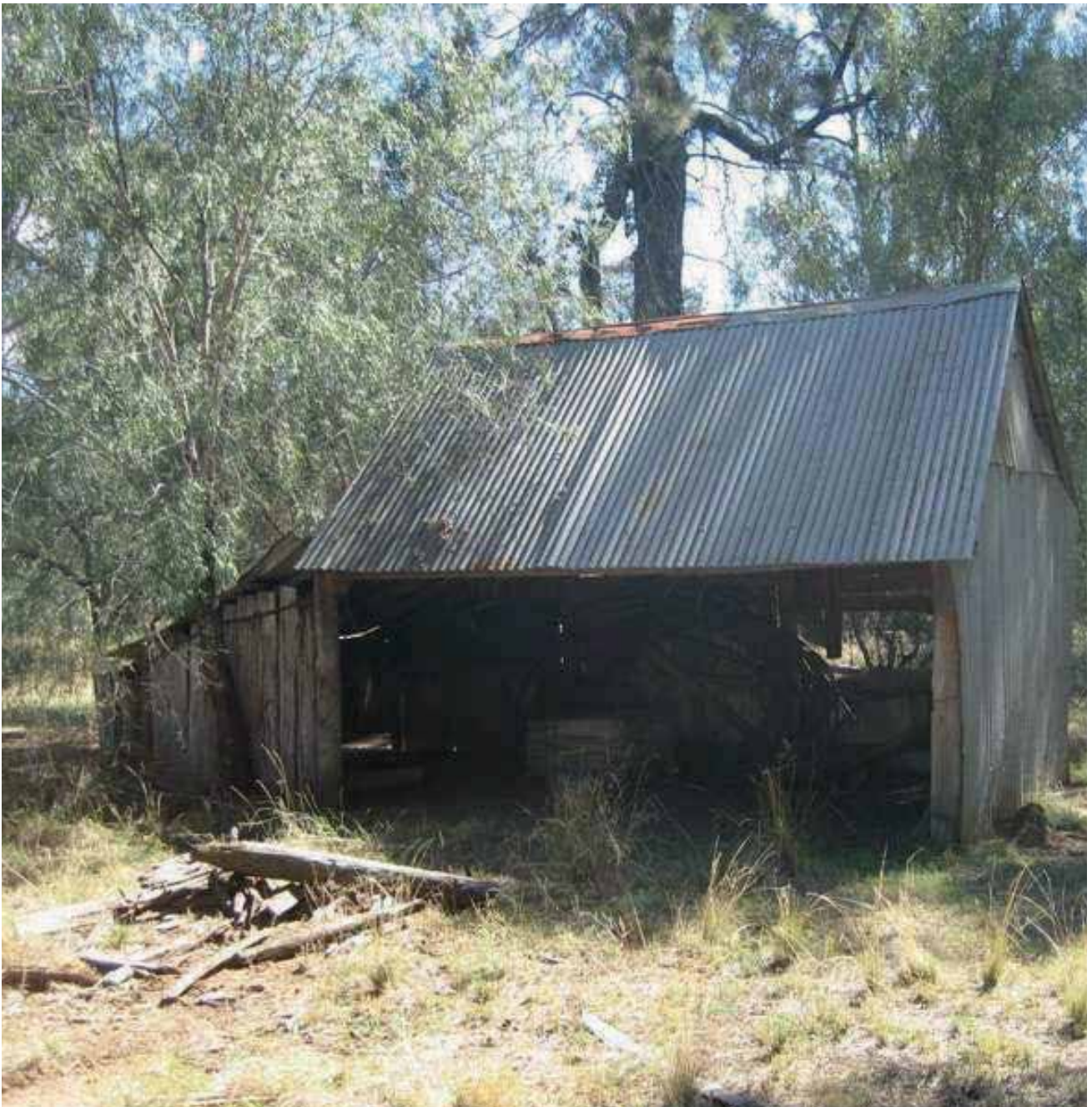
Historic Heritage Impact Assessment





Hansen Bailey
11 September 2012

Watermark Coal Project: Historic Heritage Impact Assessment



Watermark Coal Project: Historic Heritage Impact Assessment

Prepared for
Hansen Bailey

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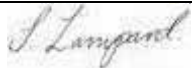
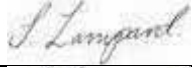
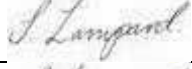
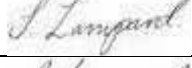
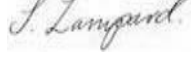
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Executive Summary

Shenhua Watermark Coal Pty Limited (Shenhua Watermark) is a subsidiary of the Shenhua Group, an integrated coal based Energy Company. In October 2008, Shenhua Watermark was granted Exploration Licence (EL) 7223. The Watermark Coal Project is located within EL 7223, approximately 25 km south south-east of the township of Gunnedah and to the immediate west of the village of Breeza, within the Gunnedah Local Government Area (LGA). AECOM Australia Pty Ltd (AECOM) was commissioned by Hansen Bailey Pty Ltd (Hansen Bailey) on behalf of Shenhua Watermark to undertake a historical heritage assessment for the Watermark Coal Project (the Project). The purpose of the assessment is to form part of an Environmental Impact Statement (EIS) being prepared by Hansen Bailey to support an application for State Significant Development Consent under Division 4.1 of Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to facilitate the development of an open cut coal mining operation and associated infrastructure for the Project.

This report presents the results of the historical archaeological surveys conducted between 11 and 16 April 2011 and 27 and 29 April 2012 and the subsequent significance assessment of heritage sites identified within the Project Boundary. A five km radius around the Project Boundary was also assessed to identify heritage sites with the potential to be indirectly impacted by the Project.

Prior to the field survey, AECOM undertook a search of the World Heritage List, Commonwealth Heritage Register, National Heritage Register, Register of the National Estate, State Heritage Register, State Heritage Inventory and the current and draft Gunnedah Local Environmental Plan Heritage Schedules. No heritage sites were listed on these inventories within the Project Boundary. One site, Plains Grass, was identified within a five km radius of the Project. The Plains Grass is listed on the Section 170 register of the Department of Primary Industries. The Project will not impact the Plains Grass site.

The field survey identified 18 sites within the Project Boundary, 14 of which were subsequently assessed as being of heritage significance. These sites are of local historical, research and/or representative significance. One site, the Williams' Family Markers, were assessed as being of significance to the Williams' family, but not the broader community. Fifteen of the 18 identified sites were farm complexes, established between 1895 and 1924, two of which do not hold heritage significance. The remaining site, a historic, disused coal mine, was also assessed as holding no heritage significance.

Ten heritage sites identified in the field survey (Farm Complexes 1, 2, 6, 8, 9, 10, 11, 14, 15 and the Williams' Family Markers) are within the Disturbance Boundary for the Project and will require removal. It is recommended that each site to be disturbed is documented, in accordance with the relevant guidelines (NSW Heritage Office, 1998, 2006), to capture an accurate record of past settlement and land use. With the exception of the Williams' Family Markers, it is recommended that recording be followed by archaeological test excavation and salvage excavation, if warranted by the testing.

With regard to potential blasting impacts, the acoustics impact assessment for the Project undertaken by Bridges Acoustics (Appendix H of the EIS) provided recommended blasting criteria, which are considered adequate to protect Shenhua owned heritage buildings from superficial or cosmetic damage. In this regard, no blasting impacts are anticipated to heritage buildings within the Project Boundary.

The Project will result in the modification of the existing visual environment surrounding Farm Complex 3, 7, 12, 13. As outlined in the visual impact assessment (JVP, 2012) (Appendix J of the EIS), mitigation measures to reduce visual impacts at sensitive viewing locations, including heritage sites, have been incorporated into the design and operation of the Project. If required, offsite mitigation measures, such as tree screening or plantings, can be implemented to further reduce the visual impact to landscapes surrounding heritage sites.

The impacts will be managed through the Historical Heritage Management Plan and Conservation Management Plans.

1.0 Introduction

AECOM Australia Pty Ltd (AECOM) was commissioned by Hansen Bailey Pty Ltd (Hansen Bailey) on behalf of Shenhua Watermark Coal Pty Limited (Shenhua Watermark) to undertake a historic heritage impact assessment for the Watermark Coal Project (the Project). The location of the Project is shown in Figure 1. The purpose of the assessment is to form part of an Environmental Impact Statement (EIS) being prepared by Hansen Bailey to support an application for State Significant Development Consent under Division 4.1, Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to facilitate the development of an open cut coal mining operation and associated infrastructure.

1.1 Project Background

In October 2008, Shenhua Watermark was granted Exploration Licence (EL) 7223. Shenhua Watermark is a subsidiary of the Shenhua Group.

The Project is located within EL 7223, approximately 25 km south south-east of the township of Gunnedah and to the immediate west of the village of Breeza, within the Gunnedah Local Government Area (LGA). The Project is approximately 282 km by rail from the export Port of Newcastle. Figure 1 illustrates the regional locality of the Project in relation to the nearest town centres of Breeza and Gunnedah.

The Project generally comprises:

- The construction and operation of an open cut mining operation extracting up to 10 Million tonnes per annum (Mtpa) of Run of Mine (ROM) coal for a 30 year period;
- An open cut mining fleet of excavators and shovels, supported by haul trucks, dozers, graders, drill rigs and water carts;
- Progressive rehabilitation of all disturbed areas;
- The construction and operation of a Coal Handling and Preparation Plant (CHPP) with a throughput of 10 Mtpa ROM coal;
- The co-disposal of tailings and coarse reject within the Overburden Emplacement Areas (OEA);
- The construction and operation of a rail spur, rail loop, Kamilaroi Highway rail overpass, associated load out facility and connection to the Werris Creek- Moree Railway Line;
- The construction and operation of a Mine Access Road;
- The construction and operation of administration, workshop and related facilities;
- The construction and operation of ground and surface water management and reticulation infrastructure including pipelines, pumping stations and associated infrastructure for access to water from groundwater aquifers, the Mooki River and private dams to the north-east of the Project Boundary;
- The installation of communications and electricity reticulation infrastructure; and
- A workforce of up to approximately 600 full-time equivalent employees during construction and up to 600 full-time equivalent employees during the operation of the Project.

The conceptual layout of the Project is shown in Figure 2.

1.2 Assessment Objectives

The scope of work completed by AECOM for the assessment included:

- Review of previous archaeological and historical studies within and adjacent to the Project Boundary to assess the current status of historical heritage and to provide a basis for developing an understanding of the development of the area;

- Locate and record historical sites within the Project Boundary to assist in developing suitable heritage management recommendations and nominate areas of potential constraints;
- Record the location of all identified historical heritage objects and sites with a GPS;
- Assess the heritage significance of sites in accordance with the New South Wales (NSW) Heritage Office guidelines *Assessing Heritage Significance* (2001);
- Prepare Statements of Heritage Impacts for impacted sites in accordance with NSW Heritage Office guidelines *Statements of Heritage Impact* (NSW Heritage Office, 2002); and
- Present recommendations for the management of and/or mitigation of the Projects' impact on the identified heritage resource.

1.2.1 Director-General's Requirements

The Director-General of the Department of Planning and Infrastructure (DP&I), along with the NSW Heritage Council issued the Director-General's Requirements (DGRs) for the historical heritage assessment on 19 April 2012.

Table 1 lists each requirement relevant to the historic heritage impact assessment and where it is addressed in this report.

Table 1 Director-General Requirements for the historic heritage impact assessment

Director-General Requirement	Section Addressed in this Report
A Historic heritage assessment (including archaeology) which must:	
Contain a detailed history and land-use summary of the site	Section 4.0
Include a statement of heritage impact (including significance assessment) for any State significant or locally significant historic heritage items	Appendix B
Outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures	Section 8.0
<i>NSW Heritage Council Submission</i>	
The proposed draft DGR for Heritage is considered generally appropriate; however, the Heritage Council would like to specify that the Historic Heritage Assessment should contain a detailed history and a land use summary of the site	Section 4.0
If a likelihood for non-Indigenous archaeology is established as part of the EIS and it is required to be excavated as part of the project works, the Historic Heritage Assessment must contain an appropriate research design and excavation methodology for its management/mitigation	Appendix C

The following guidelines have been adopted for this assessment as specified in the DGRs:

- NSW Heritage Manual (NSW Heritage Office & NSW Department of Urban Affairs and Planning, 1996a); and
- The Burra Charter (the Australia ICOMOS charter for places of Cultural Significance) (ICOMOS (Australia), 1999).

In addition to the guidelines identified in the DGRs, the following guidelines were considered in this assessment:

- Assessing Heritage Significance (NSW Heritage Office, 2001);
- Heritage Curtilages (NSW Heritage Office & NSW Department of Urban Affairs and Planning, 1996b); and
- Levels of Heritage Significance (NSW Heritage Office, 2008).

1.3 Project Team

The Project was managed by Dr Susan Lampard (AECOM Archaeologist). Susan coordinated project logistics, conducted heritage assessments and authored this report with the assistance of AECOM Graduate Archaeologist Rochelle Coxon. Peter Howard (AECOM Archaeologist) assisted with fieldwork. Ruth Baker (AECOM Associate Director - Environment) and Luke Kirkwood (AECOM Senior Archaeologist) provided technical and Quality Assurance review. Jackie Mandy and Tim Osborne provided mapping support.

1.4 Limitations

Within this report predictions have been made about the probability of subsurface archaeological materials occurring within the study area, based on surface indications and environmental contexts. However, it is possible that materials may occur in areas without surface indications and in any environmental context.

A summary of the statutory requirements regarding historical heritage is provided in Section 2.0. This is provided based on experience with the heritage system in NSW and does not purport to be legal advice. It should be noted that legislation, regulations and guidelines change over time and users of the report should satisfy themselves that the statutory requirements have not changed since the report was written.

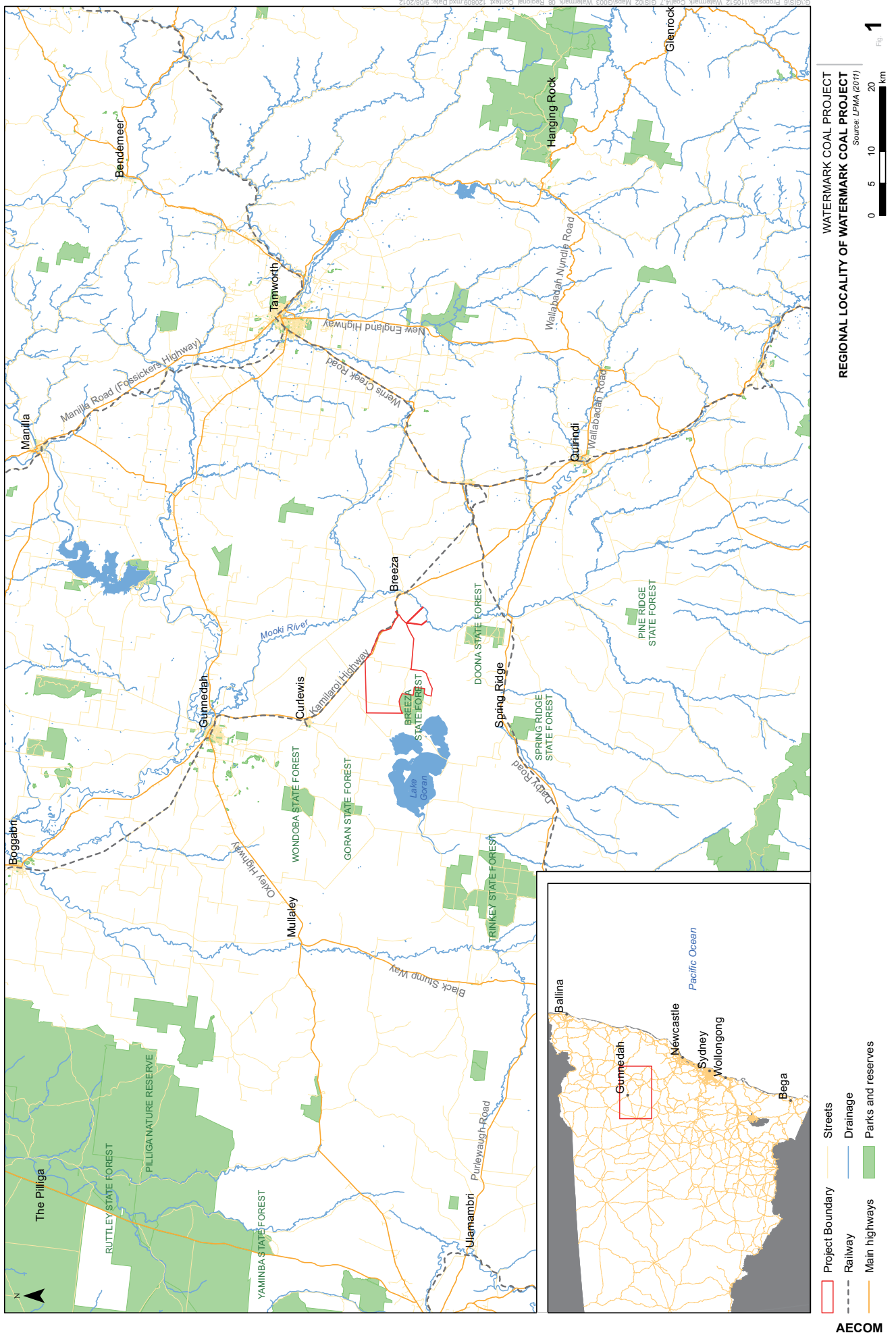
1.5 Acknowledgments

AECOM would like to acknowledge the assistance of Len Roworth for providing a copy of the history of the Breeza district (Durrant & Roworth, 1973) and for sharing his personal insight into the area. David Williams, former owner of Demeter, is also thanked for the information provided about that property, the area within the Project Boundary and immediate surrounds more generally. Stuart Read of the Heritage Branch, Office of Environment and Heritage provided information on osage oranges and their frequency across NSW. Also acknowledged is the assistance of Lachlan Johnson, Environmental and Natural Resource Manager of Gunnedah Shire Council and the assistance of members of the Gunnedah and District Historical Society.

1.6 Related Studies

The studies which are to be read in conjunction with this assessment include:

- The EIS acoustic impact assessment; and
- The EIS visual impact assessment.





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2.0 Statutory Controls Relating to Heritage

2.1 Introduction

A number of planning and legislative documents govern how heritage is managed in NSW and Australia. The following section provides an overview of the requirements under each as they apply to the Project.

2.2 Federal Controls

2.2.1 Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) took effect on 16 July 2000.

Under Part 9 of the EPBC Act, any action that is likely to have a significant impact on a matter of National Environmental Significance (known as a controlled action under the Act), may only progress with approval of the Commonwealth Minister for the Department of Sustainability, Environment, Water, Population and Communities (SEWPAC). An action is defined as a project, development, undertaking, activity (or series of activities), or alteration. An action will also require approval if:

- It is undertaken on Commonwealth land and will have or is likely to have a significant impact on the environment on Commonwealth land; and
- It is undertaken by the Commonwealth and will have or is likely to have a significant impact.

The EPBC Act defines 'environment' as both natural and cultural environments and therefore includes Aboriginal and historic cultural heritage sites. Under the Act protected heritage sites are listed on the National Heritage List (sites of significance to the nation) or the Commonwealth Heritage List (sites belonging to the Commonwealth or its agencies). These two lists replaced the Register of the National Estate (RNE). While the RNE has been suspended and is no longer a statutory list, Section 391A of the Act requires the Minister to consider RNE listing if a referral is made. This requirement expires in 2012, by which time all RNE listings are to be transferred to a relevant heritage register. Sites on the RNE can have a variety of statuses, including Registered (it is inscribed on the Register) and Indicative (it is in the database, but no formal nomination has been received or an assessment has not been completed).

The heritage registers mandated by the EPBC Act have been consulted and there are no sites within the Project Boundary on these registers. In relation to heritage, the EPBC Act therefore is not of further relevance to the Project.

2.3 State Controls

2.3.1 Environmental Planning and Assessment Act 1979

The EP&A Act allows for the preparation of planning instruments to direct development within NSW. This includes Local Environment Plans (LEP), which are administered by local government, and principally determine land use and the process for development applications. LEPs usually include clauses requiring that heritage be considered during development applications and a schedule of identified heritage sites be provided. The Gunnedah LEP 2012 applies to the Project and is discussed further in Section 2.3.3.

Upon repeal of Part 3A of the EP&A Act on 1 October 2011, the *Environmental Planning and Assessment Amendment (Part 3A Repeal) Act 2011* inserted a new Division 4.1 in Part 4 of the EP&A Act. Division 4.1 provides for a new planning assessment and determination regime for State Significant Development (SSD). Section 89C of the EP&A Act stipulates that a development will be considered SSD if it declared to be such by the new *State Environmental Planning Policy (State and Regional Development) 2011* (SEPP SRD).

Under Clause 8(1) of SEPP SRD, a development is declared to be SSD if:

- The development on the land concerned is, by the operation of an environmental planning instrument, is permissible only with development consent under Part 4 of the EP&A Act, and
- The development is specified in Schedule 1 or 2.

The Project is declared to be a SSD as it meets both of these criteria.

Section 89J of the EP&A Act provides that an approval under Part 4, or an excavation permit under Section 139, of the *Heritage Act 1977* is not required for the Project as it is an approved SSD.

2.3.2 The Heritage Act 1977

The *Heritage Act 1977* (as amended) was enacted to conserve the environmental heritage of NSW. Under Section 32, places, buildings, works, relics, moveable objects or precincts of heritage significance are protected by means of either Interim Heritage Orders (IHO) or by listing on the NSW State Heritage Register (SHR). Sites that are assessed as having State heritage significance can be listed on the SHR by the Minister on the recommendation of the NSW Heritage Council.

Archaeological relics (any relics that are buried) are protected by the provisions of Section 139. Under this section it is illegal to disturb or excavate any land knowing or suspecting that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed. In such cases an excavation permit under Section 140 is required. Note that no formal listing is required for archaeological relics; they are automatically protected if they are of local significance or higher.

Proposals to alter, damage, move or destroy places, buildings, works, relics, moveable objects or precincts protected by an IHO or listed on the SHR require an approval under Section 60. Demolition of whole buildings will not normally be approved except under certain conditions (Section 63). Some of the sites listed on the SHR or on LEPs may either be 'relics' or have relics associated with them. In such cases, a Section 60 approval is also required for any disturbance to relics *associated* with a listed site.

Under Section 170 of the *Heritage Act 1977*, NSW Government agencies are required to maintain a register of heritage assets. The Register places obligations on the agencies, but not on non-government proponents, beyond their responsibility to assess the impact on surrounding heritage sites. AECOM searched Section 170 registers to determine whether there are listed sites within the Project Boundary. One site was identified, being the Plains Grass Site, listed by the NSW Department of Agriculture. This site is outside the Project Boundary and will not be impacted.

2.3.3 Gunnedah Local Environmental Plan (2012)

The *Gunnedah Local Environmental Plan 2012* (LEP) controls development in relation to heritage sites within the Gunnedah Shire. Part 5, Section 5.10 of the LEP outlines Gunnedah Shire Council's aims in relation to heritage, which are:

- To conserve the environmental heritage of Gunnedah;
- To conserve the heritage significance of heritage sites and heritage conservation areas, including associated fabric, settings and views;
- To conserve archaeological sites;
- To conserve Aboriginal objects and Aboriginal places of heritage significance.

The LEP contains a schedule of identified heritage sites in Schedule 5. The Schedule provides an indication of the heritage sites within the LGA. The Gunnedah LEP was reviewed to identify whether any heritage sites occur in the Project Boundary or its surrounds.

3.0 Methodology

3.1 Introduction

A field survey of the Project Boundary was undertaken by Dr Susan Lampard and Peter Howard of AECOM between 11 and 16 April 2011. An additional three days field survey of a 5 km buffer zone around the Project Boundary was undertaken by Dr Susan Lampard and Darran Jordan of AECOM from the 27 – 29 February 2012. The following sections describe the methodology used.

3.2 Field Survey Methodology

3.2.1 Initial Field Survey

The initial field survey from 11 – 16 April 2011 comprised a targeted search of sites identified from historical and archival research completed prior to the physical assessment. All structures and areas of disturbance, as visible on aerial photographs, or on the ground were also assessed.

Three key historical sites of interest were identified within the Project Boundary from historical documents and secondary sources:

- The former site of the Watermark Public School;
- The potential tank shown on the Nea Parish map; and
- The 'Spring Tank' near the corner of the Kamilaroi Highway and The Dip Road, indicated on the Breeza Parish Map.

Furthermore, local residents were consulted as to their knowledge of the history of the Project Boundary and potential sites of heritage value. The historical heritage survey team also liaised with the Indigenous heritage survey team, who were undertaking extended transects across the Project Boundary and thereby expanding the search for sites of historical interest. No additional sites of interest were identified via this means.

An additional site (memorial markers related to the Williams family), as identified by Shenhua Watermark, were also investigated.

The following assessment method was undertaken at each site:

- The tenant was located and permission was sought to access their property, where appropriate;
- Tenants were asked for information regarding the age and history of the structure or feature and if the tenant was aware of any other known features of historical interest in the area. Information gained in this manner was limited, however, as the majority of residences were vacant;
- The structures and/or features at the site were identified and recorded;
- The structures/features were assessed for historical significance;
- Photographs were taken of the structures/features with details maintained in a photo log; and
- The position of the site was recorded with a GPS.

No sub-surface testing was undertaken.

3.2.2 Additional Survey

Three days of additional survey were conducted in February 2012 to survey a five km buffer zone around the Project Boundary.

During the additional survey, the historical heritage survey team met former land owner and current tenant John Bailey to discuss the history of Farm Complex 1 - Shar and Farm Complex 8 - Watermark.

Farm Complex 15: 'Lilyfield' was also subject to re-examination, including a meeting and discussion with the former owners and current tenants regarding the history of the complex.

The historical heritage survey team also investigated an historic site located on the property Demeter, identified by previous land owner David Williams, and revisited those sites from the original survey which required development of Research Design and Excavation Methodologies. These measures were undertaken in order to develop a definitive significance assessment, so as to enable the development of relevant management measures for these sites. The assessment method listed in Section 3.2.1 above was undertaken at each site.

3.3 Analysis Method

The GPS data was provided to AECOM's Geographic Information System analyst for mapping. The field notes were then typed into Heritage Inventory Sheets for each of the sites inspected during the field survey (Appendix A). During this process, the physical evidence was analysed in light of the site's historical context and the site's significance assessed. The process of determining significance is described further in Section 3.4. The significance of each site and the information collected in the field are key components in determining what impact, if any, the Project may have on the sites. Based on the significance of the site and the level of potential impact, management recommendations were developed.

3.4 Significance Assessment Criteria

In order to understand how a development will impact on a heritage site it is essential to understand why an site is significant. An assessment of significance is undertaken to explain why a particular site is important and to enable the appropriate site management and curtilage to be determined. Cultural significance is defined in the Australia ICOMOS Charter for the conservation of places of Cultural Significance (the Burra Charter) as meaning "aesthetic, historic, scientific or social value for past, present or future generations" (Article 1.1). Cultural significance may be derived from a place's fabric, association with a person or event, or for its research potential. The significance of a place is not fixed for all time, and what is of significance to us now may change as similar sites are located, more historical research is undertaken and community tastes change.

The process of linking this assessment with a site's historical context has been developed through the NSW Heritage Management System and is outlined in the guideline *Assessing Heritage Significance*, part of the NSW Heritage Manual (Heritage Branch, Department of Planning). The *Assessing Heritage Significance* guidelines establish seven evaluation criteria (which reflect four categories of significance and whether a place is rare or representative) under which a place can be evaluated in the context of State or local historical themes. Similarly, a heritage site can be significant at a local level (i.e. to the people living in the vicinity of the site), at a State level (i.e. to all people living within NSW) or be significant to the country as a whole and be of National or Commonwealth significance.

In accordance with in the guideline *Assessing Heritage Significance* (NSW Heritage Office, 2001), an site (item) will be considered to be of State or local heritage significance if it meets one or more of the following criteria:

Criterion (a) – *an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).*

The site must show evidence of significant human activity or maintains or shows the continuity of historical process or activity. An item is excluded if it has been so altered that it can no longer provide evidence of association.

Criterion (b) – *an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local to area).*

The site must show evidence of significant human occupation. An item is excluded if it has been so altered that it can no longer provide evidence of association.

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).*

An item can be excluded on the grounds that it has lost its design or technical integrity or its landmark qualities have been more than temporarily degraded.

Criterion (d) – *an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.*

This criterion does not cover importance for reasons of amenity or retention in preference to proposed alternative.

Criterion (e) – *an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area). Significance under this criterion must have the potential to yield new or further substantial information.*

Under the guideline, an item can be excluded if the information would be irrelevant or only contains information available in other sources.

Criterion (f) – *an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area). The site must show evidence of the element/function etc proposed to be rare.*

Criterion (g) – *an item is important in demonstrating the principal characteristics of a class of NSW's (or local area's):*

- *Cultural or natural places; or*
- *Cultural or natural environments.*

An item is excluded under this criterion if it is a poor example or has lost the range of characteristics of a type.

The Heritage Council require the summation of the significance assessment into a succinct paragraph, known as a Statement of Significance. The Statement of Significance is the foundation for future management and impact assessment.

3.5 Statements of Heritage Impact

The method used in the preparation of the Statements of Heritage Impact (SOHI) is outlined in Appendix B.

4.0 Historical Context

4.1 Introduction

The historical context of an area is important in understanding the type and frequency of sites likely to be identified and their potential distribution. The following information is based on a range of secondary sources, although information for the area is somewhat limited and relies heavily on Durrant & Roworth (1973).

4.2 European Exploration

John Oxley was the first official European explorer of the area around Breeza. In August of 1818, Oxley and his party travelled towards the east on a line that took them through where the town of Curlewis is situated today (Whitehead, 2004:237), located to the north of the Project Boundary. After exiting the area which is today the Pilliga Nature Reserve, the relatively open land, free of quicksand and dense vegetation, was welcomed by the party. Oxley wrote that the country was “beautiful and fertile” (Johnson, 2001:127).

4.3 Settlement

It was the fertile land that attracted squatters, perhaps from as early as 1826 (Longmuir, 1956:11). Two of the most influential runs in the area were ‘Doona’ and ‘Breeza’. ‘Doona’ was established in 1837 by Samuel Clift, although he may have selected the land as early as 1835. ‘Breeza’ was set up by Donald McLaughlin on behalf of Thomas Potter Macqueen (or McQueen) in 1832. McLaughlin drove some bullocks to the current location of Breeza Station and built a stockyard and hut. He left these in the hands of Mr. Freeman and William Mitchell. In 1835 Mr. Macqueen’s agent ordered that ‘Breeza’ be abandoned (Durrant & Roworth, 1973:14-15).

Dispute arose over the ownership of the licence of ‘Breeza’: McLaughlin believed that he had taken over the licence in 1835 and had later transferred it to Andrew Lang. McLaughlin’s employer, Richard Jones, believed that ‘Breeza’ had established on his behalf. Jones later sold his land to John Eales and the Land Commissioner was to find against Eales.

Eales was also in dispute with Clift during 1845. Clift had complained to Commissioner Allman about the trespass of Eales’ sheep on his land. Allman gave Eales ample opportunity to attend and, after failing to show for the first two dates, when Eales asked for further extension to allow for a witness to come from Moreton Bay, Allman found against him. Allman, in recording his decision, went on to say that there was:

“...ill feeling which unhappily exists amongst the settlers in the lower part of Liverpool Plains; being close to the great Northern Range and consequently the Stations of great value from their proximity to the bounds of the Colony, this part of the District is more densely populated than any other and in my opinion overstocked. No boundaries that I am aware of have been made between the different Runs, and from the fact of possession being held by parties to whom the land does not belong for a length of years, the rightful owners suffer, without the Commissioner having it in his power to come to a just conclusion to the right. Added to which the principal witnesses in these cases are generally the old stockmen of the District, and from this class of men I regret to say but little can be depended upon as regard truth. In fact I have on many occasions forborne to put men of this description on their oath to prevent perjury which I felt satisfied would take place.

(in Durrant & Roworth 1973:21)

Eales did not remove his sheep from Clift’s land and in 1847 Clift made a further complaint against him. In response the Commissioner marked out Clift’s boundaries.

Clift consolidated his holdings in the area through the purchase of ‘Breeza’ from Lang in 1849. Property disputes continued through much of the rest of the century, more detail of which can be found in Durrant & Roworth (1973).

The next big change in the area came as a result of the *Robertson Land Act 1861*. Squatters now had the option to purchase parts of their runs, but they were also required to relinquish parts of their lease back to the Crown for sale. Samuel Clift died in 1862 and his runs (Breeza, Weia Weia Creek, Wallala East and West and Mooki River) were transferred to his sons William, Joseph, James, Samuel and George. James sold his portion and was bought out by the remaining brothers. Each brother received around 32,000 acres each.

The land within the Project Boundary, for the most part, became the property of William Clift, with the western portion been given to George. All the Clift brothers tried to have the entirety of their leaseholds converted to freehold. They appear to have been largely successful until the new *Crown Lands Act 1884*. At this point squatters had to divide their leases into an area of lease and an area to be resumed. The resumed area could be leased by the squatter until it was selected (Durrant & Roworth 1973:88).

William Clift died in 1889 and his land was divided amongst his four sons, with his daughters being given a dowry (Durrant & Roworth 1973:98). Each son received 8,000 acres, although it is not clear how the land was divided and who inherited the portion within the Project Boundary still in Clift ownership.

When William's brother George died in 1912, his property was also subdivided between his seven children. Within the Project Boundary the land to the west of Nea Spring Ridge Road was inherited by George Percival Clift. On his death, the land was split between his four children, with George Percival junior inheriting the portion within the Project Boundary. George Percival junior divided this land into 'Lochiel', which he operated, 'Lochiel East', which was managed by his son Don, and two other properties, 'Birrawa' and 'Uralba' located outside the Project Boundary and managed by his other sons (Durrant & Roworth 1973:102).

One of the earliest Settlement Leases was taken up by Walter Court in 1896. His lease of 1,600 acres was converted to a Conditional Purchase in 1913. Walter had been a tutor on a squatters run in southern NSW, where he acquired a taste for country life. The property was named Flakenhoe, a variation on his father's middle name of Flecknoe (Durrant & Roworth 1973:90).

Lilyfield was another early selection, taken by John Gaynor on 14 February 1899. This was followed by a number of other selections within the Project Boundary, including The Dip, selected by John Branxton Clift, which was later augmented by land from one of the other Clift estates. John A. Clift held Browns Corner, on the corner of the Kamilaroi Highway and The Dip Road. The Clifts also owned The Watermark until it passed on to the Bailey family. Additionally, the Bailey family owned Watermark (referred to as Shar in this report), a separate property on the corner of the Kamilaroi Highway and Court Lane, which was selected by Joseph Bailey in 1902. In the same year, Vine Cottage (now Demeter) was purchased by Jonathan McIntosh, who passed it on to David Williams (Durrant & Roworth 1973:90-91). One of the worst droughts recorded in the area occurred in 1902, so neither Bailey or McIntosh had a good start.

In 1905, the property of Joe Pateman, Black Mountain, was sold to John Perry who renamed it The Wilgas. John Perry was a member of the NSW Legislative Assembly from 1904 to 1907 and again in 1911 (Durrant & Roworth 1973:102) and had the dubious honour of being the first member thrown out for interjection (L Roworth pers. comm. 11 April 2011). Perry sold the property to the Hethringtons. The Wilgas was purchased by the Roworth family in 1938.

Sometime before 1906 Barwo was purchased by Jack Devlin, which was then passed on to Mrs J. Farley. Inverness had been settled by Hugh Cameron, but was bought by Thomas Colley in 1906 and was later owned by J. Colley during the 1970s (Durrant & Roworth 1973:90-91). Colley Road was evidently being named after the family.

Following World War I, land in the Project Boundary was resumed for soldier settlement, including land to the north of The Dip Road, formerly part of Bumble owned by B. Durham. Three parcels of land were given to W. Hale, N. Hirst and A. Maclean in 1920. Maclean did not stay long and sold his property to Lance Tudgey in 1924, which became known as Hill 60 (Durrant & Roworth 1973:91-92). Hale also sold, dividing the land between Hirst and Tudgey.

The area was hit hard by the depression and, just as it was beginning to recover, almost ground to a halt again during WWII. Following WWII, there was another round of land resumption for soldier settlement blocks, although this seems to have mainly occurred on Piallaway Station to the north of the Project Boundary. The post war period was a time of expansion as the increased population and new farming techniques drove innovation and increased production (Durrant & Roworth 1973:107).

4.4 Coal Mining

John Perry was involved in establishing the Wilga Coal and Coke Company (WCCC) in 1914 with a group of Quirindi businessmen. The mine was located just off the Kamilaroi Highway, about 1 km south of The Wilgas homestead.

The quality of coal was never good and, once the company lost the tender to supply coal to the local railway combined with the impact of World War I, the mine was forced to close in 1916. Prior to its closure, a spur line was constructed from the main railway line. The earthworks are still visible today.

Local jealousy and a misunderstanding of mining rights, led the neighbouring Clift family to begin excavation of a tunnel on their adjacent property. The Clifts thought WCCC could excavate under the property boundary and steal their coal. Once this misunderstanding had been resolved no further mining was undertaken by the Clifts (Len Roworth pers. comm. 11 April 2011).

4.5 Breeza Township

The township of Breeza originated with the establishment of an accommodation house near the Mooki River in 1845. The accommodation was run by William Conroy, who also had eight horses and 80 cattle on 160 acres of land, which was within Lang's 'Breeza'. When Clift purchased the property, he disputed Conroy's claim to the land. The Crown Lands Commissioner, however, ordered a reserve of one square mile for a township. Given this it appears that Conroy was allowed to remain.

There is an indication that the township may have been established slightly earlier. A birth registered at St Paul's, West Tamworth in 1844 described the father, Frederick Ferrier, as a storekeeper at Breeza. It is unclear, however, whether this was at the Station or the site of the current township.

Conroy held a Publican's Licence from 1853 for Breeza Inn. In the same year the residents requested that a Post Office be established at Breeza stating that the area "abounds with Stations numerously inhabited, and the contemplated formation of a Township at Breeza, already containing an Inn, Store, Blacksmith's shop, and a population of at least Forty persons..." (in Durrant & Roworth 1973:38). This development had taken place on the reserve recommended by the Crown Lands Commissioner. In 1859, the town was laid out formerly and Conroy purchased the land on which he had made improvements.

Most visitors were unimpressed by Breeza. In 1879, during the construction of the railway, one journalist said "Breeza village is a dingy, benighted-looking straggle of pine huts, without form or comeliness, and about as ugly a little settlement as one could go 120 miles to see".

Prior to WWI, there was a building boom in Breeza as locals took advantage of the services of builder Samuel H. Hill. Hill had come to the area to erect The Gap abattoir (Durrant & Roworth 1973:108), but appears to have stayed on to become the Post Master.

The Post Office seems to have been the heart of the Breeza township, moving between various contractors over the years, although there were up to two or three stores in the town at various times. The area was also serviced by Indian hawkers, who travelled between the stations from the early 1900s.

4.6 Railway

Initial surveys for a railway line between Werris Creek and Gunnedah were undertaken in 1873. There was political wrangling over the location of the line and delays caused by heat and various other factors. The line was not officially proclaimed until 14 June 1877 and work began very soon thereafter.

The line was finished and officially opened in Gunnedah on 11 September 1879. It did not, however, make a profit and it was soon realised that to do so the line would require an extension to Narrabri. This was achieved by October 1882.

The railway line improved local farmers' ability to transport and sell local livestock. An increase in cropping was also evident with the construction of a silo in 1934 (Durrant & Roworth 1973:79). Breeza, however, did not greatly profit from the railway line as it was never a terminus.

4.7 Watermark Public School

An application was made for a Provisional School at Watermark. The guidelines for a Provisional School were that there were more than 10 students, but less than 25 (NSW Department of Education and Training, 2003:17). A Provisional School located within the Project Boundary was approved by the Education Department on 2 September 1903 (Curlewis Centenary Committee 1985:52). Student enrolments increased to the extent that the facility was converted to a Public School in 1913, indicating more than 25 pupils.

The school however was closed at the end of 1916, probably due to falling student enrolments (NSW Department of Education and Training, 2003:136).

Curlewis Centenary 1885-1985 (Curlewis Centenary Committee, 1985:52) has a photograph of Maypole dancing out the front of the school building. The building is partly obscured by the activity in front, but can be described as a simple rectangular building with a gabled roof and a central chimney. There is not enough detail to determine the construction material of the chimney (a brick chimney is more likely to leave an archaeological trace). The building is surrounded by a verandah on at least two sides, with one corner being enclosed with a screen. A water tank is also clearly visible to the rear of the building. The building was apparently moved to the Nea Public School after it was opened at the beginning of 1918 (Curlewis Centenary Committee, 1985:52).

4.8 Breeza State Forest

The Breeza State Forest was set aside as a timber reserve on 15 November 1880 (1884 Parish Map). The reserve was converted to a State Forest in 1914. Early reports on activities in timber reserves and state forests are sparse. The earliest reports relating to the forests in the Gunnedah area date from 1910 to 1915 and indicate that the vegetation was comprised of native hardwood and pine. The pines were young, being regeneration after the previous stands were felled in 1880-1890s. The regenerated pines were logged in the 1980s, making the current growth the third generation.

Reliable records regarding the State Forests begin in 1920 and in 1921/22 the number of sawmilling licences issued was 15. Curby and Humphreys (2002:71) state that:

The number of licenses suggests a fairly active local industry but the record of cuts from State Forests indicates these millers were mostly involved in cutting logs from private property. From 1920, when reliable forestry records are first available, cuts of cypress pine logs averaged less than 200 m³ per annum from the Gunnedah State Forests. In the 11 years between 1932 and 1943 a considerable upsurge in logging of State Forest timber took place and in that period cuts averaged almost 1,100 m³ per annum. Not surprisingly, the cut dropped dramatically during WWII. Despite the increase in activity in state forests preceding World War II, operations on private property remained extensive.

It must be noted that Curby and Humphreys are discussing logging across the whole of the Gunnedah Forest administrative area, however, it does provide an indication that extensive clearing was being undertaken in the freehold areas during this period.

It is therefore unclear how many men in the Breeza area were involved in logging the State Forests, but it did provide a source of employment or income throughout the historical period.

In 1948, mill licensee L.G. Eather (subsequently Gunnedah Sawmilling Co. and Gunnedah Timbers Pty Ltd) obtained exclusive allocation of the entire Gunnedah State Forest area. Logging continues to this day, mainly for the building industry (Curby & Humphries, 2002: 72).

4.9 Employment

The dominant land use within the Project Boundary was agricultural and the bulk of people living and working in the area would have been employed as agricultural labourers or stockmen. The majority of these men (and their families, if they had one) are likely to have lived on their employer's property in supplied accommodation (see for example the cottage constructed on The Watermark property, Section 6.10.2) or within the township of Breeza.

From 1914 to 1916, men were also employed by WCCC mining coal.

There is likely to have been some overlap with men logging in the Breeza State Forest residing within the Project Boundary, but as there was not a residential centre within the Project Boundary this would have been limited. The general pattern for loggers was to live in the forest, moving camp when they had logged out the area around them.

4.10 Land use summary

Based on the above history, the land use of the area can be characterised as pastoral, followed by cropping as the land was cleared. Oral testimony provided by the Bailey and Gaynor families indicates that wheat, barley, sorghum, sunflowers, dry-land cotton and durham wheat, in more recent years, have been produced in the area. The clearance of vegetation was probably steady from the early 1830s, but seems to have accelerated following

the release of the land in 1895 and following grants of solidier settler blocks after World War I. Crown Plan for the Linavardi property (Lands and Property Management Authority Crown Plan 5000-1781) of 1914, for example, indicates that rink-barking to the value of £200 had been undertaken.

Within the Project Boundary there was no service centre, that facility being provided by the township of Breeza to the south and Curlewis and Gunnedah further to the north. The exception was the provision of a school located on Colley Road.

5.0 Desktop Study

5.1 Introduction

This section provides the results of the heritage inventory searches and the search of Crown Plan and Parish Map information. In addition to these sources, the desktop study included the compilation of the historical context of the Project Boundary and a literature review. Information was sought from:

- Mitchell Library (information gained from the library has been included in Section 4.0);
- Gunnedah Shire Library – Gunnedah Branch (information gained from the library has been included in Section 4.0);
- A visit to the Gunnedah and District Historical Society museum and discussion with members (see section 5.2); and
- Information held by the Gunnedah Shire Council (see section 5.2).

5.2 Heritage Inventories

A search of the following Heritage Inventories was undertaken by AECOM:

- World Heritage List
- Commonwealth Heritage Register;
- National Heritage Register;
- RNE;
- SHR;
- State Heritage Inventory (including Section 170 registers); and
- Gunnedah LEP (2012) Heritage Schedule 5.

No heritage sites within the Project Boundary were listed on these inventories. One site was located within the 5 km buffer zone (Figure 4). This site is listed as 'Plains Grass' and comprises 12 ha of grassland on the Liverpool Plains. The grassland is dominated by native plains grass *Austrastipa aristiglumis* along with other native species, and a limited number of exotic species. This site is outside of the Project Boundary and will not be impacted by the Project. As such this has not been discussed further in the assessment.

Dr Susan Lampard of AECOM contacted the Gunnedah Shire Council on 30 March 2011. Lachlan Johnson, Environmental and Natural Resource Manager of Gunnedah Shire Council, indicated that the Council had undertaken a heritage study in 2009, but he was unaware of any listed sites within the Project Boundary. This was confirmed during a meeting with Lachlan Johnson on 11 April 2011. A copy of the heritage study was not available for public viewing as it had not been adopted by the Council.

The Gunnedah and District Historical Society were visited on the same day. Their knowledge regarding the Breeza area was limited. They were unaware of sites of heritage in the area or within the Project Boundary. Dr Susan Lampard was directed to contact Len Roworth (former owner of The Wilgas).

5.3 Parish Maps and Crown Plans

Early Parish Maps and Crown Plans sometimes contain information on the development within the area. While their purpose was to show the sub-division of land within a parish (Parish Maps), or to indicate the boundaries of a property (Crown Plans), they occasionally record the location of a hut, well, stockyard or other improvement. For a period in the 1890s, the Crown Plan proforma contained a space for land improvements and their value. Parish Maps and Crown Plans can therefore be a good source of information regarding early development in areas without a detailed history and for identifying the location of former structures that may now be archaeological sites.

The land within Project Boundary covers three Parishes:

- The Parish of Nea covers the western portion - from the northern and western Project boundaries to the Breeza State Forest in the south. The eastern boundary does not have physical definition, but is between Nea Siding Spring Rise Road and Court Road;
- The Parish of Breeza covers the eastern portion - from the northern boundary to the Dip Road; and
- The Parish of Clift covers the southern section of the - south of The Dip Road and the Breeza State Forest.

Figure 3 provides a montage of the three Parish Maps overlaid by the Project Boundary.

5.3.1 Parish Maps - Nea

The first Parish Map of Nea was created in 1884 and it indicates that the majority of the Parish within the Project Boundary had been set aside as a Timber Reserve on 15 November 1880. Within the Reserve is marked "Tank or Dam" at a value of £50 (Land and Property Management Authority, Parish Plan of Nea, 1884). This is of interest as the tank/dam may have been a focal point for subsequent settlement.

There are two portions of land (48 and 49) owned by WJ Samuel and G Clift, that were not resumed for the Timber Reserve. It appears that the owners were allowed to keep this land potentially as a result of past improvements. Portion 48 appears to have been well developed, having a well, tank, two huts and a sheep yard with a total value of £252.15. Portion 49 had a fenced tank to the value of £60 (Crown Plan 2623-1781). This, however, falls just outside the Project Boundary (Figure 3).

The second Parish Map of Nea was drawn in 1895. This map indicates that the earlier alignment of The Dip Road had been altered from a straight line to the curve that today delineates the northern boundary of the Breeza State Forest. By this time the Timber Reserve was seen as superfluous to requirements and the land had been subdivided and sold off. Portion 48 remained unaltered, although it was now in the hands of J. Cameron. Portion 49, however, had, in part, been subsumed into a new, larger portion – no. 61, in the ownership of George Percival Clift. Overlays of the historic Parish Map with the modern road alignment indicate that the tank on Portion 49 was dissected by the road. Portion 48 potentially has archaeological relics associated with the huts, well, tank and sheep yards, however, it lies just outside the Project Boundary.

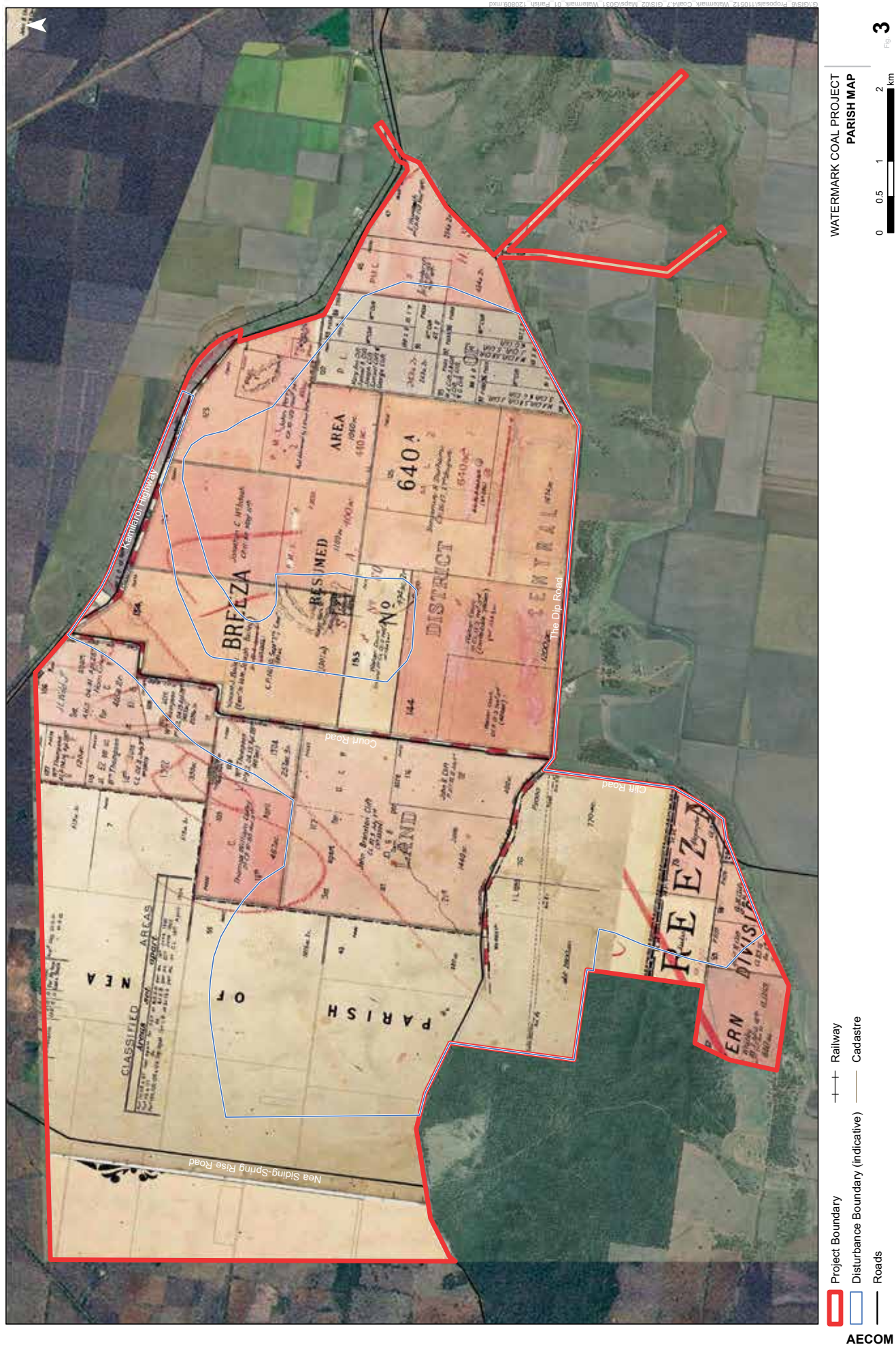
5.3.2 Parish Maps – Breeza

The first Parish Map of Breeza was drawn in 1893. It indicates that the Parish had been subdivided and sold. The Map does not provide any indication of land improvements, although this does not necessarily mean that there were none as the level of detail depended on the whim of the individual surveyor and was usually determined by whether the improvement had been used as a reference point for surveying purposes. The majority of labelled surveying points on the plans are trees. Subsequent issues of the Parish Map in 1906, 1917, 1928 and 1943 indicate that the land was consolidated into larger holdings. The 1906 Parish Map also indicates a parcel of land was set aside for a school on what is now Colley Road, near Watermark Gully.

The Crown Plans did not indicate any structural improvements, but did note a "Spring Tank" near the corner of the Kamilaroi Highway and The Dip Road.

5.3.3 Parish Maps – Clift

The Parish of Clift was first mapped in 1886. As with the Breeza Parish Map, no improvements were depicted. The Crown Plans did not record any structural improvements within the Project Boundary, although fencing and a tank were noted.



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5.4 Aerial Photographs

A series of six aerial photographs were examined for areas of interest and to map vegetation clearance. The first aerial was flown in 1954 and a ten year interval was selected for investigation, as near as possible. The years examined therefore were 1954, 1967, 1976, 1989, 1998, 2003 and 2011.

The early aerials are of low resolution and do not allow for the identification of individual buildings or sites. The 1954 aerial shows that the vegetation clearance is similar to the present, with the exception of a section of land south of Mt Watermark, on the Flakenhoe property. The vegetation had been cleared to its present extent by 1967. The construction of contour banks on the land surrounding Mt Watermark to the north and north-west also appears to have occurred between the intervening years.

Limited additional information regarding the properties could be gleaned from the aerials and this has been mentioned in the relevant individual histories provided in Section 6.0.

5.5 Summary

No sites within the Project Boundary are listed on a statutory heritage schedule. The Parish Maps provided three sites for further investigation:

- The tank opposite Breeza State Forest;
- The "Spring Tank" near the corner of the Kamilaroi Highway and The Dip Road; and
- The former Watermark Public School.

The two tanks are of interest as other settlement may have occurred in the vicinity to take advantage of the water. The aerial photography indicates that the majority of the Project Boundary was cleared by 1954, with minor additional clearing completed by 1967.

6.0 Field Survey Results and Significance Assessment

6.1 Introduction

During the field survey 18 sites of interest were identified within the Project Boundary (Figure 4).

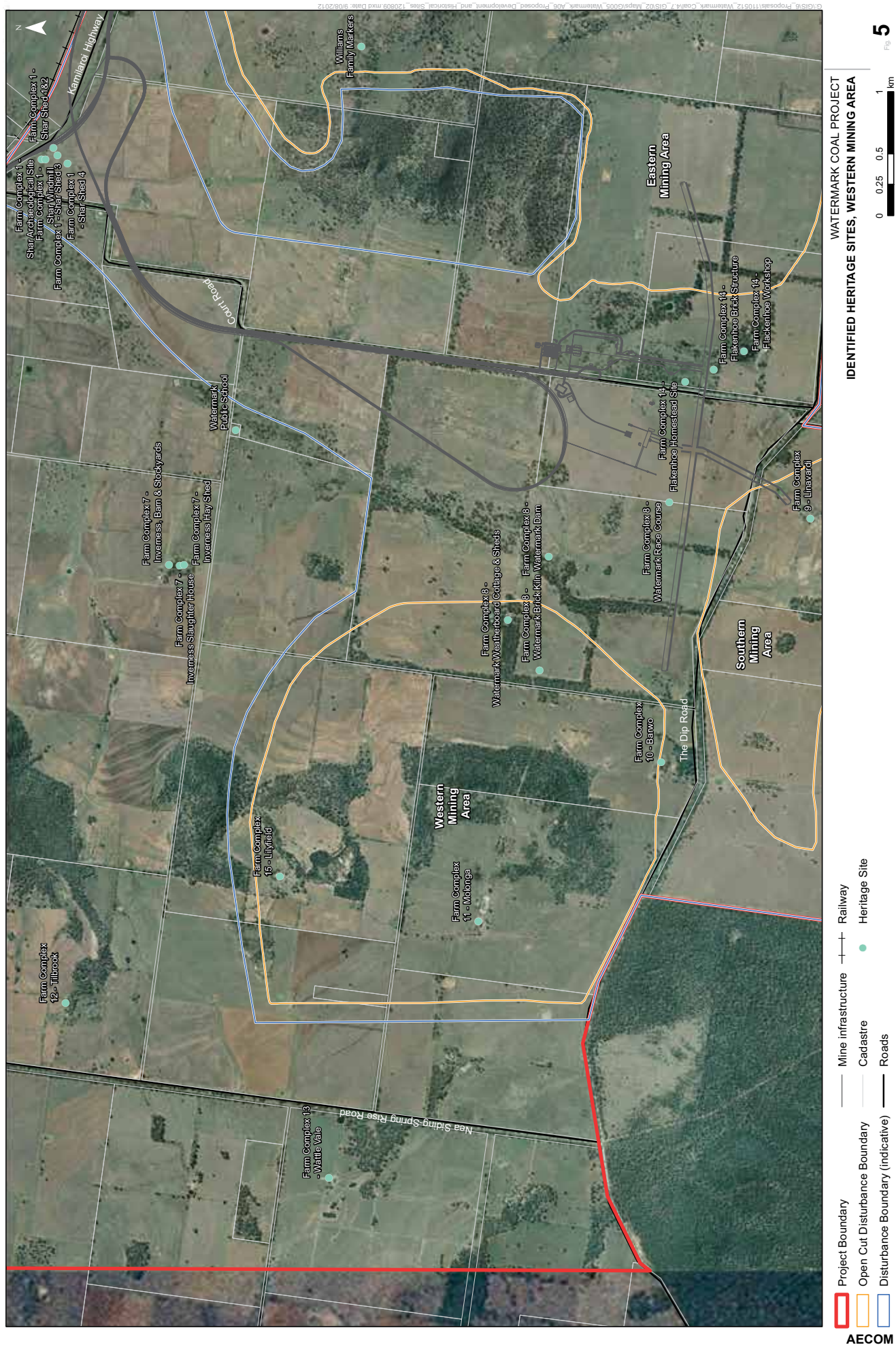
The following section describes each site, considers the criteria outlined in Section 3.4 to determine heritage significance and provides a Statement of Significance. The location of the sites identified is shown in Figure 5 and Figure 6. A summary of the sites identified and the associated heritage significance criteria met, where relevant, is provided in Table 2. Further details regarding the sites, together with images, can be found in the Heritage Inventory Sheets in Appendix A.

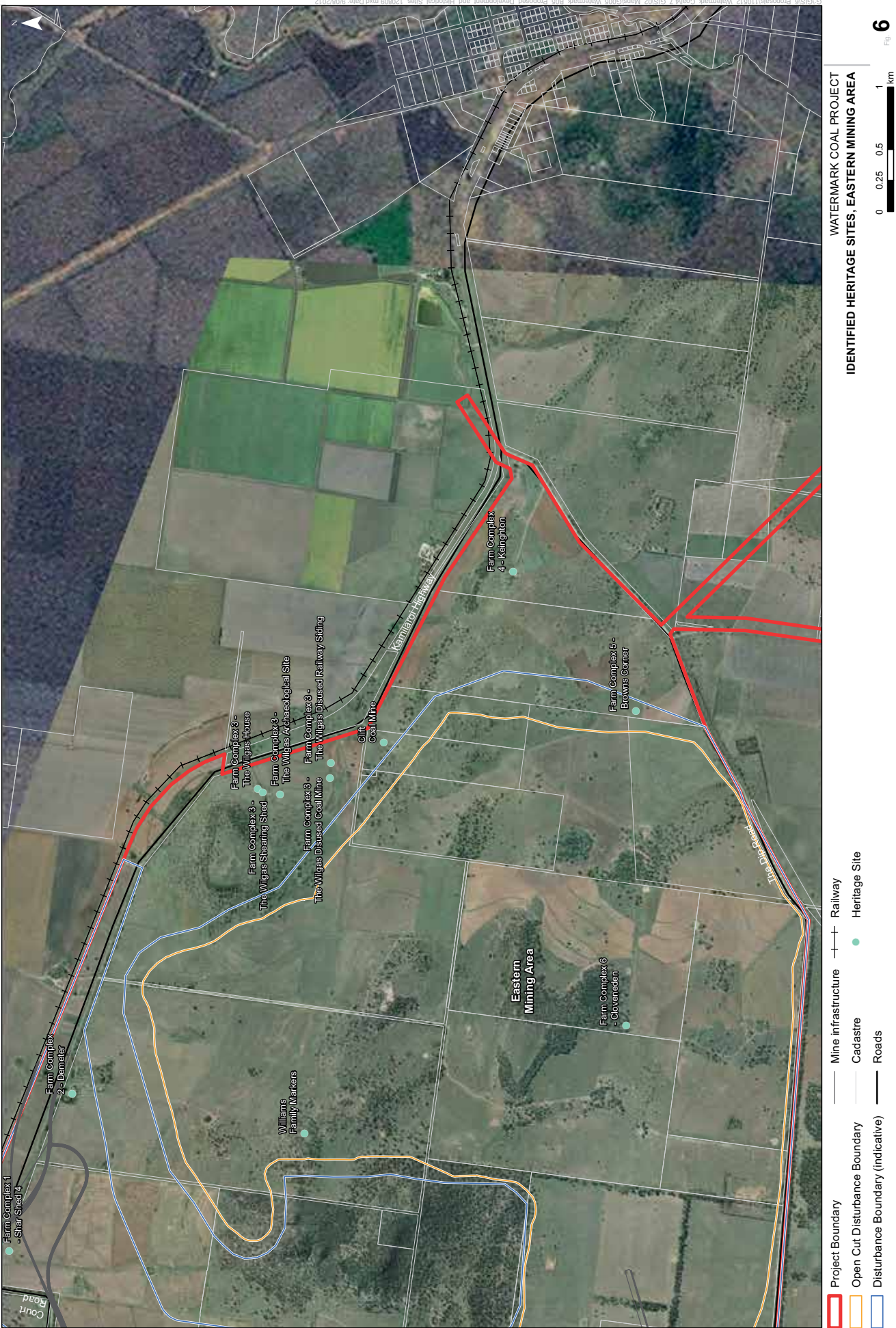
The location of the “Spring Tank” and tank identified on the Parish Maps was investigated during the survey, but no areas of historical or archaeological significance were identified.

Table 2 Summary of sites identified and assessed heritage significance

Site Name	Significance Criteria Met
Farm Complex 1 – Shar	Historical, research
Farm Complex 2 – Demeter	Historical, research
Williams’ Family Markers	Significant to the Williams family
Farm Complex 3 – The Wilgas	Historical, association, research
Clift Coal Mine	Not of heritage significance
Farm Complex 4 – Keinghton	Not of heritage significance
Farm Complex 5 – Browns Corner	Not of heritage significance
Farm Complex 6 – Cloveneden	Historical, research, representative
Farm Complex 7 – Inverness	Historical, research, representative
Farm Complex 8 – Watermark	Research
Farm Complex 9 – Linavardi Hut	Research
Farm Complex 10 – Barwo	Historical, research, representative
Farm Complex 11 – Molonga	Historical, research, representative
Farm Complex 12 – Tilbrook	Research, representative
Farm Complex 13 – Wattle Vale	Rarity
Farm Complex 14 – Flakenhoe	Historical, research
Farm Complex 15 – Lilyfield	Historical, research, representative
Watermark Public School (former site)	Historical, research







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6.2 Farm Complex 1 - Shar

6.2.1 Description

See Appendix A for images of the sites described below.

The Shar Farm Complex is located on the south-eastern corner of the intersection of Court Lane and the Kamilaroi Highway. It is not listed on a heritage register. The site is made up of a number of components:

Archaeological Site – The site of the former homestead is marked by a cylindrical septic tank dug into ground. Adjacent is a depression filled with building rubble, including a small number of bricks. The area is highly likely to retain sub-surface deposits and features related to the construction and habitation of the former homestead. Features and deposits are likely to include rubbish pits which contain artefacts that, subject to analysis, are able to yield information regarding rural life from c.1900 onwards. Scattered across the site are fragments of corrugated concrete – probably from a cement-rendered water tank.

Shed 1 – Small corrugated iron shed with steep pitched roof and concrete floor. The floor has risen in the middle, cracking the cement. A single door has been inserted in the western elevation. The framework is bush timbers with some dressed timber. The corrugated iron is marked “Redcliffe”. Approximate dimensions: 3 x 5m.

Shed 2 – Corrugated iron shed open at both ends. The floor is dirt with the exception of the south-eastern corner, which has wooden beams laid. The shed is built of bush timbers with horizontal weatherboard filling the apex of the pitched roof. There is a finial on the eastern elevation. The up-right supports have notches cut out of them, a possible indication they have been reused from elsewhere. The shed was connected to electricity – fittings appear to be c.1920-1940s. Approximate dimensions: 5 x 10m.

Shed 3 – Bush timber open sided hayshed with pitched corrugated iron roof. No internal fittings.

Shed 4 – c. 1970s steel framed shed with corrugated iron pitched roof. Frames have a zig-zag support structure. ‘NEALCO’ stencilled on top of uprights.

Windmill – Standard Southern Cross windmill – non-operational, oral history indicates it was erected in the 1970s.

6.2.2 Historical Context

Crown Plan 3598-1781, approved in October 1895, showed no improvements made to the property at that time. The land was granted to Jesse Fielder on the 26 November 1898, but was forfeited only a few years later, in January 1900. On 6 June 1901 the land taken up by Joseph Bailey. Watermark, as it was then known, remained in the family until at least the 1970s.

According to local land owners John and Sharmin Bailey (pers. com. February 2012), the Bailey family first bought Shar in 1895, but did not move to the property until 1900, with Joseph working on Caroona Station instead until then.

John Bailey recalls his Uncle Jack telling the story of the family’s arrival at Shar. Just a boy at the time, Jack Bailey said that after they arrived in the wagon they found there was so much vegetation in the area that they could not get off it. There were 11 children in the Bailey family when they settled at Shar, consisting of eight boys and three girls, with another three children (cousins) later brought up in the same family group.

In addition to the homestead, there were also sheds and a horse stand (near the present day silos) constructed on the property. John Bailey recalls a dray being used to pull wheat at Shar and stated that the Bailey family worked as carriers at that time. Mr Bob Leister of the Gunnedah and District Historical Society (pers. comm. 11 April 2011) noted that the Shar homestead had been demolished. Personal communication with the Bailey family indicated it was demolished approximately 20 years ago.

6.2.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Shar is of local historical significance as it demonstrates the course and pattern of history in the Breeza area. Although the land had been taken up as part of a squatter run as early as the 1870s, the land was not intensively utilised until the turn of the century when smaller portions were sold off to individuals who came to live and work on the land. Bailey built structures necessary to crop and graze the property, in much the same manner as other farmers in the area.
Historical association significance SHR criteria (b)	Shar does not meet this criterion as it does not have strong or special associations to a group or person of importance to the local area.
Aesthetic significance SHR criteria (c)	Shar does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Shar does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Shar is of local research significance as it has the potential to yield information regarding the location, construction and use of farm buildings in the area. There is a lack of information regarding the rural farming landscape. The archaeological site of the former homestead has research potential. The area is highly likely to retain sub-surface deposits and features related to the construction and habitation of the former homestead. Features and deposits are likely to include rubbish pits which contain artefacts that, subject to analysis, are able to yield information regarding rural life from c.1900 onwards.
Rarity SHR criteria (f)	There is currently insufficient information regarding the rarity of this site to assess Shar's significance against this criterion.
Representativeness SHR criteria (g)	Shar does not meet this criterion as it has lost some of the characteristics of its class.

6.2.4 Statement of Significance

Shar is of local historical and research significance for its ability to demonstrate the course of history in the local area, from part of a large squatting run to a family owned and operated farm. Shar is of significance as part of a larger rural landscape demonstrating the overall development of the region. The site of the former homestead has the potential to yield information, through the excavation and analysis of artefacts, regarding rural life from c.1900 onwards.

6.3 Farm Complex 2 – Demeter

6.3.1 Description

See Appendix A for images of the site.

Demeter is located on the Kamiliaroi Highway between Court Lane and Roworth Road.

The house consists of the original Vine Cottage, orally described by previous owner David Williams, as being a 25 m² four roomed house of azed cedar cut from the property. In 1976, 3 m was added to the house on all sides and clad with hardiplank. According to oral evidence, the original c. 1900 cottage remains at the centre of the structure and was retained intact, with minimal interventions, during the additions. While the original Vine Cottage is not currently visible, based on the information provided, it is anticipated that the structure will be largely intact once the 1976 additions and Gyprock are removed. The house has a pitched roof with a broken-back verandah. The house is currently vacant.

To the south is a modern garage.

Other areas of historical and archaeological interest include:

Dump – South of the house is a depression filled with rubbish and may be the clean out associated with the vacation of the house. David Williams stated that the previous owner, Jonathan McIntosh, had dumped rubbish in this area for nearly 100 years. After the Williams' bought the property they bull-dozed a hole and transferred the rubbish to the hole. During this process, whole bottles and objects deemed to be of value were removed. The sites on the surface of the hole appeared to cover a range from the 1960s through to the 1980s, indicating the Williams' may also have utilised the pre-existing dump. The dump retains the potential to contain archaeological deposits and information regarding the life of McIntosh and rural farm life in the Breeza area more generally.

Archaeological site – To the south of the cottage is a flat, open area of approximately 25 m², which is assumed to be the location of the former Breeza Station boundary rider's hut, as indicated by former owner David Williams. While there was no surface expression, the area is highly likely to have preserved sub-surface archaeological deposits and features.

Sheep Shower – To the east of the house is a HH Model Cooper Sheep Shower by Sunbeam, with associated in-ground water tanks.

Shearing Shed – Approximately 200 m south of the house is a corrugated iron shearing shed which appears to be c.1970s. The shed has a wooden floors and a donkey engine in the attached engine room. The shearing equipment appears to be older and may be reused. Adjacent to the shed is one white metal silo with concrete pads for two more.

6.3.2 Historical Context

Crown Plan 3604-1781, approved in October 1895, showed that the land on which Demeter is situated on was granted to Thomas James Kingston, however this was withdrawn in August 1899. On 17 March 1900, the property was purchased by Jonathan Charles McIntosh and mortgaged to the Rural Bank of NSW.

McIntosh was a bachelor, who lived in the cottage by himself (David Williams, pers comm. 2 February 2012). During this period the property was known as Vine Cottage. McIntosh lived and worked on the property until 1972, when it was purchased by David and Helen Williams and renamed Demeter (Curlewis Centenary Committee 1985:86). Mr Williams noted that the property was purchased in 1970 (pers comm. 2 February 2012). The Williams' renovated the Cottage in 1976, adding three metres to all sides. The original cottage is still extant at the centre of the house (David Williams, pers comm. 2 February 2012).

Mr Williams also provided information regarding a Breeza Station boundary rider's hut that was located to the south of the house. The location of the hut provided focus for the later Vine Cottage, with Mr Williams seeming to indicate that McIntosh lived between Vine Cottage and the boundary rider's hut, probably occupying the hut prior to the construction of the Cottage (pers comm. 2 February 2012). During their ownership, the Williams dismantled the hut as it was becoming unsafe. The hut was built of vertical timber slabs, cut on the property.

The Williams family owned and operated the property until it was purchased by Shenhua Watermark.

6.3.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Demeter is of local historical significance as it demonstrates the course and pattern of history in the Breeza area. Demeter was originally part of the Breeza Station. Vine Cottage was constructed adjacent to a Breeza Station boundary rider's hut. Although the area had been taken up as part of a squatter run as early as the 1830s, the land was not intensively utilised until the turn of the century when smaller portions were sold off to individuals who came to live and work on the land. McIntosh built structures necessary to crop and graze the property, in much the same manner as other farmers in the area. McIntosh's location for his residence was influenced by the location of the boundary rider's hut, indicating the ongoing influence Breeza Station had on the pattern of occupation in the area.
Historical association significance SHR criteria (b)	Demeter does not meet this criterion as it does not have strong or special associations to a group or person of importance to the local area.
Aesthetic significance SHR criteria (c)	Demeter does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Demeter does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Demeter is of local research significance as it has the potential to yield information regarding the location, construction and use of buildings in the area. Demeter incorporates the original Vine Cottage and therefore has the potential to yield information regarding turn of the century construction in this rural area. The archaeological deposits relating to the boundary rider's hut have archaeological potential to yield information regarding boundary rider's huts and material culture not available elsewhere. The rubbish dump associated with Vine Cottage has the potential to yield information regarding rural living and the lifestyle of a bachelor over an extended period of time. Mr McIntosh occupied the property from c.1902 until c.1970. The potential of the deposits remains despite the disturbance of the dump by the Williams family and the removal of whole bottles. The dump retains the potential to contain archaeological deposits and information regarding the life of McIntosh and rural farm life in the Breeza area more generally.
Rarity SHR criteria (f)	There is currently insufficient information regarding the rarity of this site to assess Demeter's significance against this criterion.
Representativeness SHR criteria (g)	Demeter does not meet this criterion as it has lost some of the characteristics of its class.

6.3.4 Statement of Significance

Demeter is of local historical and research significance. Demeter is of local historical significance for its ability to demonstrate the course of history in the local area, from part of a large squatting run to a family owned and operated farm. Demeter is also of local research potential regarding the construction of Vine Cottage and the associated archaeological deposits, including that of the boundary riders hut and dump, can reveal information regarding the lives of early settlers in the Breeza area.

6.4 Williams' Family Markers

6.4.1 Description

See Appendix A for images of the site.

The site consists of two boulders in a rock outcrop near the top of Mt Watermark with a northerly aspect. Each bolder has a brass plaque with commemorative details:

IN MEMORY OF/ROBERT HENRY WILLIAMS/DIED 10TH OCT 1984/AGED 77 YEARS

RHODA LOUISA WILLIAMS/(NEE BARTLETT)/BORN 10TH MAY 1911/DEPARTED THIS LIFE OF 93 YEARS/MIDDAY 22ND SEPTEMBER 2004/EX DEO NASCIMUR/IN CHRISTO MORIMUR/PER SPIRITUM SANCTUM REVIVISCIMUS

Robert Williams' plaque bears no decoration. Rhoda Williams' plaque features gum nuts and leaves in the top right hand corner and in the bottom left trees, a fence and a plough.

Mr Williams, son of Robert and Rhoda, stated that the ashes of his parents were buried directly below the plaques. The ashes were not in a container, but were placed into a hole approximately 100 mm deep (David Williams, pers comm. 2 February 2012).

6.4.2 Historical Context

J.C. McIntosh bought the land on which the Markers were later placed just before 1902 (Durrant & Roworth 1973:91). It remained in the McIntosh family until 1972 when it was purchased by David and Helen Williams and renamed Demeter (Curlewis Centenary Committee 1985:86). The Williams family owned and operated the property until it was purchased by Shenhua Watermark. Neither Robert nor Rhoda lived at the property, although Rhoda was born at Goodwood, approximately 5 km north along the Kamilaroi Highway. Mr Williams selected the location to honour his father's amateur interest in geology – the geological formations of Mt Watermark being of interest and having value for the evidence of rare lava flows (David Williams, pers comm. 2 February 2012).

6.4.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	The Williams' Family Markers do not meet this criterion as it does not demonstrate the pattern or course of State or local history.
Historical association significance SHR criteria (b)	The Williams' Family Markers does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	The Williams' Family Markers does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	The Williams' Family Markers does not meet this criterion as it does not have strong or special associations with the community at large. It does have strong and special associations with the Williams family.
Technical/Research significance SHR criteria (e)	The Williams' Family Markers do not meet this criterion as they are not of technical or research significance.
Rarity SHR criteria (f)	The Williams' Family Markers does not meet this criterion as they are not rare.
Representativeness SHR criteria (g)	The Williams' Family Markers does not meet this criterion as they are not representative.

6.4.4 Statement of Significance

The Williams' Family Markers have been assessed as being of personal significance to the Williams' family, but are not of heritage significance to the broader community. The Markers were placed on private land as a private memorial with no anticipation of wider recognition. The site does not hold historical, associative, aesthetic, social or technical significance to the wider community.

6.5 Farm Complex 3 – The Wilgas

6.5.1 Description

See Appendix A for images of the site.

The Wilgas is located at 5975 Kamilaroi Highway, Breeza. The property is 437.18 ha and is on the southern side of Black Mountain, also the former name of the property. The collection of buildings is accessed off the Highway, with the service buildings being located behind the main house.

House – Gable and wing front elevation. Front gable may be a later addition. Wing is covered by a verandah that is either a later addition or a replacement of an earlier verandah. Probably reclad in the 1970s. Front steps are flanked by Bougainvillea. Internally there have been significant alterations – the ceilings have been lowered and the floor plan altered to an open plan living, dining and kitchen. Additions at the rear of the house include the bathroom, laundry and kitchen. House is still sitting on original wooden stumps. The rear, external outhouse still in working order. The associated garage is of corrugated iron.

Shearing Shed – Of corrugated iron and bush timbers. Some of the undressed timber has been replaced. Shearing equipment produced by Cooper Sunbeam and driven by Brooks electric engine. Associated yards are of

split logs with more modern steel yards to the north. Two modern steel sheds to the east and a sheep dip to the north east.

Archaeological Site – A mature Kurrajong tree was recorded to the west of the house. Scatter of glass and metal artefacts and bricks in the vicinity of the tree.

Disused Coal Mine & Railway Siding – A disused coal mine exists as a tear drop shaped depression with an adjacent spoil heap of approximately 5 m in height. The site is also marked by a small tree. Some wooden structural timbers from the mine are still evident between the depression and waste rock pile. A rail siding runs to the south curving to meet the railway line. The siding is distinguishable from the contour banks by the curve and the width of the siding - being wider than the average contour bank.

6.5.2 Historical Context

The land was originally part of Breeza Station. The area was part of the resumed land under the alterations to the *Crown Lands Act 1884*. It was selected by Joe Pateman and named Black Mountain. Pateman, according to Len Roworth (pers comm 11 April 2011), was employed by the Clift family and the selection was probably made on behalf of the Clift family, Pateman being used as a 'dummy'.

In 1905, the property was sold to John Perry, who renamed it 'The Wilgas'. John Perry was a member of the NSW Legislative Assembly from 1904 to 1907 and again in 1911 (Durrant & Roworth 1973:102) and had the dubious honour of being the first member thrown out for interjection (L Roworth pers. comm. 11 April 2011).

Perry was involved in establishing the WCCC in 1914 with a group of Quirindi businessmen. The mine was located just off the Kamilaroi Highway, about 1 km south of The Wilgas homestead. The quality of coal was never good and once the company lost the tender to supply coal to the local railway combined with World War I, the mine was forced to close in 1916. Perry was also instrumental in the establishment of the Farmers and Settlers Association.

Perry sold the property to the Hethringtons. The Wilgas was purchased by the Roworth family in 1938. Subsequent generations of the Roworth family owned and operated the farm until it was purchased by Shenhua Watermark. The Roworth family still lease and farm the property.

6.5.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	The Wilgas is of local historical significance as it demonstrates the pattern and course of settlement and use of the area. It was originally part of Breeza Station, one of the largest in the area. The land was subsequently resumed under the alterations to the <i>Crown Lands Act 1884</i> . It was 'dummied' by the Clift family through an employee, Joe Pateman. It then became a family owned and operated farm. The Wilgas is of additional historical significance having physical remains of one of the earliest coal mines in the area.
Historical association significance SHR criteria (b)	The Wilgas is of local associative significance on two counts. It was owned by Local Member of the Legislative Assembly John Perry, who was also an active member of community. It was subsequently owned by the Roworth family for four generations. The Roworth family is well known and respected within the local community.
Aesthetic significance SHR criteria (c)	The Wilgas does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	The Wilgas does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	The Wilgas is of local research significance as it has the potential to yield information regarding the location, construction and use of farm buildings in the area. There is a lack of information regarding the rural farming landscape. The site may also have archaeological research potential regarding the material culture of turn of the century farming settlement.
Rarity SHR criteria (f)	There is currently insufficient information regarding the rarity of this site to assess The Wilgas' significance against this criterion.
Representativeness SHR criteria (g)	The Wilgas does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.

6.5.4 Statement of Significance

The Wilgas is of local historical, associative and research significance. Together with the other farms in the Breeza area, The Wilgas demonstrates the pattern and course of the history of the area, from a squatting run to a family farm. It also retains evidence of one of the earliest coal mines in the area.

The Wilgas is associated with two notable families, that of Local Member of the Legislative Assembly John Perry and the Roworth family, well known and respected members of the local community.

As part of the broader landscape, The Wilgas is of local research significance, having the ability to add to the body of knowledge regarding the settlement and construction in the area and the subsequent lives of the people who lived and worked on the land.

6.6 Clift Coal Mine

6.6.1 Description

See Appendix A for images of the site.

The Clift Coal Mine is located on the Cardington property and is visible from the Kamilaroi Highway. The site consists of a small, less than 3 m high, waste rock pile. There is a depression approximately 15 m to the south, which was probably the shaft/tunnel entrance. This has been used as a rubbish dump and a collection of c.1970-80s material is visible in the depression. This material is not of heritage significance. The site is in poor condition.

6.6.2 Historical Context

Mr Len Roworth provided oral history of the mine (pers. comm. 11 April 2011). Mr Roworth stated that the mine was excavated by the Clift family after 1914. The Clifts feared the adjacent coal mine operated on The Wilgas by WCCC would tunnel under their land and take the coal. The mine was never a serious operation.

6.6.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	The Clift Coal Mine does not meet this criterion as it does not contribute to an understanding of the pattern and course of history of the area.
Historical association significance SHR criteria (b)	The Clift Coal Mine does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	The Clift Coal Mine does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	The Clift Coal Mine does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	The Clift Coal Mine does not meet this criterion as it is not of technical or research significance.
Rarity SHR criteria (f)	The Clift Coal Mine does not meet this criterion as it is not rare.
Representativeness SHR criteria (g)	The Clift Coal Mine does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.

6.6.4 Statement of Significance

This site does not meet the significance threshold.

6.7 Farm Complex 4 - Keington

6.7.1 Description

See Appendix A for images of the site.

House appears to be a c.1930s cottage with gable front and wing with enclosed verandah front elevation. Additions have been made to the front, rear and sides of the building.

A recent garage of corrugated iron and undressed timber is associated with the house. To the rear (north) is a collection of c.1970s farm buildings (machinery sheds etc.). To the north-west of the house is a collection of timbers. The former owner said he had demolished the original stables soon after he occupied the property (sometime between late 1970s through to mid 1980).

6.7.2 Historical Context

The land was originally part of Breeza Station. The area was part of the resumed land under the alterations to the *Crown Lands Act 1884*. The homestead selection of John William Browne was confirmed near the beginning of 1896. By 1906, the selection had been subdivided, although it appears Elli Howarth owned all three portions. The final Parish Map still shows Howarth as the owner of the land, although the internal subdivisions were no longer evident.

6.7.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Keington does not meet this criterion as it does not demonstrate the pattern and course of history of the area.
Historical association significance SHR criteria (b)	Keington does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Keington does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Keington does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Keington is of local research significance as it has the potential to yield information, in combination with other sites, regarding the location, construction and use of farm buildings in the area. There is a lack of information regarding the rural farming landscape.
Rarity SHR criteria (f)	Keington does not meet this criterion as it is not rare.
Representativeness SHR criteria (g)	Keington does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.

6.7.4 Statement of Significance

Keington is not of heritage significance.

6.8 Farm Complex 5 – Browns Corner

6.8.1 Description

See Appendix A for images of the site.

Site consists of an open sided shed of modern bush timbers. Adjacent is a stockyard with loading ramp of bush timbers, wire and geo-grid. It is approximately 30 x 15 m. Both are well maintained and appear to be reasonably modern.

6.8.2 Historical Context

The land was originally part of Breeza Station. The area was part of the resumed land under the alterations to the *Crown Lands Act 1884*. The homestead selection of John William Browne was confirmed near the beginning of 1896. By 1906, the selection had been subdivided, although it appears Elli Howarth owned all three portions. The final Parish Map still shows Howarth as the owner of the land, although the internal subdivisions are no longer evident.

6.8.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Browns Corner does not meet this criterion by its self, however, in conjunction with the other farms in the vicinity it can contribute to an understanding of the pattern and course of history in the area.
Historical association significance SHR criteria (b)	Browns Corner does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Browns Corner does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Browns Corner does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Browns Corner is of local research significance as it has the potential to yield information, in combination with other sites, regarding the location, construction and use of farm buildings in the area. There is a lack of information regarding the rural farming landscape.
Rarity SHR criteria (f)	Browns Corner does not meet this criterion as it is not rare.
Representativeness SHR criteria (g)	Browns Corner does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.

6.8.4 Statement of Significance

Browns Corner is not of heritage significance.

6.9 Farm Complex 6 - Cloveneden

6.9.1 Description

See Appendix A for images of the site.

The Cloveneden property consists of a house, earlier cottage, ice house and modern farm buildings.

House – A weatherboard house of four rooms with bathroom and kitchen. The kitchen has a brick chimney, which has partially collapsed. The house is surrounded on at least two sides by a verandah, which has largely collapsed. Associated with the house and slightly to the north east is an external toilet with a pressure tank on top.

Ice House – Packed earth rectangular structure, of which half is dug into the ground. The roof pinnacle is at eye level. A set of steps lead down into the cool room. The western wall has completely collapsed.

Early Cottage – The early cottage is a linear weatherboard structure of three rooms. The easternmost room is a lean-to addition with a concrete floor, while the other two rooms have wooden floor boards. The lean-to has an external corrugated iron and tin chimney in the western elevation. Internally a stove is still evident. The Crown Plan indicates this structure was a weatherboard shed at the time the plan was drafted (see Section 6.9.2). However, inspection indicated that it was likely to be a temporary residence during the establishment of the farm, and prior to the construction of the main house.

Stockyards – Located 1.1 km to the north of the homestead and are reasonably modern.

6.9.2 Historical Context

The land was originally part of Breeza Station. The area was part of the resumed land under the alterations to the *Crown Lands Act 1884*. The area was passed on to William Walter Clift, whose settlement lease was gazetted in 1896. By 1906, the land was in the hands of Benjamin R. Durham. Durham may have given the property the name Bumble, as this was the label on the property when it was subdivided into three soldier settlement farms prior to 1919. Cloveneden was Farm No. 1 (Crown Plan 5494-1781) and was purchased by William Hale in 1920. The Crown Plan of 1919 indicates extensive fencing, a weatherboard cottage with a galvanised iron roof, sheds, stables, yards, a garage, a windmill and a galvanised iron tank, and a cement ice house were already present on the property at this time (Figure 7). It also shows that some areas of the property had already been subject to cultivation, and that a farm dam had been constructed on the north-east boundary of the property.

Farms 2 (Crown Plan 5492-1781) and 3 (Crown Plan 5493-1781) were situated to the north of Cloveneden. Durrant and Roworth (1973:92) state that Hale sold to the owners of Farms 2 and 3, Tudgey and Hirst, although

this is not indicated on any of the Parish Maps, the last being published in 1943. In 1973, when Durrant and Roworth wrote their book, the property was said to be occupied by J. and B. Lobban. Cloveneden is now owned by Shenhua Watermark.

6.9.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Cloveneden is of local historical significance as it demonstrates the pattern and course of settlement and use of the area. It was originally part of Breeza Station, one of the largest in the area. As with most of the land in the area, it continued to be owned by members of the Clift family. Following this, Cloveneden demonstrates land settlement in the 1920s through its resumption for soldier settlement purposes. The physical remains on the property are historically significant as evidence of the soldier settlement process.
Historical association significance SHR criteria (b)	Cloveneden does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Cloveneden does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Cloveneden does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Cloveneden is of local research significance as it has the potential to yield information regarding the establishment and subsequent life on soldier settlement farms in the inter-war years and beyond.
Rarity SHR criteria (f)	There is currently an insufficient understanding of the number, type and condition of World War I soldier settler homesteads in the region. It is therefore not possible to assess Cloveneden against this criterion. The Ice House is thought to be a rare structure type in the region.
Representativeness SHR criteria (g)	Cloveneden is of local significance being representative of soldier settlement in the local area and the structures built to support their farming endeavours. It is representative of a large, intact collection of buildings, beginning with an initial cottage and progressing to a more substantial homestead, followed by modifications to address alterations in lifestyle expectations.
Integrity	The integrity of the house and archaeological deposits is high. It appears that the house has been vacant for a substantial period of time, which has minimised the number of additions and modifications to the building. This has also protected the archaeological deposits.

6.9.4 Statement of Significance

Cloveneden is of local historical, research and representative significance. Cloveneden demonstrates the pattern and course of land ownership and settlement in the area. Originally part of the large Breeza Station, it was subdivided and owned by members of the Clift family. After passing out of Clift ownership it was resumed for soldier settlement purposes. The physical remains of the soldier settlement period are of local significance for their ability to yield information regarding this period and the efforts of the former soldiers in settling and farming the area.



Fig. 7

6.10 Farm Complex 7 - Inverness

6.10.1 Description

See Appendix A for images of the site.

The Inverness complex includes the house, a slaughtering shed, hayshed, barn and stockyards.

House – Weatherboard house of four rooms with a lean-to laundry addition. The corrugated iron roof is missing in part and the house has been made partly waterproof by a tarp over the missing section. The house has verandahs on the front (eastern), rear (western) and southern sides. The rear verandah has been partly enclosed to form the laundry/bathroom. The laundry includes a brick firebox for a copper. The firebox is a modification/addition to the kitchen chimney, which it backs on to. The kitchen has two fireplaces side-by-side. One of the fireplaces has had a wood fired stove inserted. Adjacent to the kitchen is a living space and there are two rooms, probably bedrooms, at the front of the house. With the exception of the kitchen, the walls are decorated with a dark wooden dado. The ceiling and wall plaster has been affected by water. The windows are of a sash design.

Slaughter Shed – Small 1. 5 m² corrugated iron shed open on the western side. There is a small sluice at ground level on the eastern side. The north elevation has a bracket on the external wall, possibly for a winch or other type of machinery.

Hayshed – Tall, open-sided hayshed of bush timbers with a corrugated iron roof. The floor has been fashioned of reused railway sleepers.

Barn and stockyards – A modern stockyard and loading ramp attached to a bush timber barn with two raised section with wooden floors. Remaining floor is of earth. The barn is rectangular in shape and oriented east-west, which is open to allow the movement of vehicles and stock through the barn.

6.10.2 Historical Context

The first Parish Map of 1884 indicates the area was part of a timber reserve. The reserve was subdivided and by the 1895 Parish Map, Inverness was owned by Theresa Gaynor. The Gaynor family also owned Lilyfield. The 1902 and 1918 Parish Maps indicate the land was owned by H.G.P. Bedwell.

Crown Plan 4099-1781, approved on the 21 August 1899, shows that from the 29 August 1899 the homestead selection area was in the possession of Ewen Cameron, before passing into the hands of Thomas William Colley. No improvements were recorded on the Crown Plan.

6.10.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Inverness is of local historical significance as it demonstrates the pattern and course of history in the local area. It moved from timber reserve to cleared farm land and demonstrates the use of the area for farming purposes.
Historical association significance SHR criteria (b)	Inverness does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Inverness does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Inverness does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Inverness is of local research significance as it has the potential to yield information, in combination with other sites, regarding the location, construction and use of farm buildings in the area. Potential archaeological artefact deposits associated with the homestead also have the potential to yield information regarding rural life and answer questions regarding access and availability of goods and foodstuffs. There is a lack of information regarding the rural farming landscape.
Rarity SHR criteria (f)	There is currently insufficient information to determine Inverness' significance under this criterion.
Representativeness SHR criteria (g)	Inverness is representative of a homestead within the Breeza area, together with the outbuildings necessary to operate a successful farm.
Integrity	The integrity of the house has been severely impacted through renovation.

6.10.4 Statement of Significance

Inverness is of local historical, research and representative significance. Inverness demonstrates the course of history, from bush to settled farm. It is of research value as it has the potential to reveal details regarding farming life, through archaeological investigation, in the Breeza area that is unavailable from other sources. Inverness is of local representative value, it retains all the principle elements of a farm, including a homestead, stockyards, outbuildings and a slaughter house.

6.11 Farm Complex 8 – Watermark

6.11.1 Description

See Appendix A for images of the site.

Modern house – A modern brick structure built on the same location as the earlier homestead, with an in-ground swimming pool to the west. It is also associated with two wooden framed sheds, one exhibiting sections from an earlier timber slab construction.

Weatherboard Cottage – Approximately 150 m from the modern house is a c.1950 weatherboard cottage with an L shaped floor plan which has been significantly renovated. The front verandah of the cottage was an addition that was later enclosed to form a kitchen. Further additions have also been made to the southern elevation.

Sheds – To the south and east of the weatherboard cottage is a large and rambling collection of farm buildings. Buildings include a cement tank, two poultry yards, two steel sheds and four wooden framed sheds. The sheds contain a large collection of material, including vehicles ranging in age from c.1950 through to the 1990s, and farm machinery from a similar period. John and Sharmin Bailey indicated that they believed an area to the south of the stockyards, where there had been a wooden slab hut, was one of the first residences on the property.

Dams – Also within the same land holding are three dams feeding water to the modern house. One of these dams was excavated approximately 160 years ago.

Brick Kiln – Remnants of a demolished brick kiln and associated shed are located along a tree line on the periphery of one of the property paddocks. John Bailey described the area as being a pit of approximately 30 m in length and 1.5 m in depth.

Race Course – Another paddock historically was used as a horse race track, although there were no remnant signs visible during a February 2012 inspection. The area is not considered to have archaeological potential.

6.11.2 Historical Context

Following the amendments to the *Crown Lands Act 1884* this area was resumed. Watermark, like the majority of land in the area, was initially owned by the Clift family who also owned land from Carroona to Werris Creek. According to John and Sharmin Bailey the original structure, known as Watermark, was a timber slab house on stumps with horse hair plaster used on the walls.

John Bailey said that during Arthur Clift's ownership of the property there was a horse racecourse set up in one paddock and a brick kiln in another. According to the Bailey, the brick kiln was set up to produce bricks for a new house the Clifts were planning to build, but that structure was not built and the bricks were sold instead.

In the 1950s, John and Sharmin Bailey bought the property from the Clifts and took up residence at Watermark. John Bailey cleared the racecourse paddock and bulldozed the brick kiln and its associated shed. John and Sharmin also demolished the original house approximately 18 years ago to erect the current house. Watermark homestead, according to their personal communication in February 2012, was beyond repair: the ceiling leaked, the horse hair plaster was deteriorating and the building required restumping. The structure was demolished and a modern brick home built on the same location. John and Sharmin Bailey were still leasing the property from Shenhua Watermark, as of February 2012.

6.11.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Watermark does not meet this criterion by its self, however, in conjunction with the other farms in the vicinity it can contribute to an understanding of the pattern and course of history in the area.
Historical association significance SHR criteria (b)	Watermark does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Watermark does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Watermark does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Watermark is of local research significance as it has the potential to yield information, in combination with other sites, regarding the location, construction and use of farm buildings in the area. There is a lack of information regarding the rural farming landscape. The site of the brick kiln is of local research significance and potential to investigate a rural vernacular brick kiln.
Rarity SHR criteria (f)	Watermark does not meet this criterion as it is not rare.
Representativeness SHR criteria (g)	Watermark does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.

6.11.4 Statement of Significance

Watermark is of local research significance as it has the potential to yield information, in combination with other sites, regarding the location, construction and use of farm buildings in the area. There is a lack of information regarding the rural farming landscape. The site of the brick kiln is of local research significance and potential to investigate a rural vernacular brick kiln.

6.12 Farm Complex 9 - Linavardi Hut

6.12.1 Description

See Appendix A for images of the site.

Linavardi House – Linavardi house (c.1950-60s) was recently safely demolished as a training exercise by the local fire brigade. The house site has no historical significance. The outbuildings associated with the house still stand and are of limited significance.

Linavardi Hut – Approximately 100 m south of the former house site is a timber clad hut (Linavardi Hut) of one room. It is oriented to the east, the wall having been removed. The remaining elevations each have a window. The eastern, northern and western sides of the structure are protected by a verandah. Part of the western verandah has been enclosed. The roof is pitched and of corrugated iron. Internally, a concrete floor has been poured into

the structure over a foundation of local stones. In the southern elevation is a chimney constructed of corrugated iron. The hut was possibly used as shed at a later date and the chimney has been blocked off internally with a piece of corrugated iron.

Poultry Shed – To the rear (west) of the hut is a small raised structure that was last used as a poultry shed. The roof and walls are constructed of corrugated iron. The floor level is surrounded by perforated mini-orb, while the space between the floor and ground level is enclosed by flattened kerosene or similar, tins. There is a ladder sufficient for poultry to access the door, which is about 0.5 m from the ground. Internally, the back wall is set up with a ladder-like roosting structure.

Scattered Refuse – Approximately 95 m to the south east of the former house site is a stand of peppercorn trees with a scatter of sawn timber, galvanised iron sheeting and some earthworks. Due to an abundance of overgrown vegetation and undergrowth in the area, however, the layout of this site could not be interpreted.

6.12.2 Historical Context

Linavardi was originally part of a Timber Reserve gazetted in November of 1880. The Parish Map of 1896 indicates that it was taken up as a Conditional Lease by Henry Arnott Shaw on 3 June 1914. Crown Plan 5000-1781 also shows that 200 acres of ring barking, to the value of £10, was undertaken on the property after being taken up by Shaw. There is no further information regarding the use or occupation of the property available at this time.

6.12.3 Significance Assessment

The following significance assessment relates to the hut only, as the house site has been assessed as holding no heritage significance.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Linavardi Hut does not meet this criterion by its self, however, in conjunction with the other farms in the vicinity it can contribute to an understanding of the pattern and course of history in the area.
Historical association significance SHR criteria (b)	Linavardi Hut does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Linavardi Hut does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Linavardi Hut does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Linavardi Hut is of local research significance as it has the potential to yield information regarding the construction and use of early buildings in the area. There is a lack of information regarding the rural farming landscape.
Rarity SHR criteria (f)	Linavardi Hut does not meet this criterion as it is not rare.
Representativeness SHR criteria (g)	Linavardi Hut does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.

6.12.4 Statement of Significance

Linavardi Hut is of local research significance as it is able to provide insight into the initial establishment of a farming property through the recording and deconstruction of the hut and its archaeological investigation. The hut is believed to be the original hut built shortly after the land was settled. In conjunction with other farms in the vicinity it can contribute to an understanding of the pattern and course of history in the area.

6.13 Farm Complex 10 - Barwo

6.13.1 Description

See Appendix A for images of the site.

Complex of farm buildings of both timber and steel frames, all clad in corrugated iron. Within and around sheds is farm machinery, including c.1900-30s harvester/plough, wool press and windmill.

The Complex includes a linear timber-clad wood cottage of two rooms oriented south. There are verandahs on southern and eastern sides, which have collapsed due to vegetation overgrowth. The verandah on the western side has been enclosed as a lean-to. Interior had some detailing, including wood panelled dado. The style of the cottage indicates it was probably constructed in the first quarter of the 20th century.

Located 20 m to the north of the cottage is a more recent and still occupied house consisting of a small demountable site office type structure. This structure is not of heritage significance.

6.13.2 Historical Context

Barwo was originally part of a Timber Reserve gazetted in November of 1880. The Parish Map of 1895 indicates that it was taken up as a homestead selection of 480 acres by John Devlin in September of 1899. The Parish Map also indicates the land was resumed from the Breeza run, even though the previous Map had the land set aside as a timber reserve. Devlin converted his lease to a Conditional Purchase on 4 February 1914. By the 1918, Parish Map the land was in the hands of A. Ferguson.

The demountable house is still occupied. Barwo is now owned by Shenhua Watermark.

6.13.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Barwo, in conjunction with the other farms in the vicinity, can contribute to an understanding of the pattern and course of history in the area.
Historical association significance SHR criteria (b)	Barwo does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Barwo does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Barwo does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Barwo is of local research significance as it has the potential to yield information regarding the construction and use of early buildings in the area. There is a lack of information regarding the rural farming landscape. The associated archaeological deposits have the potential inform regarding the use and availability of goods in a rural setting.
Rarity SHR criteria (f)	There is currently insufficient evidence to assess Barwo against this criterion.
Representativeness SHR criteria (g)	Barwo is of local significance as a representative example of a late 1890s or early 1900s vernacular cottage.

6.13.4 Statement of Significance

Barwo is of local historic, research and representative significance as it is able to provide insight into the initial establishment of a farming property through the recording and deconstruction of the hut. The hut is believed to be the original hut built shortly after the land was settled (sometime between 1899 and 1918). The potential archaeological deposits associated with the hut could contribute to knowledge regarding material culture in a rural setting.

6.14 Farm Complex 11 - Molonga

6.14.1 Description

See Appendix A for images of the site.

The Complex contains a timer-clad cottage of two rooms with an enclosed front verandah. The cottage is oriented to the north, but is accessed from the south due to the enclosure of the front verandah. The first room is a kitchen with a wood fired stove and a corrugated iron chimney on the eastern elevation. The second room was probably a bedroom. The front verandah enclosure includes a shower added in the 1980s. A twin drum washing machine is still in place. Location and stumps may indicate the structure has been moved. The style of the cottage indicates it was probably constructed in the first quarter of the 20th century.

To the west of the cottage is a c.1960s house that is not of heritage significance. To the south east is a range of farm buildings including a large c.1970s shearing shed, stockyard and loading ramp of bush timbers. These also are not considered to be of heritage significance.

6.14.2 Historical Context

Molonga was originally part of a Timber Reserve gazetted in November of 1880. The Parish Map of 1895 indicates that it was taken up as a homestead selection of 690 acres by T.J. Gaynor in September of 1899. The Parish Map also indicates the land was resumed from the Breeza run, even though the previous map had the land set aside as a timber reserve. The Gaynor family also took up land on the opposite side of Whitby Road, now known as Lilyfield. The Selection seems to have been revoked, or perhaps sold, as in 1914 Bartholomew McDonnell held the property on a Conditional Purchase. According to personal communication with local property owners John and Sharmin Bailey in February 2012, the property was then purchased by the Whitby family. After Whitby the property was sold to John Prior. Molonga is now owned by Shenhua Watermark.

6.14.3 Significance Assessment

The following significance assessment relates to the cottage, not the house site, which is not of heritage significance.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Molonga, in conjunction with the other farms in the vicinity, can contribute to an understanding of the pattern and course of history in the area.
Historical association significance SHR criteria (b)	Molonga does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Molonga does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Molonga does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Molonga is of local research significance as it has the potential to yield information regarding the construction and use of early buildings in the area. There is a lack of information regarding the rural farming landscape.
Rarity SHR criteria (f)	There is currently insufficient evidence to assess Molonga against this criterion.
Representativeness SHR criteria (g)	Molonga is of local significance as a representative example of a late 1890s or early 1900s vernacular cottage.

6.14.4 Statement of Significance

Molonga is of local research and representative significance as it is able to provide insight into the initial establishment of a farming property through the recording and deconstruction of the cottage. The cottage is representative of the structures built as first homes on rural properties during the establishment phase.

6.15 Farm Complex 12 - Tilbrook

6.15.1 Description

See Appendix A for images of the site.

Tilbrook is a two roomed structure oriented towards the south. The two rooms have different construction techniques indicating differing construction dates. The southern section is of split slabs and of taller than normal proportions, more reminiscent of a barn. The roof is of pitched construction. The door is located centrally and there is a window in the western elevation. The rear, northern room is constructed of corrugated iron with a lean-to style roof. The northern room has an entrance in the eastern elevation and a window in the northern elevation. There is a corrugated iron chimney attached to the western elevation, which connects to an internal fireplace constructed mainly of local sandstone with a few bricks. The floor in both rooms is of good quality wide wooden floors laid on random rubble of local stones. The style of the structure indicates it was probably constructed in the first quarter of the 20th century.

6.15.2 Historical Context

Tilbrook was originally part of a Timber Reserve gazetted in November of 1880. The Parish Map of 1895 indicates that it was taken up as a homestead selection of 519 acres and 3 roods by William Thompson on 25 April 1901. In 1911 William Richards took up a Conditional Purchase on the property. By 1918, the land was in the hands of the Commercial Bank of Sydney, although this may indicate a mortgage or a loan for improvements. The intervening history of the property is currently unclear, but Curlewis Centenary Committee (1985:108) indicates that Tilbrook was purchased by Robert and Annie Whitby in 1938. It is now owned by Shenhua Watermark.

6.15.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	There is currently insufficient evidence to assess Tilbrook against this criterion.
Historical association significance SHR criteria (b)	Tilbrook does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Tilbrook does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Tilbrook does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Tilbrook is of local research significance as it has the potential to yield information regarding the construction and use of vernacular cottages in rural areas. The associated archaeological deposits have the potential to yield information regarding rural life at the turn of the century.
Rarity SHR criteria (f)	There is currently insufficient evidence to assess Tilbrook against this criterion.
Representativeness SHR criteria (g)	Tilbrook is of local significance as a representative example of a late 1890s or early 1900s vernacular cottage.
Integrity	The integrity of the cottage is good, it does not appear to have been significantly altered or relocated.

6.15.4 Statement of Significance

Tilbrook is of local research and representative significance as it is able to provide insight into the initial establishment of a farming property through the recording and deconstruction of the hut. The cottage is representative of the structures built as first homes on rural properties during the establishment phase.

6.16 Farm Complex 13 – Wattle Vale

6.16.1 Description

See Appendix A for images of the site.

Wattle Vale is a large cream brick house built c. 2005. The current tenant believes that it was built over the top of the previous house, known as Innisfail, as she has found in situ bricks in the front yard and in association with several fragments of ceramic. To the north-west of the house is a collection of modern farm buildings. The house and farm buildings are separated by an avenue of 12 mature Osage Orange trees oriented east-west.

Approximately 150 m to the south-west is a dam, which the tenant says was constructed around 2005. There are two more Osage Orange trees associated with the dam. The tenant also said that they had found artefacts in this vicinity.

6.16.2 Historical Context

The area was set aside as a Timber Reserve in November of 1880, but was seen as superfluous to requirements and subdivided. In 1899, Innisfail was taken up as a homestead selection by Anne Gaynor. In 1918, Gaynor converted the selection into a Conditional Purchase. The 1981 topographic map (Watermark 8935-I-S) marks the property as abandoned. The current house was constructed around 2005, prior to the purchase by the current tenants, who were bought out by Shenhua Watermark. There is currently no further information available regarding the property.

Osage Orange trees (*Maclura pomifera* or *Maclura aurantiaca* prior to 1906) were introduced into Australia in the mid-1850s and was heavily prompted as a hedging plant to control stock. Prior to the 1880s fencing wire was not readily available and farmers wishing to control stock movements either constructed post and rail fences or planted hedges. The Orange grew quickly, had thorns and could be formed into a hedge that was impenetrable by stock. By the turn of the century fencing wire was more readily available and hedge plantings, including the Osage Orange, fell out of favour (Brookes, 1995).

Stuart Read of the NSW Heritage Branch maintains an informal register of Osage Orange trees in NSW. The register currently includes 29 single trees or hedges across the State, the majority being located on the Cumberland Plains. There are no Osage Orange trees or hedges currently identified in the Gunnedah LGA. The closest known trees occur around Inverell, over 150 km to the north east of the Project Boundary.

6.16.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Wattle Vale does not meet this criterion as it does not demonstrate the pattern or course of state or local history.
Historical association significance SHR criteria (b)	Wattle Vale does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Wattle Vale does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Wattle Vale does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Wattle Vale does not meet this criterion as archaeological deposits associated with previous structures have been heavily impacted by the construction of the new house and dam.
Rarity SHR criteria (f)	The Osage Orange tree avenue located on Wattle Vale is of local significance as a rare example of the species within the Gunnedah LGA. The trees were introduced into Australia from the 1860s and were used as a hedging plant to control stock movement in place of wire fences, wire being difficult to obtain and expensive until the 1880s. The avenue is therefore likely to indicate pre 1880s settlement of Innisfail. The avenue of 12 trees on Innisfail are now mature trees of over 10 m, not having been maintained as a hedge. The positioning of the trees adjacent to the homestead indicates they were probably planted to prevent stock from entering the homestead area.
Representativeness SHR criteria (g)	Wattle Vale does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.
Integrity	The integrity of the archaeological site of the former structure has been severely impacted by the construction of the modern house in the vicinity.

6.16.4 Statement of Significance

The Osage Orange tree avenue located on Wattle Vale is of local significance as a rare example of the species within the Gunnedah LGA. The trees were introduced into Australia from the 1860s and were used as a hedging plant to control stock movement in place of wire fences, wire being difficult to obtain and expensive until the 1880s. The avenue is therefore likely to indicate pre 1880s settlement of Innisfail. The avenue of 12 trees on Innisfail are now mature trees of over 10 m, not having been maintained as a hedge. The positioning of the trees adjacent to the homestead indicates they were probably planted to prevent stock from entering the homestead area.

6.17 Farm Complex 14 – Flakenhoe

See Appendix A for images of the site.

Flakenhoe contains three discrete sites:

1. The archaeological site of the homestead;
2. The archaeological site of a brick structure associated with a shed and small silo; and

3. A corrugated iron workshop and an open shed.

Each of these sites will be described individually, but are assessed as a group and have one Heritage Inventory Sheet in Appendix A.

6.17.1 Description

Homestead Site - The site of the former Flakenhoe Homestead is marked by a double-sided brick chimney oriented north-south. The southern side has a brick pier coming out from the centre, potentially to support floor boards and indicating the potential for subfloor archaeological deposits to present. The floor of the fireplace has an access hole in the base.

To the west is a pile of bricks and wooden fragments – the house construction material has been bulldozed into a pile at some stage. During the heritage inspection the area contained what appeared to be crushed asbestos, probably related to the demolition of the homestead. There is a small amount of artefactual material in the rubble, the glass has been heat affected. The bricks have a thin slit as a frog (central indentation). Personal communication with former owners indicated that they burnt the homestead down due to its depilated state. They could not recollect when this had taken place, but it was probably in the 1970s or 1980s.

A corrugated iron shed of a more recent date is located near the fence line to the north-west. It is approximately 6 x 3 m.

Brick Structure - The site is marked by a galvanised iron silo and a corrugated iron shearing shed. The shed has recently been restumped on better blocks and is oriented to the north. East of the shed amongst a stand of trees is an area of brick rubble, some of which still holds its form. There is some evidence of foundations, although it was difficult to determine the size through the leaf litter. There is a scatter of artefactual material to the south including green 'weed' style transfer pattern and blue willow ware. Materials include earthenware and refined earthenware. During personal communication with former property managers John and Sharmin Bailey during February 2012, they indicated their belief this was the site of the first residence on the property.

Workshop - This area contains an open sided rectangular shed oriented east-west. The roof is pitched and of corrugated iron. The apex created has been filled on the eastern end with sheets of bark. To the south is a small corrugated iron structure approximately 5 m by 3 m with a pitched roof. There is a horizontal shuttered opening in the northern elevation and the southern elevation is completely open. On the western end a small lean-to has been added. Externally, this is constructed of split timbers tied with wire, however the interior is lined in corrugated iron. Inside the shed is a roughly 1 m² slab built of local stone to a height of approximately 0.8 m. The ground is scattered with horseshoes and other metal objects, some which appear to be more recent. Outside the shed and to the south and south east is an extended scatter of glass, stoneware and unrefined earthenware. Ceramic is also evident to the west in the ploughed paddock. In personal communication with local property owners John and Sharmin Bailey in February 2012 this structure was described as "the blacksmith shop" which they stated had a working forge.

6.17.2 Historical Context

Flakenhoe was originally part of Breeza Station and became part of the resumed land after the amendments to the Crown Lands Act in 1895. In 1896 Walter Court took up 1675 acres as a Settlement Lease on the north eastern corner of The Dip Road and what was to become known as Court Lane. Crown Plan 3637-1781, which was approved in November 1895, was reviewed, however it shows no improvements to the property at that time. Durrant and Roworth (1973:90) state that Court had experienced country life as a tutor on a squatters run before taking up his own lease. The property name is said to be a variation on his father's mother's maiden name of Flecknoe.

Family history provided to Durrant and Roworth (1973:90) suggest the Lease was converted to a Conditional Purchase in 1913. The Parish Map of 1906 indicate that around 1913 the 1,675 acres was divided into three portions:

1. Northern section of 474 acres 2 roads;
2. L shaped portion of 780 acres below northern section and surrounding portion 3; and
3. Portion of 420 acres located on the corner of Court Lane and The Dip Road.

Portion 3 was held by Court as a Conditional Purchase, while portion 2 was on a lease that had the potential to be converted to free hold, while portion 3 was not convertible. Archaeological Site 1 is located on portion 3.

The Parish Map of 1926 notes that portion 2 was in the hands of the Government Savings Bank of NSW, potentially indicating the property was mortgaged to purchase the land, which had become Conditional Purpose. The Map of 1943 shows that all three portions were in the hands of the Savings Bank and then later the Commonwealth Bank. Portion 1 was transferred to H.A. MacTavish, although the date is unclear.

The property remained in the Court family until 1949 when it was sold to R.C. Adams (Durrant & Roworth 1973:90). In personal communication with local property owners John and Sharmin Bailey in February 2012, they stated that Bill and Helene Adams lived there in "very rustic houses" the main one of which consisted of "two rooms and a closed verandah" (the homestead). The Adams' called the property Doona. After their occupation, John and Sharmin Bailey purchased the property on behalf of their daughter and son-in-law, Sue and Paul Nixon. The Bailey's ran the property on behalf of the Nixons, who were living in Brisbane. During their management the Bailey's burned the homestead and bulldozed the remains. The Bailey's stated that they sold the property to "one of the other Clifts" who held it until Shenhua Watermark took ownership.

6.17.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Flakenhoe is of local historical significance as it demonstrates the development of a rural property. Flakenhoe demonstrates the move from squatter run to a Settlement Lease to a Conditional Lease. The range of buildings on the site also demonstrates the establishment and subsequent use, modification and abandonment of a rural settlement from mid 1890s through to the recent past.
Historical association significance SHR criteria (b)	Flakenhoe does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Flakenhoe does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Flakenhoe does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Flakenhoe is of local research significance as it has archaeological deposits with the potential to yield information regarding life from the mid-1890s in the Breeza area. This includes the nature and extent of the Flakenhoe Homestead and the goods used in and around the House. There is also archaeological potential to determine the use of the blacksmith's shed and the form and function of the brick structure associated with the shed and silo. There is a lack of information regarding the rural farming landscape.
Rarity SHR criteria (f)	There is insufficient information currently available to assess the archaeological site of the Flakenhoe homestead against this criterion.
Representativeness SHR criteria (g)	There is insufficient information currently available to assess the archaeological site of the Flakenhoe Homestead against this criterion.
Integrity	The Homestead site, despite being bulldozed, is of high integrity as the bulldozer does not appear to have impacted any subsurface deposits. There has been no subsequent use of the site.

6.17.4 Statement of Significance

The Flakenhoe Complex is of local historical and archaeological significance. Flakenhoe demonstrates the historical development of the area, from squatters run to a Conditional Purchase property. The archaeological site of the Homestead has the potential to add to the present limited understanding of rural life and availability of goods and materials from the mid-1890s in the Breeza area.

6.18 Farm Complex 15 - Lilyfield

6.18.1 Description

See Appendix A for images of the site.

Lilyfield is a collection of farm buildings that appears to have been constructed haphazardly and as the need required. There are at least two dwelling structures on the property.

In personal communication with occupant Joan Gaynor in February 2012, she stated that the Lilyfield Homestead (which she was living in at the time with her son Chris Gaynor) had originally consisted of three bedrooms and a kitchen. This original house had been added to over time, with extensions made around the core of the initial

structure. Joan's mother-in-law and father-in-law (John and Harriet Gaynor) had built the original house, she estimated approximately 100 years ago. Joan stated that John and Harriet Gaynor had first lived in a hut on the boundary of the property, possibly towards Whitby Road, but she was unclear regarding the exact location. That early hut had long ago been demolished.

An old shed located near the homestead was the only structure Joan identified apart from the house that had been built before she came to live there 60 years ago. She also stated that the current shearing shed had been built approximately 60 years ago, located on the same spot as an older lean-to shed that had also been used for shearing.

6.18.2 Historical Context

Lilyfield was initially part of the timber reserve gazetted in November 1880. It was then taken as a homestead selection by Theresa Ann Gaynor in 1899. John Gaynor, Theresa's son, undertook a Conditional Purchase in 1915. According to personal communication with property occupant Joan Gaynor in February 2012, it was John Gaynor who developed the property. John Gaynor married Harriet Leonard in 1914 and they had six children together, consisting of five sons and one daughter. The land was said to have been heavily timbered and required clearing before crops could be planted (Curleris Centenary Committee 1985:93). Joan Gaynor was originally from Sydney and moved to Lilyfield in the 1950s following her marriage to the youngest son of John and Harriet, Leo Gaynor. Leo purchased the property after the death of his parents. He and Joan had six children together, consisting of five sons and one daughter.

The family estate was used by the Gaynors throughout the generations to run sheep and cattle and to grow grain, including wheat and barley. Joan Gaynor advised in personal communication in February 2012 that her son Chris Gaynor was still currently living at the Lilyfield Homestead along with her. While Chris continues to manage Lilyfield, the property is now owned by Shenhua Watermark.

6.18.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Lilyfield is of local historical significance as it demonstrates the historical development of the area, from the nineteenth century through to the present day.
Historical association significance SHR criteria (b)	Lilyfield does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Lilyfield does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Lilyfield does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Lilyfield is of technical/research significance as it possesses high archaeological potential. The homestead structure is still intact and occupied, with a high likelihood of intact subfloor deposits remaining. It is considered likely that deposits associated with the shed would also possess good integrity and archaeological potential. It is further considered likely that deposits may remain intact beneath the current shearing shed that are associated with the original shearing structure. Investigations of the archaeological potential of this site have the potential to add to the present limited understanding of rural life and availability of goods and materials from the early 1900s in the Breeza area. Due to consistent use of the homestead as an intergenerational dwelling it also has the potential to add to knowledge of changing living conditions and building modification from the early 1900s up to present day. Such information would otherwise be unobtainable from other sources.
Rarity SHR criteria (f)	There is currently insufficient information to assess Lilyfield against this criterion.
Representativeness SHR criteria (g)	Lilyfield is of representative significance as it provides a good representative example of a late 1890s or early 1900s vernacular cottage with associated farm structures.

6.18.4 Statement of Significance

The Lilyfield Complex is of local historical, research and representative significance. Lilyfield demonstrates the historical development of the area and the archaeological site of the homestead and associated structures has the potential to add to the present limited understanding of rural life and availability of goods and materials from the early 1900s in the Breeza area. Due to consistent use of the homestead as an intergenerational dwelling it also

has the potential to add to knowledge of changing living conditions and building modification from the early 1900s up to present day.

6.19 Watermark Public School (Former)

6.19.1 Description

See Appendix A for images of the site.

The School building was a weatherboard structure that was removed from the site sometime after 1918. The former location was covered in dried grass during the field survey, which limited ground visibility. No evidence of the site could be identified.

6.19.2 Historical Context

An application was made for a Provisional School at Watermark by local residents. The guidelines for a Provisional School were that there were more than 10 students, but less than 25. The parents were to provide the building and furniture, but the Government supplied the teacher, books and stationary (NSW Department of Education and Training 2003:17). A Provisional School at Watermark was approved by the Education Department on 2 September 1903. On 2 February the following year two acres was set aside for the school (Curlewis Centenary Committee 1985:52). In 1913 the school was converted from a Provisional School to a Public School, indicating an enrolment of over 25 children. The school was closed at the end of 1916 (NSW Department of Education and Training 2003:136).

Curlewis Centenary 1885-1985 (1985:52) has a photograph of Maypole dancing out the front of the school building. The building is partly obscured by the activity in front, but can be described as a simple rectangular building with a gabled roof and a central chimney. There is not enough detail to determine the construction material of the chimney, the relevance being a brick chimney is more likely to leave an archaeological trace. The building is surrounded by a verandah on at least two sides, with one corner being enclosed with a screen. A water tank is also clearly visible to the rear of the building. The building was apparently moved to the Nea Public School after it was opened at the beginning of 1918 (Curlewis Centenary Committee 1985:52).

6.19.3 Significance Assessment

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	The Watermark Public School is of local significance as it demonstrates the course of local history in the area. The Project Boundary and immediate surrounds was home to numerous new families who had taken up homestead selections and Conditional Purchases in the area from 1895 onwards. The life of the School charts the life cycle of the local community – from young families requiring a school, through the maturation of the children, most of whom left the community to find farms of their own or work elsewhere.
Historical association significance SHR criteria (b)	The Watermark Public School does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	The Watermark Public School does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	The Watermark Public School does not meet this criterion as it does not have strong or special associations with the community at large. It does have strong and special associations with the Williams family.
Technical/ Research significance SHR criteria (e)	The Watermark Public School is of local research significance as it has the potential to yield information regarding the operation of a provisional school in a rural setting between 1904 and 1916.
Rarity SHR criteria (f)	The Watermark Public School does not meet this criterion as they are not rare.
Representativeness SHR criteria (g)	The Watermark Public School does not meet this criterion as it are not representative.

6.19.4 Statement of Significance

The Watermark Public School site is of local historical and research potential. The potential archaeological deposits could reveal information regarding the operation of a rural provisional school. The Watermark Public School is of local historical significance as it demonstrates the course of local history in the area. The Project Boundary and immediate surrounds was home to numerous new families who had taken up homestead selections and Conditional Purchases in the area from 1895 onwards. The life of the School charts the life cycle of the local community – from young families requiring a school, through the maturation of the children, most of whom left the community to find farms of their own or work elsewhere.

7.0 Potential Impacts

The following section draws upon information provided in Section 6.0 to address the issues and potential impacts on identified heritage sites during the construction and operation phases of the Project.

Impacts are not addressed for sites assessed as not being of heritage significance, including Clift Coal Mine, Farm Complex 4 – Keington and Farm Complex 5 – Browns Corner. As such this has not been discussed further in the assessment.

7.1 Direct Impacts

The development of the Project will result in direct impacts (i.e. removal) to 10 sites identified within the Disturbance Boundary, as indicated in Table 3.

Table 3 Heritage sites directly impacted by the Project

Site Name	Significance Criteria
Farm Complex 1 – Shar	Historical, research
Farm Complex 2 – Demeter	Historical, research
Williams' Family Markers	Significant to the Williams family
Farm Complex 6 – Cloveneden	Historical, research, representative
Farm Complex 8 –Watermark	Not significant by itself, but contributes to the broader rural landscape
Farm Complex 9 – Linavardi Hut	Historical, research, representative
Farm Complex 10 – Barwo	Historical, research, representative
Farm Complex 11 – Molonga	Historical, research, representative
Farm Complex 14 – Flakenhoe	Historical, research, representative
Farm Complex 15 – Lilyfield	Historical, research, representative

7.2 Indirect Impacts

7.2.1 Blasting

Blasting will be a key activity required as part of the operation of the Project. As a result of this activity, associated ground vibrations and overpressure have the potential to impact the structural integrity of select heritage sites identified.

The acoustic impact assessment for the Project undertaken by Bridges Acoustics (2012) (Appendix H of the EIS) provides a blasting impact assessment, which considers the heritage sites identified within Project Boundary. The impact assessment reported the recommended vibration and overpressure criteria for each site identified but not directly impacted (see Table 4).

Blasting annoyance criteria are derived from the *Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration* prepared by the Australian and New Zealand Environment and Conservation Council (ANZECC 1999). This criterion relevantly applies to non-mine owned and occupied buildings such as residences, schools and hotels.

Accordingly, for buildings owned by Shenhua Watermark, this annoyance criterion does not apply. Table 4 indicates the criteria applicable to heritage buildings owned by Shenhua Watermark and which are not proposed to be directly impacted by proposed mining activities.

Table 4 Recommended vibration and overpressure criteria

Site Name	Vibration Criteria (mm/s)	Overpressure Criteria (dBL)
Farm Complex 3 – The Wilgas	15	133
Farm Complex 7 – Inverness	15	133
Farm Complex 12 – Tilbrook	15	133
Farm Complex 13 – Wattle Vale	15	133

It should be noted that occupied buildings routinely withstand wind pressures, including strong wind gusts, so are not particularly sensitive to overpressure. Appendix J5 of AS 2187.2:2006 states *“From Australian and overseas research, damage (even of a cosmetic nature) has not been found to occur at airblast levels below 133 dBL. Windows are the building element currently regarded as most sensitive to airblast, and damage to windows is considered improbable below 140 dBL”*.

The majority of occupied buildings can also withstand much greater vibration levels, typically well over 20 mm/s, before the onset of superficial or cosmetic damage. Vibration levels well over 25 mm/s would typically be required to cause structural damage to these buildings. Appendix J4 of *Australian Standard 2187.2-2006 Explosives – Storage and use, Part 2: Use of explosives* (AS 2187.2:2006) suggests a vibration criterion of 15 mm/s at 4 Hz, rising to 50 mm/s at 40 Hz and above, would protect occupied buildings constructed of lightweight materials such as timber frames and plasterboard lining.

The recommended blasting criteria presented in Table 4 are therefore considered adequate to protect Shenhua owned heritage buildings from superficial or cosmetic damage. Nonetheless, a blasting vulnerability study should be completed by a qualified Structural Engineer to confirm the criteria listed in Table 4 does not adversely impact the heritage buildings listed.

Bridges Acoustics (2012) concluded that the blast vibrations generated by the Project will not exceed the recommended vibration and overpressure criteria at all heritage sites. Table 5 outlines the predicted blasting impacts at each heritage site.

Table 5 Predicted blasting impacts

Heritage Site	Ground Vibration (mm/s)			Overpressure (dBL)		
Maximum Instantaneous Charge (kg)	1000	1500	2000	1000	1500	2000
Farm Complex 3 – The Wilgas	7.5	10.4	13.1	118	119	120
Farm Complex 7 – Inverness	1.4	2.0	2.5	107	108	109
Farm Complex 12 – Tilbrook	1.9	2.6	3.3	109	110	111
Farm Complex 13 – Wattle Vale	2.8	3.9	4.9	112	113	114

7.2.2 Visual

The construction of the Project, including the overburden emplacement areas, rehabilitation areas and tree screenings, will modify the existing visual environment and potentially the visual aesthetics of surrounding heritage sites identified.

The visual impact assessment for the Project undertaken by JVP Visual Planning and Design (2012) (Appendix J of the EIS) describes the likely visual impacts associated with the Project on the areas surrounding the Project Boundary (the primary visual catchment). The primary visual catchment for the Project is divided into four sectors, including the northern, eastern, southern and western sectors. This assessment can be used to assess the likely visual impacts that may be experienced at each of the heritage items identified but not directly impacted.

Due to the proximity of the heritage sites to the Project, each will have a high sensitivity to changes in the existing landscape.

Northern Sector

Farm Complex 7 – Inverness is situated within the Project Boundary to the north of the Disturbance Boundary.

Due to the proximity, limited availability of surface features and direct line of sight, this heritage site will experience views to the Mine Infrastructure Area for the life of the Project resulting in a high visual effect and consequently a high visual impact.

Mt Watermark is a prominent feature in the landscape and shields the majority of views in the Eastern Mining Area during the early stages of the Project. At approximately Year 21, operations advance to the Southern Mining Area and then the Western Mining Area. Due to the proximity, limited availability of surface features and direct line of sight, this heritage site will experience views to the Southern and Western Mining Area during the final stages of the Project, resulting in a high visual effect and consequently a high visual impact. This impact will be reduced to moderate once the overburden emplacement area is fully constructed and low to very low as rehabilitation progresses and matures.

Once successfully rehabilitated, the elements of the Project will be substantially integrated into the existing landscape and the visual effect and overall visual impact will be negligible.

Eastern Sector

Farm Complex 3 – The Wilgas is situated within the Project Boundary to the east of the Disturbance Boundary.

Based on topography alone, views from this heritage site to the Mine Infrastructure Area will be shielded for the life of the Project.

During the initial years of operations, the Eastern Mining Area will create high visual effects and consequently high visual impacts on this heritage site. This impact will be reduced to moderate once the eastern face of the overburden emplacement area is fully constructed by Year 15 and low to very low as rehabilitation progresses and matures.

Once successfully rehabilitated, the elements of the Project will be substantially integrated into the existing landscape and the visual effect and overall visual impact will be negligible.

Western Sector

Farm Complex 12 – Tilbrook and Farm Complex 13 – Wattle Vale are situated within the Project Boundary to the west of the Disturbance Boundary.

Based on topography alone and other surface features, these heritage sites will be shielded from the Mine Infrastructure Area for the life of the Project and mining operations in the east until approximately Year 24. Visibility from the Western Sector to the Southern Mining Area is restrained by the hills and vegetation of the Breeza State Forest and other topographical features.

By Year 25, operations advance to the Western Mining Area within close proximity to these heritage sites creating a high visual effects and consequently high visual impacts during the final stages of the Project. This impact will be reduced to moderate once the overburden emplacement area is fully constructed and low to very low as rehabilitation progresses and matures. Once successfully rehabilitated, the elements of the Project will be substantially integrated into the existing landscape.

8.0 Mitigation and Management

Where feasible, engineering design measures have been incorporated to avoid impacts, however, where these are unavoidable, mitigation and management measures for each impact are proposed to reduce the magnitude of the impacts as far as practicable.

8.1 Directly Impacted Sites

Table 6 provides the proposed mitigation measures for heritage sites directly impacted by the Project. A Research Design and Excavation Methodology have been developed for sites recommended for archaeological monitoring, test excavation and potential salvage, which can be found in Appendix C.

Table 6 Recommended mitigation measures for heritage sites directly impacted by the Project

Site Name	Significance Criteria	Impact	Recommendations
Farm Complex 1 – Shar	Historical, research	Within Disturbance Boundary (for road and rail infrastructure) and will require removal.	- Archival recording of Sheds 1-3, including the relationship between the sheds and other features and structures on the site. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006); - Monitoring of homestead site by a qualified archaeologist during construction. - Archaeological salvage if warranted.
Farm Complex 2 - Demeter	Historical, research	Within Disturbance Boundary (for road and rail infrastructure) and will require removal.	- Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation to determine nature, extent and significance of archaeological deposits, particularly the location of the former Boundary Rider's hut and the dump. - Archaeological salvage if warranted by the testing.
Williams' Family Markers	Significant to the Williams family	Within the Disturbance Boundary and will require removal	- Consult with the Williams Family regarding their wishes in relation to the markers.
Farm Complex 6 – Cloveneden	Historical, research, representative	Within Disturbance Boundary and will require removal	- Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing.
Farm Complex 8 – Watermark	Research	Within the Disturbance Boundary and will require removal	- Undertake a brief photographic archival recording of the shed complex. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Monitoring of the site of the slab hut and brick kiln by a qualified archaeologist during construction. - Archaeological salvage if warranted.

Site Name	Significance Criteria	Impact	Recommendations
Farm Complex 9 – Linavardi Hut	Historical, research, representative	Within the Disturbance Boundary and will require removal	- Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing.
Farm Complex 10 – Barwo	Historical, research, representative	Within the Disturbance Boundary and will require removal	- Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation to determine nature, extent and significance of archaeological deposits. - Archaeological salvage, if warranted by the testing.
Farm Complex 11 – Molonga	Historical, research, representative	Within the Disturbance Boundary and will require removal	- Full archival recording (including scale drawing and photography) of cottage prior to demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation of cottage to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing.

Site Name	Significance Criteria	Impact	Recommendations
Farm Complex 14 – Flakenhoe	Historical, research, representative	Within the Disturbance Boundary and will require removal.	Homestead: - Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing. Brick Structure: - Archaeological test excavation to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing. Workshop: - Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing.
Farm Complex 15 – Lilyfield	Historical, research, representative	Within the Disturbance Boundary and will require removal.	Homestead: - Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing.

8.2 Indirectly Impacted Sites

8.2.1 Blasting

The acoustic impact assessment (Bridges Acoustics, 2012) (Appendix H of the EIS) provides management and mitigation measures to ensure all relevant blast vibration criteria are met at each heritage site identified, including:

- All blasts should be monitored at receiver locations or alternative representative locations, including heritage sites, to confirm acceptable blast impacts and to assist in predicting future blast effects as the blast sites approach sensitive receivers.
- A blasting vulnerability study should be completed by a qualified Structural Engineer to confirm the blasting criteria listed in Table 4 does not adversely impact the heritage buildings listed.
- .
- Blasts requiring a reduced Maximum Instantaneous Charge to meet vibration criteria could include one or more of the following options:
 - Lower density explosives;
 - Deck loading;
 - Reduced hole diameter;
 - Reduced blast area; or
 - Reduced blast bench height.
- Blasts requiring a reduced overpressure level to meet relevant criteria could include one or more of the following options:
 - Appropriate aggregate of sufficient depth could be used for stemming material to contain the blast energy;
 - Sufficient burden (distance between rows) could be designed to minimise the risk of face blowout;
 - Each blast could be oriented, where possible, to avoid facing towards the most sensitive receiver;
 - The hole pattern could be designed to fire the closest holes first, to minimise the risk of overpressure reinforcement; or
 - Weather conditions, specifically wind speed and direction and cloud cover, should be monitored before each blast and any weather related effects should be considered when predicting overpressure levels and designing the blast pattern.

It is also recommended that a pre-blasting structural survey / dilapidation survey of heritage sites be undertaken to document current conditions and that ongoing structural surveys are conducted on a risk-based frequency to monitor the site's condition over time. Remedial measures should be implemented, where necessary, when blasting impacts are shown to be the underlying cause.

8.2.2 Visual

The visual impact assessment for the Project (JVP, 2012) (Appendix J of the EIS) confirmed that the landscapes within view of will be modified to various degrees as a result of the Project. As outlined in the visual impact assessment (JVP, 2012), several mitigation measures to reduce visual impacts at sensitive viewing locations, including heritage sites, have been incorporated into the design and operation of the Project, including:

- Maintaining existing topography (i.e. Mt Watermark, Smokey Point, Black Mountain and a significant hill on the Springhurst property); and
- Progressive rehabilitation of overburden emplacement areas and disturbed areas.

If required, offsite mitigation measures, such as tree screening or plantings, can be implemented to reduce the visual impact to landscapes surrounding heritage sites further.

8.2.3 Historical Heritage Management Plan

The management of the historical heritage within the Project Boundary should be undertaken through a Historical Heritage Management Plan. The plan should include, but should not be limited to, the following:

- A list and map indicating the location of sites identified within to the Project Boundary and the five km buffer zone that are subject to the plan;
- A significance assessment and Statement of Significance for each site;
- Management and mitigation measures for the visual and blasting impacts, including dilapidation surveys on a risk based frequency; and
- Unexpected finds procedure, including a specific procedure for human remains.

8.2.4 Conservation Management Plans

Conservation Management Plans (CMP) should be prepared to guide the conservation of the following:

- Farm Complex 3 – The Wilgas; and
- Farm Complex 7 – Inverness.

The CMP for The Wilgas should be oriented towards the continued occupation of the houses in order to preserve and maintain the Complex. The CMP for Inverness would investigate the potential for restoration of the house on the basis of a dilapidation and white ant survey. It is noted that Inverness will have no permanent access once construction of the mine commences. This will assist in the protection of the structure, through reduced visibility and access. Access to undertake dilapidation and other surveys will necessarily be via 4WD tracks.

8.3 Effectiveness and reliability

The DGRs for the historical impact assessment require the effectiveness and reliability of the proposed mitigation measures to be evaluated (Section 1.2.1).

The proposed archival recording and archaeological investigation of the directly impacted sites is considered to be an effective and reliable mitigation measure as the heritage and archaeological information will be gathered and preserved.

The management of the remaining heritage assets within the Project Boundary during construction and operation will be undertaken through a Historical Heritage Management Plan and Conservation Management Plan. These management documents are commonly used as heritage management tools, their effectiveness and reliability is supported by Heritage Council advocacy.

9.0 Conclusion

Based on the information drawn from the field survey, historical research and other technical study aspects, the conclusions of the historical heritage assessment for the Project are summarised below.

The field survey identified 18 sites within the Project Boundary, 14 of which were subsequently assessed as being of historical significance. These sites are of local significance, research and/or representative significance. One site, the Williams' Family Markers, were assessed as being of significance to the Williams' family, but not the broader community. Fifteen of the 18 identified sites were farm complexes, established between 1895 and 1924. The remaining three sites were assessed to not be of heritage significance.

Ten heritage sites identified in the field survey (Farm Complexes 1, 2, 6, 8, 9, 10, 11, 14, 15 and the Williams' Family Markers) are within the Disturbance Boundary for the Project and will require removal. It is recommended that each site to be disturbed is documented, in accordance with the relevant guidelines (NSW Heritage Office, 1998, 2006), to capture an accurate record of past settlement and land use. With the exception of the Williams' Family Markers, it is recommended that recording be followed by archaeological test excavation and salvage excavation, if warranted by the testing.

With regard to potential blasting impacts, the acoustics impact assessment for the Project undertaken by Bridges Acoustics (Appendix H of the EIS) provided recommended blasting criteria which are considered adequate to protect Shenhua owned heritage buildings from superficial or cosmetic damage. In this regard, no blasting impacts are anticipated to heritage buildings within the Project Boundary.

The Project will result in the modification of the existing visual environment surrounding Farm Complex 3, 7, 12 and 13. As outlined in the visual impact assessment (JVP, 2012) (Appendix J of the EIS), mitigation measures to reduce visual impacts at sensitive viewing locations, including heritage sites, have been incorporated into the design and operation of the Project. If required, offsite mitigation measures, such as tree screening or plantings, can be implemented to further reduce the visual impact to landscapes surrounding heritage sites.

The impacts will be managed through the Historical Heritage Management Plan and Conservation Management Plans.

10.0 References

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Appendix A

Heritage Inventory Sheets for Identified Sites

Heritage Data Form

ITEM DETAILS						
Name of Item	Farm Complex 1 – Shar					
Other Name/s Former Name/s	Watermark					
Area, Group, or Collection Name						
Street number						
Street name	Kamilaroi Highway					
Suburb/town	Breeza				Postcode	2381
Local Government Area/s	Gunnedah					
Property description	Located on the corner of the Kamilaroi Highway and Court Lane. Main structures are accessed via a cocky gate off the Kamilaroi Highway.					
Location - AMG (if no street address)	Zone	56	Easting	Shed 1&2 249576 Shed 3 249520 Shed 4 249450 Septic 249487 Windmill 249485	Northing	6544305 6544272 6544192 6544401 6544369
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Grazing					
Former Use	Farm Buildings					
Statement of significance	Shar is of local historical and research significance. Shar is of local historical significance for its ability to demonstrate the course of history in the local area, from part of a large squatting run to a family owned and operated farm. Shar is of significance as part of a larger rural landscape demonstrating the overall development of the region.					
Level of Significance	State ☐			Local ☒		

DESCRIPTION	
Designer	
Builder/ maker	
Physical Description	Archaeological Site – The site of the former homestead is marked by a cylindrical septic tank dug into ground. Adjacent is a depression filled with building rubble, including a small number of bricks. The area is highly likely to retain sub-surface deposits and features related to the construction and habitation of the former homestead. Features and deposits are likely to include rubbish pits which contain artefacts that, subject to analysis, are able to yield information regarding rural life from c.1900 onwards. Scattered across the site are fragments of corrugated concrete – probably from a cement-rendered water tank. Shed 1 – Small corrugated iron shed with steep pitched roof and concrete floor. The floor has risen in the middle, cracking the cement. A single door has been inserted in the western elevation. The framework is bush timbers with some dressed timber. The corrugated iron is marked "Redcliffe". Approximate dimensions: 3 x 5m. Shed 2 – Corrugated iron shed open at both ends. The floor is dirt with the exception of the south-eastern corner, which has wooden beams laid. The shed is built of bush timbers with horizontal weatherboard filling the apex of the pitched roof. There is a finial on the eastern elevation. The up-right supports have notches cut out of them, a possible indication they have been reused from elsewhere. The shed was connected to electricity – fittings appear to be c.1920-1940s. Approximate dimensions: 5 x 10m. Shed 3 – Bush timber open sided hayshed with pitched corrugated iron roof. No internal fittings. Shed 4 – c. 70s steel framed shed with corrugated iron pitched roof. Frames have a zig-zag support structure. 'NEALCO' stencilled on top of uprights. Windmill – Standard Southern Cross windmill – non-operational, erected in the 1970s.

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Physical condition and Archaeological potential	Sheds 1, 3 and 4 are in reasonable condition. Shed 2 shows evidence of structural decay. There is archaeological potential associated with depression next to the septic tank.				
Construction years	Start year	1902	Finish year		Circa ☒
Modifications and dates	Homestead demolished approximately 20 years ago.				
Further comments					

HISTORY	
Historical notes	Crown Plan 3598-1781, approved in October 1895, was consulted and it showed no improvements made to the property at that time. The land was granted to Jesse Fielder on the 26/11/1898, but was forfeited only a few years later, in January 1900. On the 6 June 1901, the land taken up by Joseph Bailey. Watermark, as it was then known, remained in the family until at least the 1970s. According to local land owners John and Sharmin Bailey (pers. com. February 2012), the Bailey family first bought Shar in 1895, but did not move to the property until 1900, with Joseph working on Carroona Station instead until then. John Bailey recalls his Uncle Jack telling the story of the family's arrival at Shar. Just a boy at the time, Jack Bailey said that after they arrived in the wagon they found there was so much vegetation in the area that they could not get off it. There were 11 children in the Bailey family when they settled at Shar, consisting of eight boys and three girls, with another three children (cousins) later brought up in the same family group. In addition to the homestead, there were also sheds and a horse stand (near the present day silos) constructed on the property. John Bailey recalls a dray being used to pull wheat at Shar and stated that the Bailey family worked as carriers at that time. Mr Bob Leister of the Gunnedah and District Historical Society (pers. comm. 11 April 2011) noted that the Shar homestead had been demolished. Personal communication with the Bailey family indicated it was demolished approximately 20 years ago.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Shar is of local historical significance as it demonstrates the course and pattern of history in the Breeza area. Although the land had been taken up as part of a squatter run as early as the 1870s, the land was not intensively utilised until the turn of the century when smaller portions were sold off to individuals who came to live and work on the land. Bailey built structures necessary to crop and graze the property, in much the same manner as other farmers in the area.
Historical association significance SHR criteria (b)	Shar does not meet this criterion as it does not have strong or special associations to a group or person of importance to the local area.
Aesthetic significance SHR criteria (c)	Shar does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Shar does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Shar is of local research significance as it has the potential to yield information regarding the location, construction and use of farm buildings in the area. There is a lack of information regarding the rural farming landscape. The archaeological site of the former homestead has research potential. The area is highly likely to retain sub-surface deposits and features related to the construction and habitation of the former homestead. Features and deposits are likely to include rubbish pits which contain artefacts that, subject to analysis, are able to yield information regarding rural life from c.1900 onwards.
Rarity SHR criteria (f)	There is currently insufficient information regarding the rarity of this item to assess Shar's significance against this criterion.
Representativeness SHR criteria (g)	Shar does not meet this criterion as it has lost some of the characteristics of its class.
Integrity	Shar's farm buildings retain a high degree of integrity. The Homestead has lost integrity through demolition and subsequent earthworks.

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HERITAGE LISTINGS	
Heritage listing/s	Nil
RECOMMENDATIONS	
Impact	The extant structures and features are within the Disturbance Boundary and will require demolition.
Recommendations	- Archival recording of Sheds 1-3, including the relationship between the sheds and other features and structures on the site. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006); - Monitoring of homestead site by a qualified archaeologist during construction. - Archaeological salvage if warranted.

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IMAGES - 1 per page

Image caption	Sheds 1 and 2, view south east. Shed 3 in rear.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Sheds 3 and 4, view south.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Windmill with Sheds 1 and 2 in background, view east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Archaeological site of the former homestead in the foreground with Windmill, Shed 3 and 4 in background. View south south-east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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ITEM DETAILS						
Name of Item	Farm Complex 2 – Demeter					
Other Name/s Former Name/s	Vine Cottage					
Street number						
Street name	Kamilaroi Highway					
Suburb/town	Nea				Postcode	2381
Local Government Area/s	Gunnedah					
Property description						
Location - AMG (if no street address)	Zone	56	Easting	Shed 250715 Dump 250651	Northing	6543685 6543676
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Vacant House and farm					
Former Use	House and farm					
Statement of significance	Demeter is of local historical and research significance. Demeter is of local historical significance for its ability to demonstrate the course of history in the local area, from part of a large squatting run to a family owned and operated farm. Demeter is also of local research potential regarding the construction of Vine Cottage and the associated archaeological deposits, including that of the boundary riders hut, can reveal information regarding the lives of early settlers in the Breeza area.					
Level of Significance	State ☐			Local ☒		

DESCRIPTION	
Designer	
Builder/ maker	
Physical Description	Demeter is located on the Kamilaroi Highway between Court Lane and Roworth Road. The house consists of the original Vine Cottage, orally described by previous owner David Williams, as being a 25 m² four roomed house of azed cedar cut from the property. In 1976 three metres was added to the house on all sides and clad with hardiplank. The house has a pitched roof with a broken-back verandah. The house is currently vacant, but in an excellent state of repair. To the south is a modern garage. Other areas of historical and archaeological interest include: Dump - South of the house is a depression filled with c.1970s rubbish and may be the clean out associated with the vacation of the house. David Williams stated that the previous owner had dumped rubbish in this area for nearly 100 years. After the Williams' bought the property they bulldozed a hole and transferred the rubbish to the hole. During this process whole bottles and objects deemed to be of value were removed. Archaeological Site – to the south of the cottage is a flat, open area of approximately 5 m², which is assumed to be the location of the former Breeza Station boundary rider's hut, as indicated by former owner David Williams. While there was no surface expression, the area is highly likely to have preserved sub-surface archaeological deposits and features. Sheds - Amongst the collection are two bush timber, open sided sheds. The first shed is filled with material culture, including horse yokes hanging from the rafters. The second shed has a small stock holding yard associated with it. Sheep Shower - To the east of the house is a HH Model Cooper Sheep Shower by Sunbeam, with associated in-ground water tanks. Shearing Shed - About 200 m south of the house is a corrugated iron shearing shed. Appears to be c.1970s. The shearing shed has wooden floors and a donkey engine in the attached engine room. The shearing equipment appears to be older and may be

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	reused. Adjacent to the shearing shed is one white metal silo with concrete pads for two more.				
Physical condition and Archaeological potential	All buildings are in good to excellent condition. There is high archaeological potential within the vicinity of the house.				
Construction years	Start year		Finish year		Circa ☐
Modifications and dates					
Further comments					

HISTORY	
Historical notes	Crown Plan 3604-1781, approved in October 1895, was consulted, and it showed that the land on which Demeter is situated on was gazetted to Thomas James Kingston, however this was withdrawn in August 1899. On 17 March 1900, the property was purchased by Jonathan Charles McIntosh and mortgaged to the Rural Bank of NSW. McIntosh was a bachelor, who lived in the cottage by himself (David Williams, pers comm. 2 February 2012). It remained in the McIntosh family until 1972 when it was purchased by David and Helen Williams and renamed Demeter (Curlewis Centenary Committee 1985:86). Mr Williams (pers comm. 2 February 2012) provided a purchase date of 1970. The Williams' renovated the Cottage in 1976, adding three metres to all sides. The original cottage is still extant at the centre of the house (David Williams, pers comm. 2 February 2012). Mr Williams also provided information regarding a Breeza Station boundary rider's hut that was located to the south of the house. The location of the hut provided focus for the later Vine Cottage, with Mr Williams seeming to indicate that McIntosh lived between Vine Cottage and the boundary rider's hut, probably occupying the hut prior to the construction of the Cottage. During their ownership the Williams' dismantled the hut as it was becoming unsafe. The hut was built of vertical slabs, cut from the property. The Williams family owned and operated the property until it was purchased by Shenhua Watermark.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Demeter is of local historical significance as it demonstrates the course and pattern of history in the Breeza area. Demeter was originally part of the Breeza Station. Vine Cottage was constructed adjacent to a Breeza Station boundary rider's hut. Although the area had been taken up as part of a squatter run as early as the 1830s the land was not intensively utilised until the turn of the century when smaller portions were sold off to individuals who came to live and work on the land. McIntosh built structures necessary to crop and graze the property, in much the same manner as other farmers in the area. McIntosh's location for his residence was influenced by the location of the boundary rider's hut, indicating the on-going influence Breeza Station had on the pattern of occupation in the area.
Historical association significance SHR criteria (b)	Demeter does not meet this criterion as it does not have strong or special associations to a group or person of importance to the local area.
Aesthetic significance SHR criteria (c)	Demeter does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Demeter does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Demeter is of local research significance as it has the potential to yield information regarding the location, construction and use of buildings in the area. Demeter house incorporates the original Vine Cottage and therefore has the potential to yield information regarding turn of the century construction in this rural area. The archaeological deposits relating to the boundary rider's hut have archaeological potential to yield information regarding boundary rider's huts and material culture not available elsewhere. The rubbish dump associated with Vine Cottage has the potential to yield information regarding rural living and the lifestyle of a bachelor over an extended period of time. Mr McIntosh occupied the property from c.1902 until c.1970. The

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	potential of the deposits remains despite the disturbance of the dump by the Williams' family and the removal of whole bottles. The remaining relics retain their ability to inform.
Rarity SHR criteria (f)	There is currently insufficient information regarding the rarity of this item to assess Demeter's significance against this criterion.
Representativeness SHR criteria (g)	Demeter does not meet this criterion as it has lost some of the characteristics of its class.
Integrity	Demeter's integrity is limited, having been extensively modified. The construction of modern sheds adjacent to the historical sheds also limits the integrity of those items.

HERITAGE LISTINGS

Heritage listing/s	Nil
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RECOMMENDATIONS

Impact	Demeter house, sheds and archaeological site are outside the Disturbance Boundary. The shearing shed and silo is inside the Disturbance Boundary.
Recommendations	• Prepare a Conservation Management Plan for the Complex to manage the significance of the house, sheds, dump and archaeological site. • Undertake a brief photographic archival recording of the shearing shed and silo. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006).

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IMAGES - 1 per page

Image caption	House – Demeter, potentially Vine Cottage. View west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Historical sheds associated with Demeter House.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	c.1970 dump associated with Demeter House.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Interior of shearing shed.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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ITEM DETAILS						
Name of Item	Williams' Family Memorial Markers					
Other Name/s Former Name/s	On Demeter					
Area, Group, or Collection Name						
Street number						
Street name	Off the Kamilaroi Highway					
Suburb/town	Breeza				Postcode	2381
Local Government Area/s	Gunnedah					
Property description						
Location - AMG (if no street address)	Zone	56	Easting	250397	Northing	6541815
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Family Markers					
Former Use	Hill top					
Statement of significance	The Williams' Family Markers have been assessed has being of personal significance to the Williams' family, but are not of heritage significance to the broader community. The Markers were placed on private land as a private memorial with no anticipation of wider recognition. The site does not hold historical, associative, aesthetic, social or technical significance to the wider community.					
Level of Significance	State ☐			Local ☐		

DESCRIPTION	
Designer	
Builder/ maker	
Physical Description	Two boulders in a rock outcrop near the top of Mt Watermark with a northerly aspect. Each bolder has a brass plaque with commemorative details: IN MEMORY OF/ROBERT HENRY WILLIAMS/DIED 10TH OCT 1984/AGED 77 YEARS RHODA LOUISA WILLIAMS/(NEE BARTLETT)/BORN 10TH MAY 1911/DEPARTED THIS LIFE OF 93 YEARS/MIDDAY 22ND SEPTEMBER 2004/EX DEO NASCIMUR/IN CHRISTO MORIMUR/PER SPIRITUM SANCTUM REVIVISCIMUS Rough translation: "Of God we are born, in Christ we die, through the Holy Spirit we live again" Robert Williams' plaque had no decoration. Rhoda Williams' had gum nuts and leaves in the top right hand corner and in the bottom left some trees a fence and a plough. Mr Williams, son of Robert and Rhoda, stated that the ashes of his parents were buried directly below the plaques. The ashes were not in a container, but were placed into a hole approximately 100 mm deep (David Williams, pers comm. 2 February 2012).Historical Context J.C. McIntosh bought 'Vine Cottage' just before 1902 (Durrant & Roworth 1973:91). It remained in the McIntosh family until 1972 when it was purchased by David and Helen Williams and renamed Demeter (Curleris Centenary Committee 1985:86). The Williams family owned and operated the property until it was purchased by Shenhua Watermark. Neither Robert nor Rhoda lived at the property, although Rhoda was born at Goodwood, approximately 5 km north along the Kamilaroi Highway. Mr Williams selected the location to honour his father's amateur interest in geology – the geological formations of Mt Watermark being of interest and having value for the evidence of rare lava flows (David Williams, pers comm. 2 February 2012).
Physical condition	The plaques are in excellent condition.

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and Archaeological potential						
Construction years	Start year	1984	Finish year	2004	Circa	☐
Modifications and dates						
Further comments						

HISTORY	
Historical notes	J.C. McIntosh bought the land on which the Markers were later placed just before 1902 (Durrant & Roworth 1973:91). The property remained in the McIntosh family until 1972, when it was purchased by David and Helen Williams and renamed Demeter (Curlewis Centenary Committee 1985:86). The Williams family owned and operated the property until it was purchased by Shenhua Watermark. The Williams family owned and operated the property until it was purchased by Shenhua Watermark. Neither Robert nor Rhoda lived at the property, although Rhoda was born at Goodwood, approximately 5 km north along the Kamilaroi Highway. Mr Williams selected the location to honour his father's amateur interest in geology – the geological formations of Mt Watermark being of interest and having value for the evidence of rare lava flows (David Williams, pers comm. 2 February 2012).

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	The Williams' Family Markers do not meet this criterion as it does not demonstrate the pattern or course of State or local history.
Historical association significance SHR criteria (b)	The Williams' Family Markers does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	The Williams' Family Markers does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	The Williams' Family Markers does not meet this criterion as it does not have strong or special associations with the community at large. It does have strong and special associations with the Williams family.
Technical/Research significance SHR criteria (e)	The Williams' Family Markers do not meet this criterion as they are not of technical/research significance.
Rarity SHR criteria (f)	The Williams' Family Markers does not meet this criterion as they are not rare.
Representativeness SHR criteria (g)	The Williams' Family Markers does not meet this criterion as they are not representative.
Integrity	

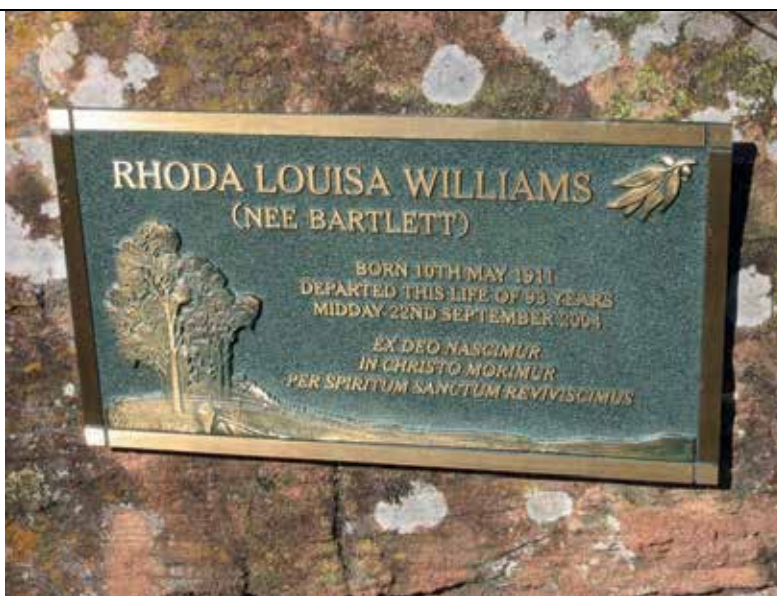
HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	The Williams' Family Markers are within the Eastern Mining Area and will require removal.
Recommendations	Consult with the Williams Family regarding their wishes in relation to the markers.

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IMAGES - 1 per page

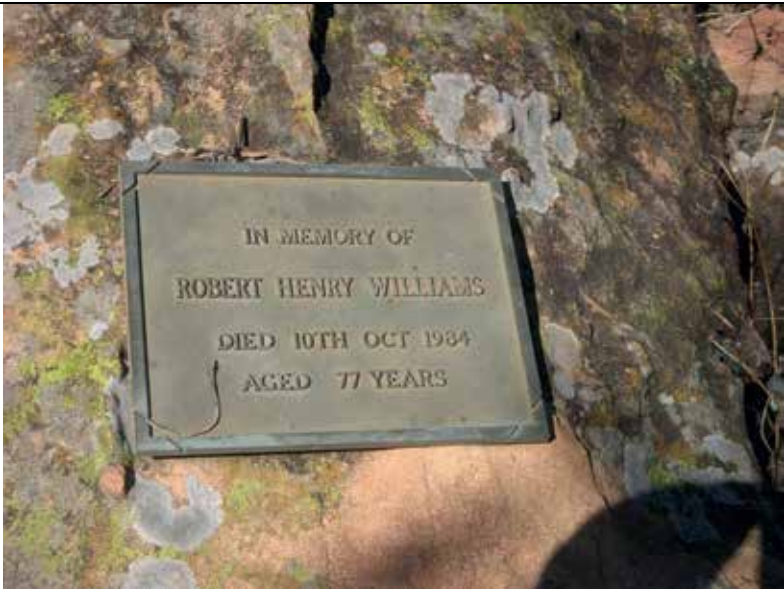
Image caption	Detail of Rhoda Williams' plaque.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Detail of Robert Williams' plaque				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	View towards the Kamilaroi Highway (north) from Williams' Family Markers.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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ITEM DETAILS							
Name of Item	Farm Complex 3 – The Wilgas						
Other Name/s Former Name/s	Black Mountain						
Area, Group, or Collection Name							
Street number	5975						
Street name	Kamilaroi Highway						
Suburb/town	Breeza					Postcode	2381
Local Government Area/s	Gunnedah						
Property description							
Location - AMG (if no street address)	Zone	56	Easting	House 253167 Shearing Shed 253141 House Site 253127 Coal Mine 253262 Railway Siding 253379	Northing	6542192 6542152 6542012 6541611 6541604	
Owner	Shenhua Watermark Coal Pty Ltd						
Current use	Farm						
Former Use	Farm and Coal Mine						
Statement of significance	The Wilgas is of local historical, associative and research significance. Together with the other farms in the Breeza area, The Wilgas demonstrates the pattern and course of the history of the area, from a squatting run to a family farm. It also retains evidence of one of the earliest coal mines in the area. The Wilgas is associated with two notable families, that of Local Member of the Legislative Assembly John Perry and the Roworth family, well known and respected members of the local community. As part of the broader landscape, The Wilgas is of local research significance, having the ability to add to the body of knowledge regarding the settlement and construction in the area and the subsequent lives of the people who lived and worked on the land.						
Level of Significance	State ☐			Local ☒			

DESCRIPTION	
Designer	Unknown
Builder/ maker	Unknown
Physical Description	House – Gable and wing front elevation. Front gable may be a later addition. Wing is covered by a verandah that is either a later addition or a replacement of an earlier verandah. Probably reclad in the 1970s. Front steps are flanked by Bougainvilleas. Internally there have been significant alterations – the ceilings have been lowered and the floor plan altered to an open plan living, dining and kitchen. Additions at the rear of the house include the bathroom, laundry and kitchen. House still sitting on original wooden stumps. Rear outhouse still in working order. Associated garage of corrugated iron. Shearing Shed – Of corrugated iron and bush timbers. Some of the undressed timber has been replaced. Shearing equipment produced by Cooper Sunbeam and driven by Brooks electric engine. Associated yards are of split logs with more modern steel yards to the north. Two modern steel sheds to the east and a sheep dip to the north east. House Site – A mature Currawong tree to the west of the house. Scatter of glass and metal artefacts and bricks in the vicinity. Disused Coal Mine & Railway Siding – A disused coal Mine exists as a tear drop shaped

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	depression with an adjacent spoil heap of approximately 5 m in height. The site is also marked by a small tree. Some wooden structural timbers from the mine are still evident between the depression and slag heap. A rail siding runs to the south, curving to meet the railway line. The siding is distinguishable from the contour banks by the curve and the width of the siding - being wider than the average contour bank.				
Physical condition and Archaeological potential	The house is in good to excellent condition. There is moderate archaeological potential in the vicinity of the house. There is high archaeological potential at the former house site. There is low archaeological potential at the coal mine and railway siding site.				
Construction years	Start year	House c. 1905. Shearing shed 1890s.	Finish year		Circa ☐
Modifications and dates	The house underwent extensive renovations during the 1970s. The kitchen was altered again within the last 10 years. The coal mine area was remediated by a grant from the Mines Department. The shaft was apparently cemented over. This was not visible during the site inspection. The former house site – the house was a weatherboard structure originally constructed at Corinya in 1933. It was relocated to The Wilgas in 1938 and in 1948 dismantled and moved to Tamworth.				
Further comments					

HISTORY	
Historical notes	The land was originally part of Breeza Station. In 1884 the area was part of the Resumed Land under the 1884 alterations to the Crown Lands Act. It was selected by Joe Pateman and named Black Mountain. Pateman, according to Len Roworth (pers comm 11 April 2011), was employed by the Clift family and the selection was probably made on behalf of the Clift family, Pateman being used as a 'dummy'. In 1905 the property was sold to John Perry, who renamed it 'The Wilgas'. John Perry was a member of the NSW Legislative Assembly from 1904 to 1907 and again in 1911 (Durrant & Roworth 1973:102) and had the dubious honour of being the first member thrown out for interjection (L Roworth pers comm. 11 April 2011). Perry was involved in establishing the Wilga Coal and Coke Company in 1914 with a group of Quirindi businessmen. The mine was located just off the Kamilaroi Highway, about one kilometre south of The Wilgas homestead. The quality of coal was never good and once the Company lost the tender to supply coal to the local railway, together with World War I, the mine was forced to close in 1916. Perry was also instrumental in the establishment of the Farmers and Settlers Association. Perry sold the property to the Hethringtons. 'The Wilgas' was purchased by the Roworth family in 1938. Subsequent generations of the Roworth family owned and operated the farm until it was purchased by Shenhua Watermark Coal. The Roworth family still lease and farm the property.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	The Wilgas is of local historical significance as it demonstrates the pattern and course of settlement and use of the area. It was originally part of Breeza Station, one of the largest in the area. The land was subsequently resumed under the 1884 alterations to the Crown Lands Act. It was 'dummied' by the Clift family through an employee, Joe Pateman. It then became a family owned and operated farm. The Wilgas is of additional historical significance having physical remains of one of the earliest coal mines in the area.
Historical association significance SHR criteria (b)	The Wilgas is of local associative significance on two counts. It was owned by Local Member of the Legislative Assembly John Perry, who was also an active member of community. It was subsequently owned by the Roworth family for four generations. The Roworth family is well known and respected within the local community.
Aesthetic significance SHR criteria (c)	The Wilgas does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	The Wilgas does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	The Wilgas is of local research significance as it has the potential to yield information regarding the location, construction and use of farm buildings in the area. There is a lack of information regarding the rural farming landscape. The site may also have archaeological research potential regarding the material culture of turn of the century farming settlement.
Rarity	There is currently insufficient information regarding the rarity of this item to assess The

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SHR criteria (f)	Wilgas' significance against this criterion.
Representativeness SHR criteria (g)	The Wilgas does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.
Integrity	The integrity of the house has been severely impacted through renovation. The coal mine area has been significantly impacted by remediation works. The integrity of the former house site is considered to be fair.

HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	The extant structures and features are outside of the proposed Disturbance Boundary.
Recommendations	Prepare a Conservation Management Plan to manage the significance of the Complex.

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IMAGES - 1 per page

Image caption	The Wilgas House – front elevation, view west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	The Wilgas House – side elevation, view south.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	The Wilgas Shearing Shed, view north.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	The Wilgas – modern sheds. View north north-west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Coal Mine slag heap, view east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	The coal mine railway siding. View south south-east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	The coal mine timber structure and shaft entrance.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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ITEM DETAILS						
Name of Item	Clift Coal Mine					
Other Name/s Former Name/s	On Cardington					
Area, Group, or Collection Name						
Street number						
Street name	Kamilaroi Highway					
Suburb/town	Breeza	Postcode	2381			
Local Government Area/s	Gunnedah					
Property description						
Location - AMG (if no street address)	Zone	56	Easting	253542	Northing	6541178
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Vacant					
Former Use	Farm					
Statement of significance	The Clift Coal Mine does not meet the significance threshold.					
Level of Significance	State ☐			Local ☐		

DESCRIPTION						
Designer						
Builder/ maker						
Physical Description	The Clift Coal Mine is located on the Cardington property and is visible from the Kamilaroi Highway. The site consists of a small, less than three metre high, slag/spoil heap. There is a depression approximately 15 m to the south, which was probably the shaft/tunnel entrance. This has been used as a rubbish dump and a collection of c.1970-80s material is visible in the depression. This material is not of heritage significance. The site is in poor condition.					
Physical condition and Archaeological potential	The site is in poor condition and has limited archaeological potential.					
Construction years	Start year	Post 1914	Finish year		Circa	☐
Modifications and dates						
Further comments						

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HISTORY	
Historical notes	Mr Len Roworth provided some oral history of the mine (pers. comm. 11 April 2011). Mr Roworth stated that the mine was excavated by the Clift family after 1914. The Clifts feared the adjacent coal mine operated on The Wilgas by Wilga Coal and Coke Company would tunnel under their land and take the coal. The mine was never a serious operation.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	This item does not meet this criterion as it does not demonstrate the pattern or course of local or state history.
Historical association significance SHR criteria (b)	This item does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	This item does not meet this criterion as it does not demonstrate aesthetic characteristics and/or a high degree of creative or technical accomplishment.
Social significance SHR criteria (d)	This item does not meet this criterion as it does not have a strong or special association with a particular community or cultural group.
Technical/Research significance SHR criteria (e)	This item does not meet this criterion as it does not have the potential to yield information that will contribute to and/or enhance our understanding of state or local cultural history.
Rarity SHR criteria (f)	This item does not meet this criterion as it is not rare.
Representativeness SHR criteria (g)	This item does not meet this criterion as it no longer represents its class.
Integrity	This item is in poor physical condition and retains only a low degree of integrity.

HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	The Clift Coal Mine is within the disturbance area and will be removed.
Recommendations	No mitigation required.

Heritage Data Form

IMAGES - 1 per page

Image caption	Clift Coal Mine, view east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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ITEM DETAILS						
Name of Item	FC 4 - Keington					
Other Name/s Former Name/s	Carinya					
Street number	48					
Street name	The Dip Road					
Suburb/town	Breeza				Postcode	2381
Local Government Area/s	Gunnedah					
Location - AMG (if no street address)	Zone	56	Easting	254921	Northing	6540137
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Farm/Vacant House					
Former Use	Farm/House					
Statement of significance	Keington is not of heritage significance.					
Level of Significance	State ☐			Local ☐		

DESCRIPTION						
Designer	Unknown					
Builder/ maker	Unknown					
Physical Description	House appears to be a c.1930s cottage with gable front and wing with enclosed verandah front elevation. Additions have been made to the front, rear and sides of the building. A recent garage of corrugated iron and undressed timber is associated with the house. To the rear (north) is a collection of c.1970s farm buildings (machinery sheds etc.). To the north-west of the house is a collection of timbers. Former owner Jeff Britten said he had demolished the original stables soon after he occupied the property (sometime between late 1970s through to mid 1980).					
Physical condition and Archaeological potential	The house is in good to excellent condition.					
Construction years	Start year		Finish year		Circa	☐
Modifications and dates	N/A					
Further comments	N/A					

HISTORY	
Historical notes	The land was originally part of Breeza Station. In 1884 the area was part of the Resumed Land under the 1884 alterations to the Crown Lands Act. The Homestead Selection of John William Browne was confirmed near the beginning of 1896. By 1906 the selection had been subdivided, although it appears Elli Howarth owned all three portions. The final Parish Map still shows Howarth as the owner of the land, although the internal subdivisions were no longer evident.

APPLICATION OF CRITERIA

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Historical significance SHR criteria (a)	Keington does not meet this criterion as it does not demonstrate the pattern and course of history in the area.
Historical association significance SHR criteria (b)	Keington does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Keington does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Keington does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Keington is of local research significance as it has the potential to yield information, in combination with other sites, regarding the location, construction and use of farm buildings in the area. There is a lack of information regarding the rural farming landscape.
Rarity SHR criteria (f)	Keington does not meet this criterion as it is not rare.
Representativeness SHR criteria (g)	Keington does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.
Integrity	The integrity of the house has been severely impacted through renovation.

HERITAGE LISTINGS

Heritage listing/s	Nil
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RECOMMENDATIONS

Impact	Outside Disturbance Boundary.
Recommendations	No mitigation required.

Heritage Data Form

IMAGES - 1 per page

Image caption	Keington – front elevation, view north west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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ITEM DETAILS						
Name of Item	Farm Complex 5 – Browns Corner					
Other Name/s Former Name/s	Browns Corner					
Area, Group, or Collection Name						
Street number						
Street name	The Dip Road					
Suburb/town	Breeza	Postcode	2381			
Local Government Area/s	Gunnedah					
Property description						
Location - AMG (if no street address)	Zone	56	Easting	253794	Northing	6539148
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Farm					
Former Use	Farm					
Statement of significance	Browns Corner itself is not of local significance. As part of the broader rural landscape, however, Brownes Corner contributes to an understanding of the pattern and course of settlement and utilisation in the area.					
Level of Significance	State ☐			Local ☐		

DESCRIPTION						
Designer	Unknown					
Builder/ maker	Unknown					
Physical Description	Site consists of an open sided shed of modern bush timbers. Adjacent is a stockyard with loading ramp of bush timbers, wire and geo-grid. It is approximately 30 x 15 m. Both are well maintained and appear to be reasonably modern.					
Physical condition and Archaeological potential						
Construction years	Start year		Finish year		Circa	☐
Modifications and dates	N/A					
Further comments	N/A					

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HISTORY	
Historical notes	The land was originally part of Breeza Station. In 1884 the area was part of the Resumed Land under the 1884 alterations to the Crown Lands Act. The Homestead Selection of John William Browne was confirmed near the beginning of 1896. By 1906 the selection had been subdivided, although it appears Elli Howarth owned all three portions. The final Parish Map still shows Howarth as the owner of the land, although the internal subdivisions are no longer evident.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Browns Corner does not meet this criterion by its self, however, in conjunction with the other farms in the vicinity it can contribute to an understanding of the pattern and course of history in the area.
Historical association significance SHR criteria (b)	Browns Corner does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Browns Corner does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Browns Corner does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Browns Corner is of local research significance as it has the potential to yield information, in combination with other sites, regarding the location, construction and use of farm buildings in the area. There is a lack of information regarding the rural farming landscape.
Rarity SHR criteria (f)	Browns Corner does not meet this criterion as it is not rare.
Representativeness SHR criteria (g)	Browns Corner does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.
Integrity	The integrity of the house has been severely impacted through renovation.

HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	Within the Disturbance Boundary and will require demolition.
Recommendations	No mitigation required.

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IMAGES - 1 per page

Image caption	Browns Corner Stockyards. View north west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Browns Corner hayshed. View north east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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ITEM DETAILS						
Name of Item	Farm Complex 6 - Cloveneden					
Other Name/s Former Name/s						
Area, Group, or Collection Name						
Street number						
Street name	The Dip Road					
Suburb/town	Breeza	Postcode	2381			
Local Government Area/s	Gunnedah					
Property description						
Location - AMG (if no street address)	Zone	56	Easting	251267	Northing	6539228
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Farm					
Former Use	Farm					
Statement of significance	Cloveneden is of local historical and research significance. Cloveneden demonstrates the pattern and course of land ownership and settlement in the area. Originally part of the large Breeza Station, it was subdivided and owned by members of the Clift family. After passing out of Clift ownership it was resumed for soldier settlement purposes. The physical remains of the soldier settlement period are of local significance for their ability to yield information regarding this period and the efforts of the former soldiers in settling and farming the area.					
Level of Significance	State ☐			Local ☒		

DESCRIPTION						
Designer						
Builder/ maker						
Physical Description	The Cloveneden property consists of a house, earlier cottage, ice house and modern farm buildings. House: Weatherboard house of four rooms with bathroom and kitchen. The kitchen has a brick chimney, which has partially collapsed. The house is surrounded on at least two sides by a verandah, which has largely collapsed. Associated with the house and slightly to the north east is an external toilet with a pressure tank on top. Ice House: Packed earth rectangular structure, of which half is dug into the ground. The roof pinnacle is at eye level. A set of steps lead down into the cool room. The western wall has completely collapsed. Early Cottage: A linear weatherboard structure of three rooms. The easternmost room is a lean-to addition with a concrete floor, while the other two rooms have wooden floor boards. The lean-to has an external corrugated iron and tin chimney in the western elevation. Internally a stove is still evident. The Crown Plan indicates this structure was a weatherboard shed at the time the plan was drafted. However, inspection indicated that it was likely to be a temporary residence during the establishment of the farm, and prior to the construction of the main house. Stock yards are located 1.1 km to the north of the house and are reasonably modern.					
Physical condition and Archaeological potential	The house and cool room are in very poor condition. The early cottage is in a fair condition. The archaeological potential is high					
Construction years	Start year	1920	Finish year		Circa	☒
Modifications and dates						
Further comments						

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HISTORY	
Historical notes	The land was originally part of Breeza Station. In 1884 the area was part of the Resumed Land under the 1884 alterations to the Crown Lands Act. The area was passed on to William Walter Clift, whose settlement lease was gazetted in 1896. By 1906 the land was in the hands of Benjamin R. Durham. Durham may have given the property the name Bumble, as this was the label on the property when it was subdivided into three soldier settlement farms prior to 1919. Cloveneden was Farm No. 1 (Crown Plan 5494-1781) and was purchased by William Hale in 1920. The Crown Plan of 1919 indicates extensive fencing, a weatherboard cottage with a galvanised iron roof, sheds, stables, yards, a garage, a windmill and a galvanised iron tank, and a cement ice house were already present on the property at this time (Figure 6). It also shows that some areas of the property had already been subject to cultivation, and that a farm dam had been constructed on the north-east boundary of the property. Farms 2 (Crown Plan 5492-1781) and 3 (Crown Plan 5493-1781) were situated to the north of Cloveneden. Durrant and Roworth (1973:92) state that Hale sold to the owners of Farms 2 and 3, Tudgey and Hirst, although this is not indicated on any of the Parish Maps, the last being published in 1943. In 1973, when Durrant and Roworth wrote their book, the property was said to be occupied by J. and B. Lobban. Cloveneden is now owned by Shenhua Watermark.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Cloveneden is of local historical significance as it demonstrates the pattern and course of settlement and use of the area. It was originally part of Breeza Station, one of the largest in the area. As with most of the land in the area, it continued to be owned by members of the Clift family. Following this, Cloveneden demonstrates land settlement in the 1920s through its resumption for Soldier Settlement purposes. The physical remains on the property are historically significant as evidence of the soldier settlement process.
Historical association significance SHR criteria (b)	Cloveneden does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Cloveneden does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Cloveneden does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Cloveneden is of local research significance as it has the potential to yield information regarding the establishment and subsequent life on soldier settlement farms in the inter-war years and beyond.
Rarity SHR criteria (f)	There is currently an insufficient understanding of the number, type and condition of World War I soldier settler homesteads in the region. It is therefore not possible to assess Cloveneden against this criterion. The Ice House is thought to be a rare structure type in the region.
Representativeness SHR criteria (g)	Cloveneden is of local significance, being representative of soldier settlement in the local area and the structures built to support their farming endeavours. It is representative of a large, intact collection of buildings, beginning with an initial cottage and progressing to a more substantial homestead, followed by modifications to address alterations in lifestyle expectations.
Integrity	The integrity of the house and archaeological deposits is high. It appears that the house has been vacant for a substantial period of time, which has minimised the number of additions and modifications to the building. This has also protected the archaeological deposits.

HERITAGE LISTINGS	
Heritage listing/s	Nil

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RECOMMENDATIONS	
Impact	Within Disturbance Boundary and will be removed.
Recommendations	• Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). • Archaeological test excavation to determine nature, extent and significance of archaeological deposits. • Archaeological salvage if warranted by the testing.

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IMAGES - 1 per page

Image caption	Cloveneden – front elevation, view north.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Cloveneden – overview from rear of complex. View south west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Cloveneden – side elevation, view west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Cloveneden – cool room, view north.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Cloveneden – early cottage corrugated iron chimney, view north.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Cloveneden – stockyards, view north.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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ITEM DETAILS						
Name of Item	Farm Complex 7 – Inverness					
Other Name/s Former Name/s						
Area, Group, or Collection Name						
Street number						
Street name	Colley Road					
Suburb/town	Breeza				Postcode	2381
Local Government Area/s	Gunnedah					
Property description						
Location - AMG (if no street address)	Zone	56	Easting	House: 246204 Slaughter Shed: 246199 Hayshed: 246203	Northing	6543371 6543284 6543250
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Farm					
Former Use	Farm					
Statement of significance	Inverness is of local historical, research and representative significance. Inverness demonstrates the course of history, from bush to settled farm. It is of research value as it has the potential to reveal, in combination with other sites, details regarding farming life in the Breeza area, including the location, construction and operational aspects of farm buildings in the area. There is a lack of information regarding the rural farming landscape, and this item has the potential to provide information that is otherwise unavailable from other sources. Inverness is also of local representative value, as it retains all the principle elements of a farm, including a homestead, stockyards, outbuildings and a slaughter house.					
Level of Significance	State ☐			Local ☒		

DESCRIPTION	
Designer	
Builder/ maker	
Physical Description	The Inverness complex includes the house, a structure that may have operated as a slaughtering shed, a hayshed, barn and stockyards. House - Weatherboard house of four rooms with a lean-to laundry addition. The corrugated iron roof is missing in part and the house has been made partly waterproof by a tarp over the missing section. The house has verandahs on the front (eastern), rear (western) and southern sides. The rear verandah has been partly enclosed to form the laundry/bathroom. The laundry includes a brick firebox for a copper. The firebox is a modification/addition to the kitchen chimney, which it backs on to. The kitchen has two fireplaces side-by-side. One of the fireplaces has had a wood fired stove inserted. Adjacent to the kitchen is a living space and there are two rooms, probably bedrooms, at the front of the house. With the exception of the kitchen, the walls are decorated with a dark wooden dado. The ceiling and wall plaster has been affected by water. The windows are of a sash design. Slaughter Shed - Small 1. 5 m² corrugated iron shed open on the western side. There is a small sluice at ground level on the eastern side. The north elevation has a bracket on the external wall, possibly for a winch or other type of machinery. Hayshed - Tall, open-sided hayshed of bush timbers with a corrugated iron roof. The floor has been fashioned of reused railway sleepers. Barn and stockyards - A modern stockyard and loading ramp attached to a bush timber barn with two raised section with wooden floors. Remaining floor is of earth. The barn is rectangular in shape and oriented east - west, which is open to allow the movement of

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	vehicles and stock through the barn.					
Physical condition and Archaeological potential	The house is in poor condition, it requires immediate stabilisation works and a new roof. The remaining buildings are in good condition. The archaeological potential is high.					
Construction years	Start year		Finish year		Circa	☐
Modifications and dates	N/A					
Further comments	N/A					

HISTORY	
Historical notes	The first Parish Map of 1884 indicates the area was part of a timber reserve. The reserve was subdivided and by the 1895 Parish Map Inverness was owned by Theresa Gaynor. The Gaynor family also owned Lilyfield. The 1902 and 1918 Parish Maps indicate the land was owned by H.G.P. Bedwell. Crown Plan 4099-1781, approved on the 21 August 1899, was also reviewed and shows that from the 29 August 1899 the homestead selection area was in the possession of Ewen Cameron, before passing into the hands of Thomas William Colley. No improvements were recorded on the Crown Plan.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Inverness is of local historical significance as it demonstrates the pattern and course of history in the local area. It moved from timber reserve to cleared farm land and demonstrates the use of the area for farming purposes.
Historical association significance SHR criteria (b)	Inverness does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Inverness does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Inverness does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Inverness is of local research significance as it has the potential to yield information, in combination with other sites, regarding the location, construction and use of farm buildings in the area. Potential archaeological artefact deposits associated with the homestead also have the potential to yield information regarding rural life and answer questions regarding access and availability of goods and foodstuffs. There is a lack of information regarding the rural farming landscape.
Rarity SHR criteria (f)	There is currently insufficient information to determine Inverness' significance under this criterion.
Representativeness SHR criteria (g)	Inverness is representative of a homestead within the Breeza area, together with the outbuildings necessary to operate a successful farm.
Integrity	The integrity of the house is high as there have been limited alterations and renovations. The archaeological integrity is also excellent, having limited disturbance.

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HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	Inverness is outside of the Disturbance Boundary.
Recommendations	• Prepare a Conservation Management Plan to manage the significance of the Complex.

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IMAGES - 1 per page

Image caption	Inverness – front elevation. View west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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Image caption	Inverness – living room.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Inverness – laundry.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Inverness – slaughtering shed, view east and detail of sluice.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Inverness – hayshed, view south.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Inverness – barn, view west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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ITEM DETAILS						
Name of Item	Farm Complex 8 – Watermark					
Other Name/s Former Name/s	The Watermark					
Area, Group, or Collection Name						
Street number						
Street name	Court Lane					
Suburb/town	Breeza	Postcode	2381			
Local Government Area/s	Gunnedah					
Property description						
Location - AMG (if no street address)	Zone	56	Easting	245763	Northing	6540631
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	House and farm					
Former Use	House and farm					
Statement of significance	Watermark is of local research significance as it has the potential to yield information, in combination with other sites, regarding the location, construction and use of farm buildings in the area. There is a lack of information regarding the rural farming landscape. The site of the brick kiln is of local research significance and potential to investigate a rural vernacular brick kiln.					
Level of Significance	State ☐			Local ☐		

DESCRIPTION	
Designer	
Builder/ maker	
Physical Description	Modern house - Watermark is a modern brick structure built on the same location as the earlier homestead, with an in-ground swimming pool to the west. It is also associated with two wooden framed sheds, one exhibiting sections from an earlier timber slab construction. Weatherboard Cottage - Approximately 150 metres from the modern house is a c.1950 weatherboard cottage with an L shaped floor plan which has been significantly renovated. The front veranda of the cottage was an addition that was later enclosed to form a kitchen. Further additions have also been made to the southern elevation. Sheds - To the south and east of the weatherboard cottage is a large and rambling collection of farm buildings. Buildings include a cement tank, two poultry yards, two steel sheds and four wooden framed sheds. Sheds contain a large collection of material including vehicles ranging in age from c.1950 through to the 1990s, and farm machinery from a similar period. John and Sharmin Bailey indicated that they believed an area to the south of the stockyards, where there had been a wooden slab hut, was one of the first residences on the property. Dams - Also within the same land holding are three dams feeding water to the modern house. One of these dams was excavated approximately 160 years ago. Brick Kiln - Remnants of a demolished brick kiln and associated shed are located along a tree line on the periphery of one of the property paddocks. John Bailey described the area as being a pit of approximately 30 m in length and 1.5 m in depth. Race Course - Another paddock was used historically as a horse race track, although there were no remnant signs visible during a February 2012 inspection. The area is not considered to have archaeological potential.
Physical condition and	The contemporary house sits on top of the same location as the historic structure called The Watermark, giving low archaeological potential in this area.

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Archaeological potential	The cottage is in a fair condition, although the additions appear to have been of a poor quality. The archaeological potential is moderate. Farm sheds are in fair condition with moderate archaeological potential. Despite bulldozing, clearance and demolition of the brick kiln there is still moderate archaeological potential for remains and deposits in the area. The racecourse area has no archaeological potential.					
Construction years	Start year	1950	Finish year		Circa	☐
Modifications and dates						
Further comments						

HISTORY	
Historical notes	Following the 1884 amendments to the Crown Lands Act this area was resumed. Watermark, like the majority of land in the area, was initially owned by the Clift family. In personal communication with John and Sharmin Bailey in February 2012 they stated that the Clift family had owned land from Caroon to Werris Creek. According to John and Sharmin Bailey the original structure, known as The Watermark, was a timber slab house on stumps with horse hair plaster used on the walls. John Bailey said that during Arthur Clift's ownership of the property there was a horse racecourse set up in one paddock and a brick kiln in another. According to the Bailey's the brick kiln was set up to produce bricks for a new house the Clifts were planning to build, but that structure was not built and the bricks were sold instead. In the 1950s John and Sharmin Bailey bought the property from the Clifts and took up residence at The Watermark. John Bailey cleared the racecourse paddock and bulldozed the brick kiln and its associated shed. John and Sharmin also demolished the original house approximately 18 years ago to erect the current house. The Watermark homestead, according to their personal communication in February 2012, was beyond repair: the ceiling leaked, the horse hair plaster was deteriorating and the building required restumping. The structure was demolished and a modern brick home built on the same location. John and Sharmin Bailey were still in residence and manage the property, as of February 2012, however, the property is now owned by Shenhua Watermark.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Watermark does not meet this criterion by its self, however, in conjunction with the other farms in the vicinity it can contribute to an understanding of the pattern and course of history in the area.
Historical association significance SHR criteria (b)	Watermark does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Watermark does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Watermark does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Watermark is of local research significance as it has the potential to yield information, in combination with other sites, regarding the location, construction and use of farm buildings in the area. There is a lack of information regarding the rural farming landscape The site of the brick kiln is of local research significance and potential to investigate a rural vernacular brick kiln.
Rarity SHR criteria (f)	Watermark does not meet this criterion as it is not rare.
Representativeness SHR criteria (g)	Watermark does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.
Integrity	The integrity of the brick kiln has been impacted through the filling of the depression, however, there remains potential for minimally disturbed deposits to be extant within the vicinity.

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HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	Watermark is within the Disturbance Boundary.
Recommendations	- Undertake a brief photographic archival recording of the shed complex. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Monitoring of the site of the slab hut and brick kiln by a qualified archaeologist during construction. - Archaeological salvage if warranted.

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IMAGES - 1 per page

Image caption	The Watermark cottage, view east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	The Watermark sheds, view west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	The Watermark sheds, view north.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Close detail of bricks made in the now demolished Clift's kiln at The Watermark.				
Image year	2012	Image by	Dr Susan Lampard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	View north across former site of the now demolished Clift's brick kiln.				
Image year	2012	Image by	Dr Susan Lampard	Image copyright holder	AECOM



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IMAGES - 1 per page					
Image caption	Detail of oven/stove door from the kiln dump site, post bull-dozing of the original site of Clift's kiln.				
Image year	2012	Image by	Dr Susan Lampard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	View north of current location of kiln dump site, comprising demolished brick kiln archaeological material resulting from bull-dozing activities at the site.				
Image year	2012	Image by	Dr Susan Lampard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	View south across horse race track site within a paddock of The Watermark property.				
Image year	2012	Image by	Dr Susan Lampard	Image copyright holder	AECOM



Heritage Data Form

ITEM DETAILS						
Name of Item	Farm Complex 9 – Linavardi Hut					
Other Name/s Former Name/s						
Area, Group, or Collection Name						
Street number						
Street name	The Dip Road					
Suburb/town	Breeza				Postcode	2381
Local Government Area/s	Gunnedah					
Property description						
Location - AMG (if no street address)	Zone	56	Easting	246578	Northing	6538184
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Vacant					
Former Use	House and farm					
Statement of significance	Linavardi Hut is of local research significance as it is able to provide insight into the initial establishment of a farming property through the recording and deconstruction of the hut and its archaeological investigation. The hut is believed to be the original hut built shortly after the land was settled. In conjunction with other farms in the vicinity it can contribute to an understanding of the pattern and course of history in the area.					
Level of Significance	State ☐			Local ☒		

DESCRIPTION	
Designer	
Builder/ maker	
Physical Description	Linavardi house (1950-1960s) was recently burnt down as a training exercise by the local fire brigade. The house site has no historical significance. The outbuildings associated with the house still stand and are of limited significance. Approximately 100 m south of the former house site is a timber clad hut of one room. It is oriented to the east, the wall having been removed. The remaining elevations each have a window. The eastern, northern and western sides of the structure are protected by a verandah. Part of the western verandah has been enclosed. The roof is pitched and of corrugated iron. Internally, a concrete floor has been poured into the structure over a foundation of local stones. In the southern elevation is a chimney constructed of corrugated iron. The hut was possibly used as shed at a later date and the chimney has been blocked off internally with a piece of corrugated iron. To the rear (west) of the hut is a small raised structure that was last used as a poultry shed. The roof and walls are constructed of corrugated iron. The floor level is surrounded by perforated mini-orb, while the space between the floor and ground level is enclosed by flattened kerosene or similar, tins. There is a ladder sufficient for poultry to access the door, which is about 0.5 m from the ground. Internally, the back wall is set up with a ladder-like roosting structure. Approximately 95 m to the south east of the former house site is a stand of peppercorn trees with a scatter of sawn timber, a galvanised iron shed and some earthworks. Due to an abundance of overgrown vegetation and undergrowth in the area, however, the layout of this item could not be interpreted.
Physical condition and Archaeological potential	The hut is in a fair to poor condition. The archaeological potential of the hut and surrounding area is moderate to high.

Heritage Data Form

Construction years	Start year		Finish year		Circa	☐
Modifications and dates						
Further comments						

HISTORY	
Historical notes	Linavardi was originally part of a Timber Reserve gazetted in November of 1880. The Parish Map of 1896 indicates that it was taken up as a Conditional Lease by Henry Arnott Shaw on 3 June 1914. Crown Plan 5000-1781 also shows that 200 acres of ring barking, to the value of £10, was undertaken on the property after being taken up by Shaw. There is no further information regarding the use or occupation of the property available at this time.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Linavardi Hut does not meet this criterion by its self, however, in conjunction with the other farms in the vicinity it can contribute to an understanding of the pattern and course of history in the area.
Historical association significance SHR criteria (b)	Linavardi Hut does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Linavardi Hut does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Linavardi Hut does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Linavardi Hut is of local research significance as it has the potential to yield information regarding the construction and use of early buildings in the area. There is a lack of information regarding the rural farming landscape.
Rarity SHR criteria (f)	There is currently insufficient evidence to assess Linavardi Hut against this criterion.
Representativeness SHR criteria (g)	Linavardi Hut does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.
Integrity	The integrity of the house is somewhat impacted by minor modifications for reuse.

HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	Within the Disturbance Boundary and will require removal.
Recommendations	- Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing.

Heritage Data Form

IMAGES - 1 per page

Image caption	Linavardi hut. View west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Linavardi hut – chimney. View west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Linavardi chicken shed. View south west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	View south of the stand of peppercorn trees approximately 95 m south east of the former Linavardi house site where remnants of a potential hut or structure are located.				
Image year	2012	Image by	Dr Susan Lampard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	View south east of the remnants of a potential hut or structure located approximately 95 m south east of the former Linavardi house site.				
Image year	2012	Image by	Dr Susan Lampard	Image copyright holder	AECOM



Heritage Data Form

ITEM DETAILS						
Name of Item	Farm Complex 10 – Barwo					
Other Name/s Former Name/s						
Area, Group, or Collection Name						
Street number						
Street name	The Dip Road					
Suburb/town	Breeza	Postcode	2381			
Local Government Area/s	Gunnedah					
Property description						
Location - AMG (if no street address)	Zone	56	Easting	244610	Northing	6539392
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Vacant					
Former Use	House and farm					
Statement of significance	Barwo is of local historic and research significance as it is able to provide insight into the initial establishment of a farming property through the recording and deconstruction of the hut. The hut is believed to be the original hut built shortly after the land was settled (sometime between 1899 and 1918). The potential archaeological deposits associated with the hut could contribute to knowledge regarding material culture in a rural setting.					
Level of Significance	State ☐			Local ☒		

DESCRIPTION						
Designer						
Builder/ maker						
Physical Description	Complex of farm buildings of both timber and steel frames, all clad in corrugated iron. Within and around sheds is farm machinery, including c.1900-30s harvester/plough, wool press and windmill. The Complex includes a linear timber clad wood cottage of two rooms oriented south. Verandahs on southern and eastern sides, which have collapsed due to vegetation overgrowth. The verandah on the western side has been enclosed as a lean-to. Interior had some detailing, including wood panelled dado. Located 20 m to the north of the cottage is a more recent and still occupied house consisting of a small demountable site office type structure. This structure is not of heritage significance.					
Physical condition and Archaeological potential	The hut is in a fair to poor condition.					
Construction years	Start year		Finish year		Circa	☐
Modifications and dates						
Further comments						

Heritage Data Form

HISTORY	
Historical notes	Barwo was originally part of a Timber Reserve gazetted in November of 1880. The Parish Map of 1895 indicates that it was taken up as a Homestead Selection of 480 acres by John Devlin in September of 1899. The Parish Map also indicates the land was resumed from the Breeza run, even though the previous Map had the land set aside as a timber reserve. Devlin converted his lease to a Conditional Purchase on 4 February 1914. By the 1918 Parish Map the land was in the hands of A. Ferguson. There is no further information regarding the use or occupation of the property available at this time.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Barwo, in conjunction with the other farms in the vicinity, can contribute to an understanding of the pattern and course of history in the area.
Historical association significance SHR criteria (b)	Barwo does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Barwo does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Barwo does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Barwo is of local research significance as it has the potential to yield information regarding the construction and use of early buildings in the area. There is a lack of information regarding the rural farming landscape. The associated archaeological deposits have the potential to inform regarding the use and availability of goods in a rural setting.
Rarity SHR criteria (f)	There is currently insufficient evidence to assess Barwo against this criterion.
Representativeness SHR criteria (g)	Barwo is of local significance as a representative example of a late 1890s or early 1900s vernacular cottage.
Integrity	The integrity of the house is somewhat impacted by later use as a storage facility. The archaeological integrity of the area is high.

HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	Barwo is within the Disturbance Boundary and will require removal.
Recommendations	- Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing.

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IMAGES - 1 per page

Image caption	Barwo hut, view east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

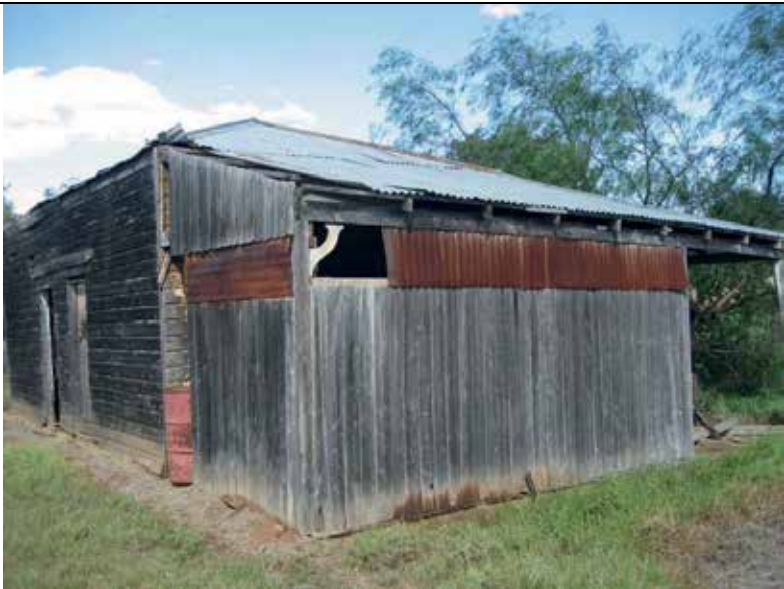
Image caption	Barwo hut, rear. View south west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



Heritage Data Form

IMAGES - 1 per page

Image caption	Barwo hut, enclosed verandah. View south east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



Heritage Data Form

ITEM DETAILS						
Name of Item	Farm Complex 11 - Molonga					
Other Name/s Former Name/s						
Area, Group, or Collection Name						
Street number						
Street name	Whitby Road					
Suburb/town	Breeza				Postcode	2381
Local Government Area/s	Gunnedah					
Property description						
Location - AMG (if no street address)	Zone	56	Easting	243322	Northing	6540869
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Vacant					
Former Use	House and farm					
Statement of significance	Molonga is of local research and representative significance as it is able to provide insight into the initial establishment of a farming property through the recording and deconstruction of the cottage. The cottage is representative of the structures built as first homes on rural properties during the establishment phase.					
Level of Significance	State ☐			Local ☒		

DESCRIPTION						
Designer	Unknown					
Builder/ maker	Unknown					
Physical Description	The Complex contains a timber-clad cottage of two rooms with an enclosed front verandah. The cottage is oriented to the north, but is accessed from the south due to the enclosure of the front verandah. The first room is a kitchen with a wood fired stove and a corrugated iron chimney on the eastern elevation. The second room was probably a bedroom. The front verandah enclosure includes a shower added in the 1980s. A twin drum washing machine is still in place. Location and stumps may indicate the structure has been moved. The style of the cottage indicates it was probably constructed in the first quarter of the 20th century. To the west of the cottage is a c.1960s house that is not of heritage significance. To the south east is a range of farm buildings including a large c.1970s shearing shed, stockyard and loading ramp of bush timbers. These also are not considered to be of heritage significance.					
Physical condition and Archaeological potential	The cottage is in a fair condition.					
Construction years	Start year		Finish year		Circa	☐
Modifications and dates	N/A					
Further comments	N/A					

HISTORY

Heritage Data Form

Historical notes	Molonga was originally part of a Timber Reserve gazetted in November of 1880. The Parish Map of 1895 indicates that it was taken up as a Homestead Selection of 690 acres by T.J. Gaynor in September of 1899. The Parish Map also indicates the land was resumed from the Breeza run, even though the previous Map had the land set aside as a timber reserve. The Gaynor family also took up land on the opposite side of Whitby Road, now known as Lilyfield. The Selection seems to have been revoked, or perhaps sold, as in 1914 Bartholomew McDonnell held the property on a Conditional Purchase. According to personal communication with local property owners John and Sharmin Bailey in February 2012, the property was then purchased by the Whitby family. After Whitby the property was sold to John Prior. Molonga is now owned by Shenhua Watermark.
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APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Molonga, in conjunction with the other farms in the vicinity, can contribute to an understanding of the pattern and course of history in the area.
Historical association significance SHR criteria (b)	Molonga does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Molonga does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Molonga does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Molonga is of local research significance as it has the potential to yield information regarding the construction and use of early buildings in the area. There is a lack of information regarding the rural farming landscape.
Rarity SHR criteria (f)	There is currently insufficient evidence to assess Molonga against this criterion.
Representativeness SHR criteria (g)	Molonga is of local significance as a representative example of a late 1890s or early 1900s vernacular cottage.
Integrity	The integrity of the cottage potentially impacted by the suspected relocation of the structure. At this stage there is insufficient evidence to conclusively determine whether it has been relocated or not.

HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	Molonga is within the Disturbance Boundary and will require removal.
Recommendations	- Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing.

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IMAGES - 1 per page

Image caption	Molonga cottage. View east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Molonga cottage – chimney. View north west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



Heritage Data Form

IMAGES - 1 per page

Image caption	Interior view of oven, Molonga.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



Heritage Data Form

ITEM DETAILS						
Name of Item	Farm Complex 12 - Tilbrook					
Other Name/s Former Name/s						
Area, Group, or Collection Name						
Street number						
Street name	Nea Siding Road					
Suburb/town	Breeza	Postcode	2381			
Local Government Area/s	Gunnedah					
Property description						
Location - AMG (if no street address)	Zone	56	Easting	2442664	Northing	6544206
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Vacant					
Former Use	House and farm					
Statement of significance	Tilbrook is of local research and representative significance as it is able to provide insight into the initial establishment of a farming property through the recording and deconstruction of the cottage. The cottage is representative of the structures built as first homes on rural properties during the establishment phase.					
Level of Significance	State ☐			Local ☒		

DESCRIPTION						
Designer						
Builder/ maker						
Physical Description	Tilbrook is a two roomed structure oriented towards the south. Two rooms have different construction techniques, indicating differing construction dates. The southern section is of split slabs and of taller than normal proportions, more reminiscent of a barn. The roof is of pitched construction. The door is located centrally and there is a window in the western elevation. The rear, northern room is constructed of corrugated iron with a lean-to style roof. The northern room has an entrance in the eastern elevation and a window in the northern elevation. There is a corrugated iron chimney attached to the western elevation, which connects to an internal fireplace constructed mainly of local sandstone with a few bricks. The floor in both rooms is of good quality wide wooden floors laid on random rubble of local stones.					
Physical condition and Archaeological potential	The cottage is in a fair condition although the floor boards are rotten.					
Construction years	Start year		Finish year		Circa	☐

Heritage Data Form

Modifications and dates	N/A
Further comments	N/A

HISTORY	
Historical notes	Tilbrook was originally part of a Timber Reserve gazetted in November of 1880. The Parish Map of 1895 indicates that it was taken up as a Homestead Selection of 519 acres and 3 roods by William Thompson on 25 April 1901. In 1911 William Richards took up a Conditional Purchase on the property. By 1918 the land was in the hands of the Commercial Bank of Sydney, although this may indicate a mortgage or a loan for improvements. The intervening history of the property is currently unclear, but Curlewis Centenary Committee (1985:108) indicates that Tilbrook was purchased by Robert and Annie Whitby in 1938. It is now owned by Shenhua Watermark.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	There is currently insufficient evidence to assess Tilbrook against this criterion.
Historical association significance SHR criteria (b)	Tilbrook does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Tilbrook does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Tilbrook does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Tilbrook is of local research significance as it has the potential to yield information regarding the construction and use of vernacular cottages in rural areas. The associated archaeological deposits have the potential to yield information regarding rural life at the turn of the century.
Rarity SHR criteria (f)	There is currently insufficient evidence to assess Tilbrook against this criterion.
Representativeness SHR criteria (g)	Tilbrook is of local significance as a representative example of a late 1890s or early 1900s vernacular cottage.
Integrity	The integrity of the cottage is good, it does not appear to have been significantly altered or relocated.

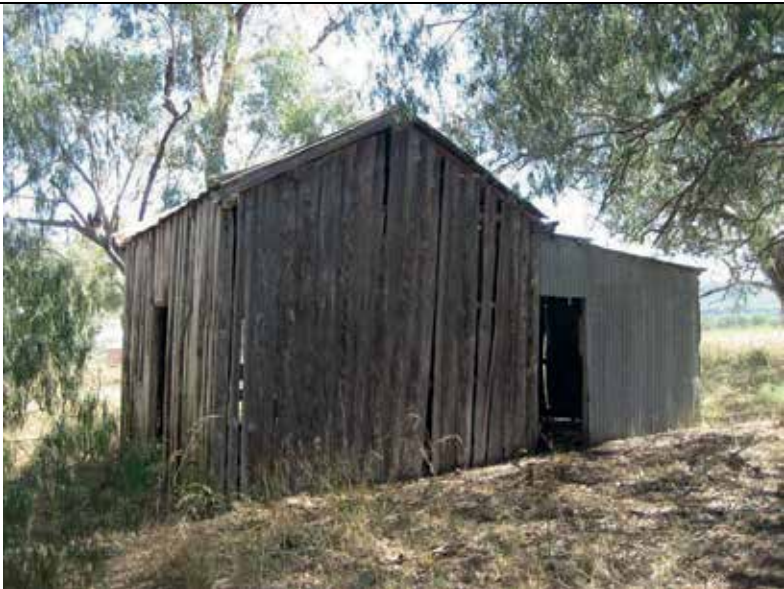
HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	Outside Disturbance Boundary.
Recommendations	Manage heritage significance through the Historic Heritage Management Plan.

Heritage Data Form

IMAGES - 1 per page

Image caption	Tilbrook cottage, view north west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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IMAGES - 1 per page

Image caption	Tilbrook hut, view south.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



Heritage Data Form

IMAGES - 1 per page

Image caption	Tilbrook hut interior, view north.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



Heritage Data Form

ITEM DETAILS							
Name of Item	Farm Complex 13 – Wattle Vale						
Other Name/s Former Name/s	Innisfail						
Street number							
Street name	Nea Spring Road						
Suburb/town	Breeza				Postcode	2381	
Local Government Area/s	Gunnedah						
Location - AMG (if no street address)	Zone	56	Easting	Avenue Single Tree	241248 241170	Northing	6542076 6541935
Owner	Shenhua Watermark Coal Pty Ltd						
Current use	Tree						
Former Use	Tree						
Statement of significance	The Osage Orange tree avenue located on Wattle Vale is of local significance as a rare example of the species within the Gunnedah LGA. The trees were introduced into Australia from the 1860s and were used as a hedging plant to control stock movement in place of wire fences, wire being difficult to obtain and expensive until the 1880s. The avenue is therefore likely to indicate pre 1880s settlement of Wattle Vale. The avenue of 12 trees on Wattle Vale are now mature trees of over 10 m, not having been maintained as a hedge. The positioning of the trees adjacent to the homestead indicates they were probably planted to prevent stock from entering the homestead area.						
Level of Significance	State ☐				Local ☒		

DESCRIPTION					
Designer					
Builder/ maker					
Physical Description	Wattle Vale is a large cream brick house built c. 2005. The current tenant believes that it was built over the top of the previous house, known as Innisfail, as she has found in situ bricks in the front yard and in association with several fragments of ceramic. To the north west of the house is a collection of modern farm buildings. The house and farm buildings are separated by an avenue of 12 Osage Orange trees oriented east-west. Approximately 150 m to the south west is a dam, which the tenant says was constructed around 2005. There are two more Osage Orange trees associated with the dam. The tenant also said that they had found artefacts in this vicinity.				
Physical condition and Archaeological potential	The trees are healthy.				
Construction years	Start year		Finish year		Circa ☐
Modifications and dates					
Further comments					

HISTORY

Heritage Data Form

Historical notes	The area was set aside as a Timber Reserve in November of 1880, but was seen as superfluous to requirements and subdivided. In 1899 Innisfail was taken up as a Homestead Selection by Anne Gaynor. Gaynor converted the selection into a Conditional Purchase in 1918. The 1981 topographic map (Watermark 8935-I-S) marks the property as abandoned. The current house was constructed around 2005, prior to the purchase by the current tenants, who were bought out by Shenhua Watermark. There is currently no further information available regarding the property. Osage Orange trees (<i>Maclura pomifera</i> or <i>Maclura aurantiaca</i> prior to 1906) were introduced into Australia in the mid 1850s and was heavily prompted as a hedging plant to control stock. Prior to the 1880s fencing wire was not readily available and farmers wishing to control stock movements either constructed post and rail fences or planted hedges. The Orange grew quickly, had thorns and could be formed into a hedge that was impenetrable by stock. By the turn of the century fencing wire was more readily available and hedge plantings, including the Osage Orange, fell out of favour (Brookes, 1995). Stuart Read of the NSW Heritage Branch maintains an informal register of Osage Orange trees in NSW. The register currently includes 29 single trees or hedges across the State, the majority being located on the Cumberland Plains. There are no Osage Orange trees or hedges currently identified in the Gunnedah LGA. The closest known trees occur around Inverell, over 150 km to the north east of the Project Boundary.
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APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Wattle Vale does not meet this criterion as it does not demonstrate the pattern or course of state or local history.
Historical association significance SHR criteria (b)	Wattle Vale does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Wattle Vale does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Wattle Vale does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Wattle Vale does not meet this criterion as archaeological deposits associated with previous structures have been heavily impacted by the construction of the new house and dam.
Rarity SHR criteria (f)	The Osage Orange tree avenue located on Wattle Grove is of local significance as a rare example of the species within the Gunnedah LGA. The trees were introduced into Australia from the 1860s and were used as a hedging plant to control stock movement in place of wire fences, wire being difficult to obtain and expensive until the 1880s. The avenue is therefore likely to indicate pre 1880s settlement of Innisfail. The avenue of 12 trees on Innisfail are now mature trees of over 10 m, not having been maintained as a hedge. The positioning of the trees adjacent to the homestead indicates they were probably planted to prevent stock from entering the homestead area.
Representativeness SHR criteria (g)	Wattle Vale does not meet this criterion as it has lost most of the characteristics of its class through renovation and alteration.
Integrity	The integrity of the archaeological site of the former structure has been severely impacted by the construction of the modern house in the vicinity.

HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	Outside Disturbance Boundary.
Recommendations	Manage heritage significance through Historic Heritage Management Plan.

Heritage Data Form

IMAGES - 1 per page

Image caption	Osage Orange Tree Avenue. View north east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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ITEM DETAILS							
Name of Item	Farm Complex 14 –Flakenhoe						
Other Name/s Former Name/s							
Street number							
Street name	Court Lane						
Suburb/town	Breeza					Postcode	2381
Local Government Area/s	Gunnedah						
Location - AMG (if no street address)	Zone	56	Easting	Homestead 247691 Brick Structure 247671 Workshop 247934	Northing	6539195 6539204 6538724	
Owner	Shenhua Watermark Coal Pty Ltd						
Current use	Vacant Farm						
Former Use	Farm and Homestead						
Statement of significance	The Flakenhoe Complex is of local historical and archaeological significance. Flakenhoe demonstrates the historical development of the area, from squatters run to a Conditional Purchase property. The archaeological site of the Homestead has the potential to add to the present limited understanding of rural life and availability of goods and materials from the mid-1890s in the Breeza area.						
Level of Significance	State ☐			Local ☒			

DESCRIPTION	
Designer	
Builder/ maker	
Physical Description	Flakenhoe contains three discrete sites: 1. The archaeological site of the Homestead; 2. The archaeological site of a brick structure associated with a shed and small silo; and 3. A corrugated iron workshop and an open shed. Each of these sites will be described individually. Homestead Site - The site of the former Flakenhoe Homestead is marked by a double-sided brick chimney oriented north-south. The southern side has a brick pier coming out from the centre, potentially to support floor boards and indicating the potential for subfloor archaeological deposits to present. The floor of the fireplace has an access hole in the base. To the west is a pile of bricks and wooden fragments – the house construction material has been bulldozed into a pile at some stage. During the heritage inspection the area contained what appeared to be crushed asbestos, probably related to the demolition of the homestead. There is a small amount of artefactual material in the rubble, the glass has been heat affected. The bricks have a thin slit as a frog (central indentation). Personal communication with former owners indicated that they burnt the homestead down due to its depilated state. They could not recollect when this had taken place, but it was probably in the 1970s or 1980s. A corrugated iron shed of a more recent date is located near the fence line to the north-west. It is approximately 6 x 3 m. Brick Structure - The site is marked by a galvanised iron silo and a corrugated iron shearing shed. The shed has recently been restumped on besser blocks and is oriented to the north. East of the shed amongst a stand of trees is an area of brick rubble, some of which still holds its form. There is some evidence of foundations, although it was difficult to determine the size through the leaf litter. There is a scatter of artefactual material to the south including green 'weed' style transfer pattern and blue willow ware. Materials include earthenware and refined

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	earthenware. During personal communication with former property managers John and Sharmin Bailey during February 2012, they indicated their belief this was the site of the first residence on the property. Workshop - This area contains an open sided rectangular shed oriented east-west. The roof is pitched and of corrugated iron. The apex created has been filled on the eastern end with sheets of bark. To the south is a small corrugated iron structure approximately 5 m by 3 m with a pitched roof. There is a horizontal shuttered opening in the northern elevation and the southern elevation is completely open. On the western end a small lean-to has been added. Externally, this is constructed of split timbers tied with wire, however the interior is lined in corrugated iron. Inside the shed is a roughly 1 m² slab built of local stone to a height of approximately 0.8 m. The ground is scattered with horseshoes and other metal objects, some which appear to be more recent. Outside the shed and to the south and south east is an extended scatter of glass, stoneware and unrefined earthenware. Ceramic is also evident to the west in the ploughed paddock. In personal communication with local property owners John and Sharmin Bailey in February 2012 this structure was described as "the blacksmith shop" which they stated had a working forge.					
Physical condition and Archaeological potential	The archaeological potential is high. While the homestead area has been bulldozed it did not impact on the subsurface. There is a high likelihood of intact subfloor deposits remaining around the chimney. There appears to be very little disturbance in the brick structure area. It is considered that deposits associated with the workshop would also possess good integrity and archaeological potential.					
Construction years	Start year	1895	Finish year	1980s	Circa	☒
Modifications and dates						
Further comments						

HISTORY	
Historical notes	Flakenhoe was originally part of Breeza Station and became part of the resumed land after the amendments to the Crown Lands Act in 1895. In 1896 Walter Court took up 1, 675 acres as a Settlement Lease on the north eastern corner of The Dip Road and what was to become known as Court Lane. Crown Plan 3637-1781, which was approved in November 1895, was reviewed, however it shows no improvements to the property at that time. Durrant and Roworth (1973:90) state that Court had experienced country life as a tutor on a squatters run before taking up his own lease. The property name is said to be a variation on his father's mother's maiden name of Flecknoe. Family history provided to Durrant and Roworth (1973:90) suggest the Lease was converted to a Conditional Purchase in 1913. The Parish Map of 1906 indicate that around 1913 the 1675 acres was divided into three portions: 1. Northern section of 474 acres 2 roods; 2. L shaped portion of 780 acres below northern section and surrounding portion 3; and 3. Portion of 420 acres located on the corner of Court Lane and The Dip Road. Portion 3 was held by Court as a Conditional Purchase, while portion 2 was on a lease that had the potential to be converted to free hold, while portion 3 was not convertible. Archaeological Site 1 is located on portion 3. The Parish Map of 1926 notes that portion 2 was in the hands of the Government Savings Bank of NSW, potentially indicating the property was mortgaged to purchase the land, which had become Conditional Purpose. The Map of 1943 shows that all three portions were in the hands of the Savings Bank and then later the Commonwealth Bank. Portion 1 was transferred to H.A. MacTavish, although the date is unclear. The property remained in the Court family until 1949 when it was sold to R.C. Adams (Durrant & Roworth 1973:90). In personal communication with local property owners John and Sharmin Bailey in February 2012, they stated that Bill and Helene Adams lived there in "very rustic houses" the main one of which consisted of "two rooms and a closed veranda" (the homestead). The Adams' called the property Doona. After their occupation, John and Sharmin Bailey purchased the property on behalf of their daughter and son-in-law, Sue and Paul Nixon. The Bailey's ran the property on behalf of the Nixons, who were living in Brisbane. During their management the Bailey's burned the homestead and bulldozed the remains. The Bailey's stated that they sold the property to "one of the other Clifts" who held it until Shenhua Watermark took ownership.

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APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Flakenhoe is of local historical significance as it demonstrates the development of a rural property. Flakenhoe demonstrates the move from squatter run to a Settlement Lease to a Conditional Lease. The range of buildings on the site also demonstrates the establishment and subsequent use, modification and abandonment of a rural settlement from mid 1890s through to the recent past.
Historical association significance SHR criteria (b)	Flakenhoe does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Flakenhoe does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Flakenhoe does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Flakenhoe is of local research significance as it has archaeological deposits with the potential to yield information regarding life from the mid 1890s in the Breeza area. This includes the nature and extent of the Flakenhoe Homestead and the goods used in and around the House. There is also archaeological potential to determine the use of the blacksmith's shed and the form and function of the brick structure associated with the shed and silo. There is a lack of information regarding the rural farming landscape.
Rarity SHR criteria (f)	There is insufficient information currently available to assess the archaeological site of the Flakenhoe homestead against this criterion.
Representativeness SHR criteria (g)	There is insufficient information currently available to assess the archaeological site of the Flakenhoe Homestead against this criterion.
Integrity	The former Homestead site, despite being bulldozed, is of high integrity as the bulldozer does not appear to have impacted subsurface deposits. There has been no subsequent use of the site.

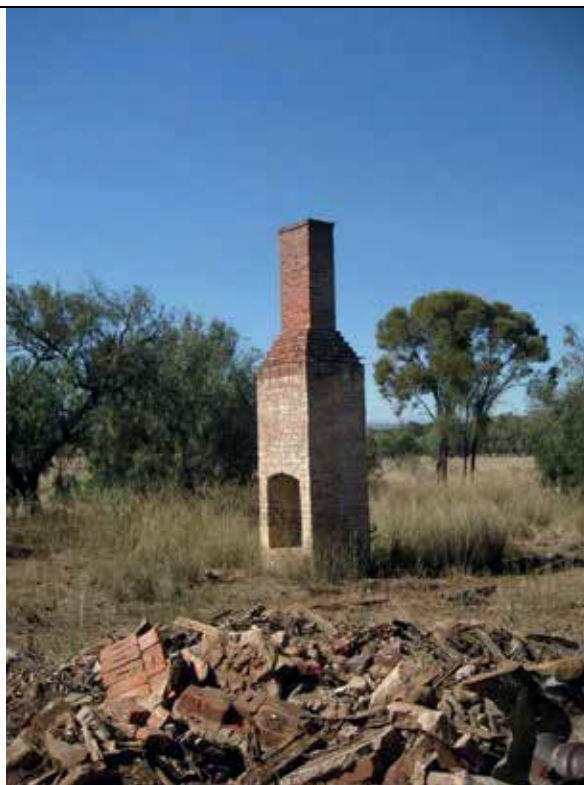
HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	Within Disturbance Boundary and will require removal.
Recommendations	Homestead: - Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation of cottage to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing. Brick Structure: - Archaeological test excavation of cottage to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing. Workshop: - Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation of cottage to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing.

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Image caption	Farm Complex 14 – Flakenhoe Homestead Chimney and rubble, view south east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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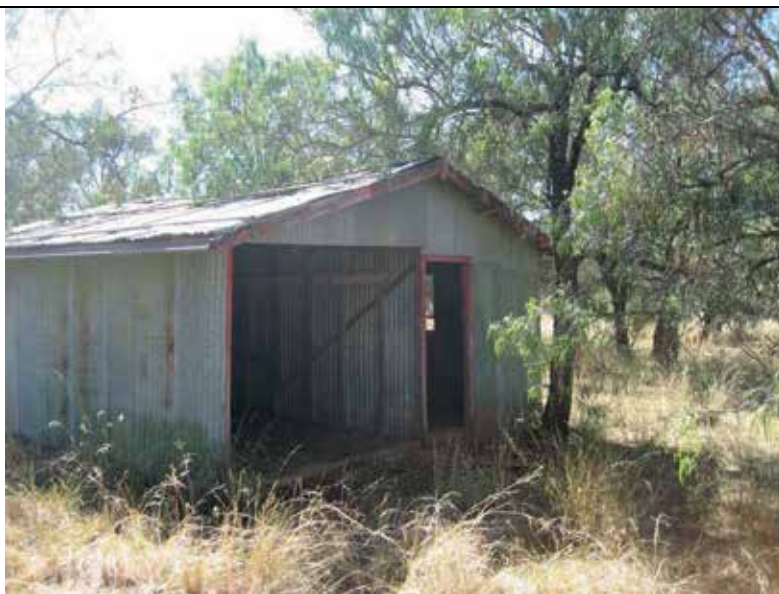
Image caption	Farm Complex 14 – Flakenhoe Homestead Chimney. View south south-west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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Image caption	Farm Complex 14 – Corrugated iron shed associated with Flakenhoe Homestead Chimney. View north north-east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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Image caption	Farm Complex 14 – Brick structure site overview showing shearing shed and silos. Brick rubble is located to the left of image (not visible). View south.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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Image caption	Farm Complex 14 – Brick Structure site showing rubble. View east.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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Image caption	Farm Complex 14 – Shed. View north.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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Image caption	Farm Complex 14 – Shed detail showing bark sheeting.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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Image caption	Farm Complex 14 – Workshop, view north north-west.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



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Image caption	Farm Complex 14 – Workshop interior.				
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ITEM DETAILS						
Name of Item	Farm Complex 15 - Lilyfield					
Other Name/s Former Name/s						
Area, Group, or Collection Name						
Street number						
Street name	Whitby Road					
Suburb/town	Breeza	Postcode	2381			
Local Government Area/s	Gunnedah					
Property description						
Location - AMG (if no street address)	Zone	56	Easting	243687	Northing	6542474
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	House and farm					
Former Use	House and farm					
Statement of significance	The Lilyfield Complex is of local historical, research and representative significance. Lilyfield demonstrates the historical development of the area and the archaeological site of the homestead and associated structures has the potential to add to the present limited understanding of rural life and availability of goods and materials from the early 1900s in the Breeza area. Due to consistent use of the homestead as an intergenerational dwelling it also has the potential to add to knowledge of changing living conditions and building modification from the early 1900s up to present day.					
Level of Significance	State ☐			Local ☒		

DESCRIPTION						
Designer						
Builder/ maker						
Physical Description	Lilyfield is a collection of farm buildings that appears to have been constructed haphazardly and as the need required. There are at least two dwelling structures on the property. In personal communication with occupant Joan Gaynor in February 2012, she stated that the Lilyfield Homestead (which she was living in at the time with her son Chris Gaynor) had originally consisted of three bedrooms and a kitchen. This original house had been added to over time, with extensions made around the core of the initial structure. Joan's mother-in-law and father-in-law (John and Harriet Gaynor) had built the original house, she estimated approximately 100 years ago. Joan stated that John and Harriet Gaynor had first lived in a hut on the boundary of the property, possibly towards Whitby Road, but she was unclear regarding the exact location. That early hut had long ago been demolished. An old shed located near the homestead was the only structure Joan identified apart from the house that had been built before she came to live there 60 years ago. She also stated that the current shearing shed had been built approximately 60 years ago, located on the same spot as an older lean-to shed that had also been used for shearing.					
Physical condition and Archaeological potential	The archaeological potential is high. The homestead structure is still intact and occupied, with a high likelihood of intact subfloor deposits remaining. It is further considered likely that deposits may remain intact beneath the current shearing shed that are associated with the original shearing structure.					
Construction years	Start year		Finish year		Circa	☐
Modifications and dates						
Further comments						

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HISTORY	
Historical notes	Lilyfield was initially part of the timber reserve gazetted in November 1880. It was then taken as a Homestead Selection by Theresa Ann Gaynor in 1899. John Gaynor, Theresa's son, undertook a Conditional Purchase in 1915. According to personal communication with property occupant Joan Gaynor in February 2012, it was John Gaynor who developed the property. John Gaynor married Harriet Leonard in 1914 and they had six children together, consisting of five sons and one daughter. The land was said to have been heavily timbered and required clearing before crops could be planted (Curlewis Centenary Committee 1985:93). Joan Gaynor was originally from Sydney and moved to Lilyfield in the 1950s following her marriage to the youngest son of John and Harriet, Leo Gaynor. Leo purchased the property after the death of his parents. He and Joan had six children together, consisting of five sons and one daughter. The family estate was used by the Gaynors throughout the generations to run sheep and cattle and to grow grain, including wheat and barley. Joan Gaynor advised in personal communication in February 2012 that her son Chris Gaynor was still currently living at the Lilyfield Homestead along with her. While Chris continues to manage Lilyfield, the property is now owned by Shenhua Watermark.

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	Lilyfield is of local historical significance as it demonstrates the historical development of the area, from the nineteenth century through to the present day.
Historical association significance SHR criteria (b)	Lilyfield does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	Lilyfield does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	Lilyfield does not meet this criterion as it does not have strong or special associations with the community.
Technical/Research significance SHR criteria (e)	Lilyfield is of technical/research significance as it possesses high archaeological potential. The homestead structure is still intact and occupied, with a high likelihood of intact subfloor deposits remaining. It is considered likely that deposits associated with the shed would also possess good integrity and archaeological potential. It is further considered likely that deposits may remain intact beneath the current shearing shed that are associated with the original shearing structure. Investigations of the archaeological potential of this item have the potential to add to the present limited understanding of rural life and availability of goods and materials from the early 1900s in the Breeza area. Due to consistent use of the homestead as an intergenerational dwelling it also has the potential to add to knowledge of changing living conditions and building modification from the early 1900s up to present day. Such information would otherwise be unobtainable from other sources.
Rarity SHR criteria (f)	There is currently insufficient information to assess Lilyfield against this criterion.
Representativeness SHR criteria (g)	Lilyfield is of representative significance as it provides a good representative example of a late 1890s or early 1900s vernacular cottage with associated farm structures.
Integrity	

HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	Within the Disturbance Boundary and will require removal.
Recommendations	- Full archival recording (including scale drawing and photography) prior to and during demolition. The recordings will comply with the Heritage Branch guidelines <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items using Film or Digital Capture</i> (2006). - Archaeological test excavation of cottage to determine nature, extent and significance of archaeological deposits. - Archaeological salvage if warranted by the testing.

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Image caption					
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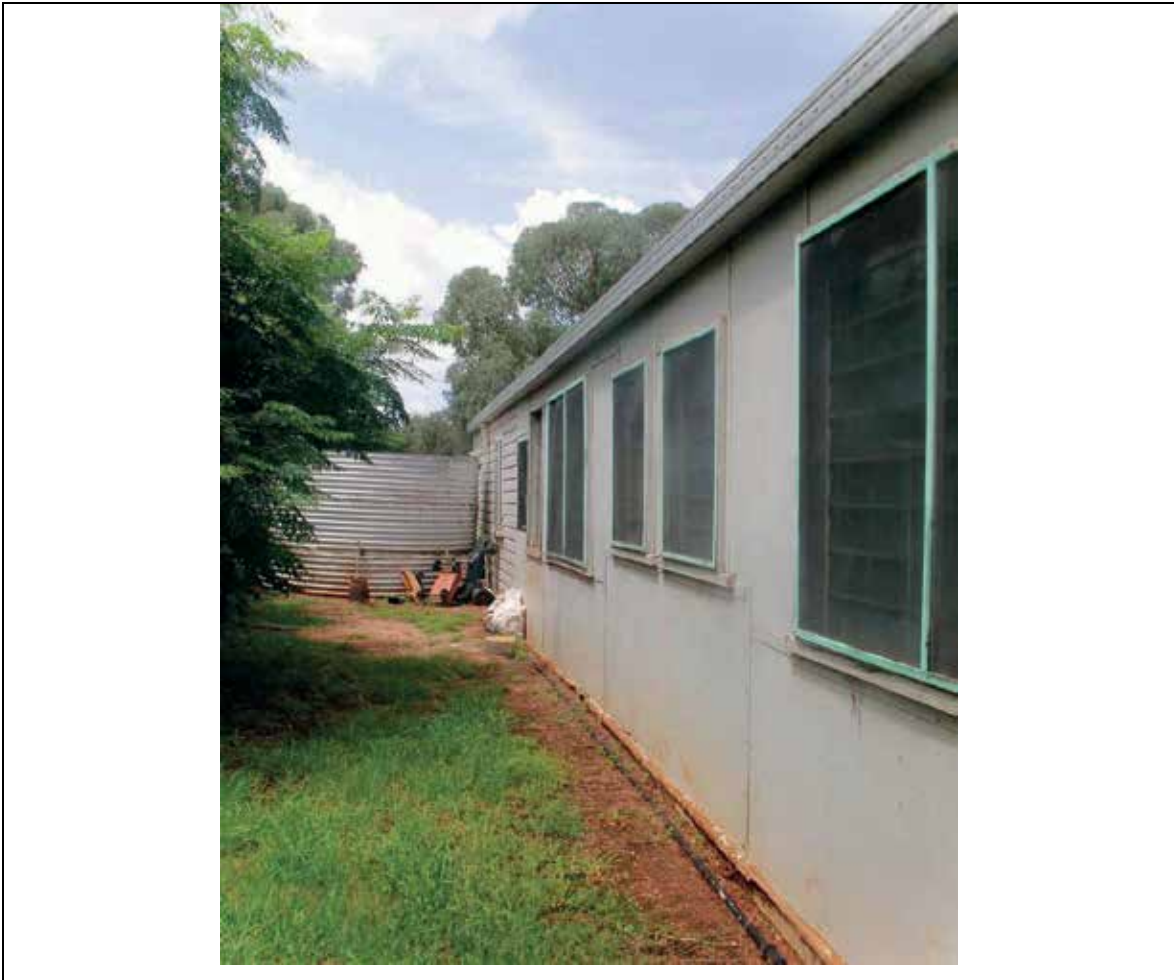
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Image year	2012	Image by	Dr Susan Lampard	Image copyright holder	AECOM



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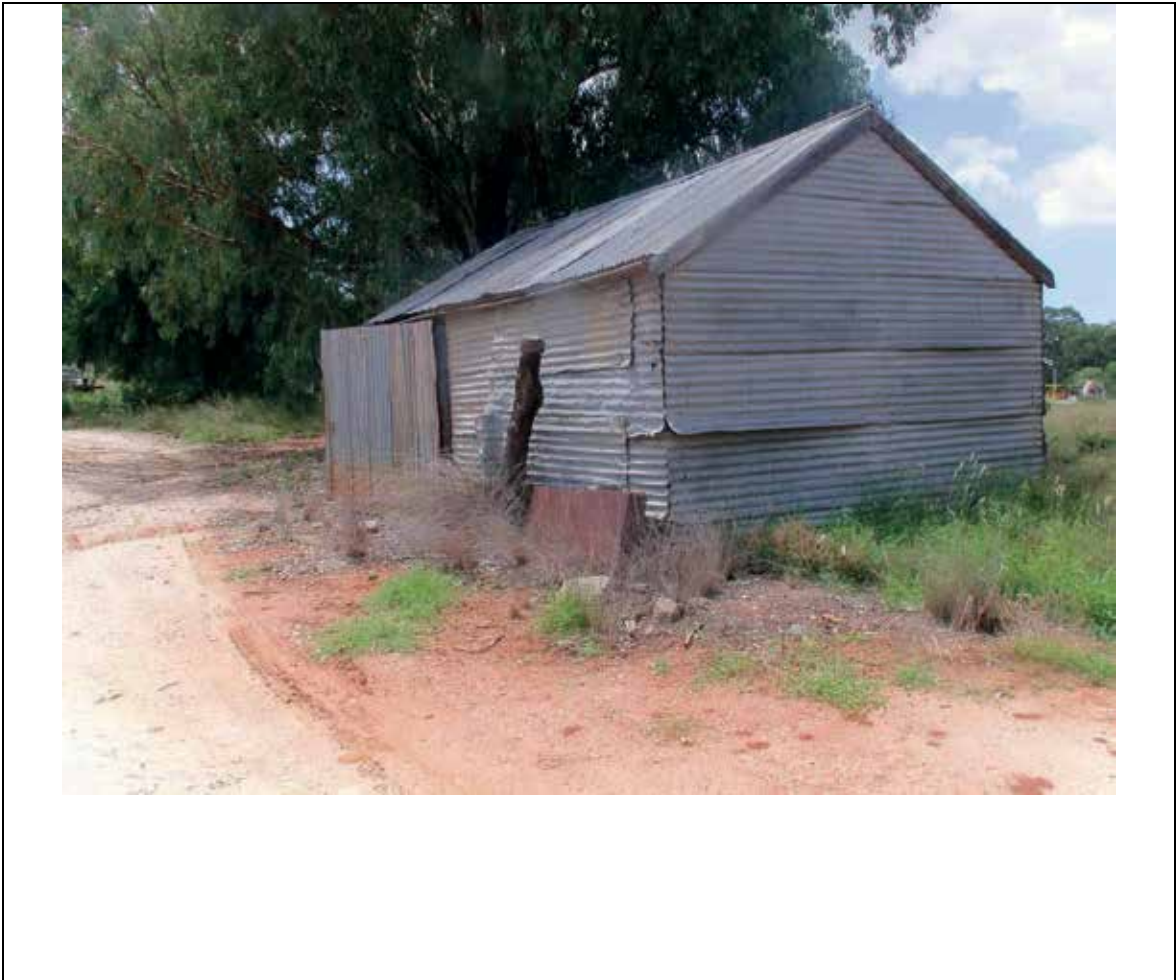
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Image caption					
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ITEM DETAILS						
Name of Item	Watermark Public School (former)					
Other Name/s Former Name/s						
Area, Group, or Collection Name						
Street number						
Street name	Colley Road					
Suburb/town	Breeza		Postcode	2381		
Local Government Area/s	Gunnedah					
Property description	On the south western corner of the intersection of Colley Road and Watermark Gully. Portion 131.					
Location - AMG (if no street address)	Zone	56	Easting	243687	Northing	6542474
Owner	Shenhua Watermark Coal Pty Ltd					
Current use	Farm field					
Former Use	School					
Statement of significance	The Watermark Public School site is of local historical and research potential. The potential archaeological deposits could reveal information regarding the operation of a rural provisional school. The Watermark Public School is of local historical significance as it demonstrates the course of local history in the area. The Watermark area was home to numerous new families who had taken up Homestead Selections and Conditional Purchases in the area from 1895 onwards. The life of the School charts the life cycle of the local community – from young families requiring a school, through the maturation of the children, most of whom left the community to find farms of their own or work elsewhere.					
Level of Significance	State ☐			Local ☒		

DESCRIPTION						
Designer						
Builder/ maker						
Physical Description	The School building was a weatherboard structure that was removed from the site sometime after 1918. The former location was covered in dried grass during the field survey, which limited ground visibility. No evidence of the site could be identified.					
Physical condition and Archaeological potential	The site has moderate archaeological potential.					
Construction years	Start year	1903	Finish year	1916	Circa	☐
Modifications and dates	N/A					
Further comments	N/A					

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HISTORY	
Historical notes	An application was made for a Provisional School at Watermark by local residence. The guidelines for a Provisional School were that there were more than 10 students, but less than 25. The parents were to provide the building and furniture, but the Government supplied the teacher, books and stationary (NSW Department of Education and Training 2003:17). A school at Watermark was approved by the Education Department on 2 September 1903. On 2 February the following year two acres was set aside for the school (Curlewis Centenary Committee 1985:52). Mr Waldemar Olling was appointed as teacher in April, but stayed less than a year, being replaced by Arthur Stanmore. Norman Rein followed in 1905 and stayed until 1907, when he was replaced by Sydney Trautwein. In 1909 John Abernethy became the teacher, followed by Hercules Crouch in 1910. Crouch stayed until 1913, when he was replaced by John Grant. In the same year the school was converted from a Provisional School to a Public School, indicating an enrolment of over 25 children. Grant was the longest serving teacher, staying until 1916, when Aubrey Towner was appointed. The school was closed at the end of 1916 (NSW Department of Education and Training 2003:136). <i>Curlewis Centenary 1885-1985</i> (1985:52) has a photograph of Maypole dancing out the front of the school building. The building is partly obscured by the activity in front, but can be described as a simple rectangular building with a gabled roof and a central chimney. There is not enough detail to determine the construction material of the chimney, the relevance being a brick chimney is more likely to leave an archaeological trace. The building is surrounded by a verandah on at least two sides, with one corner being enclosed with a screen. A water tank is also clearly visible to the rear of the building. The building was apparently moved to the Nea Public School after it was opened at the beginning of 1918 (Curlewis Centenary Committee 1985:52).

APPLICATION OF CRITERIA	
Historical significance SHR criteria (a)	The Watermark Public School is of local significance as it demonstrates the course of local history in the area. The Watermark area was home to numerous new families who had taken up Homestead Selections and Conditional Purchases in the area from 1895 onwards. The life of the School charts the life cycle of the local community – from young families requiring a school, through the maturation of the children, most of whom left the community to find farms of their own or work elsewhere.
Historical association significance SHR criteria (b)	The Watermark Public School does not meet this criterion as it does not have a strong or special association with the life or works of a person or group of persons of importance in state or local history.
Aesthetic significance SHR criteria (c)	The Watermark Public School does not meet this criterion as it does not demonstrate aesthetic characteristics or a high degree of creative or technical achievement.
Social significance SHR criteria (d)	The Watermark Public School does not meet this criterion as it does not have strong or special associations with the community at large. It does have strong and special associations with the Williams family.
Technical/Research significance SHR criteria (e)	The Watermark Public School is of local research significance as it has the potential to yield information regarding the operation of a provisional school in a rural setting between 1903 and 1916.
Rarity SHR criteria (f)	The Watermark Public School does not meet this criterion as they are not rare.
Representativeness SHR criteria (g)	The Watermark Public School does not meet this criterion as it is not representative.
Integrity	

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HERITAGE LISTINGS	
Heritage listing/s	Nil

RECOMMENDATIONS	
Impact	Outside Disturbance Boundary.
Recommendations	Manage heritage significance through Historic Heritage Management Plan.

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Image caption	View west across site of the former Watermark Public School.				
Image year	2011	Image by	Peter Howard	Image copyright holder	AECOM



Appendix B

Statements of Heritage Impact

Appendix B Statements of Heritage Impact

1.0 Introduction

The objective of a Statement of Heritage Impact (SOHI) is to evaluate and explain how the proposed development, rehabilitation or land use change will affect the heritage value of the site and/or place. A SOHI should also address how the heritage value of the site/place can be conserved or maintained, or preferably enhanced by the proposed works.

SOHIs have not been prepared for:

- Williams' Family Markers, Clift Coal Mine, Farm Complex 5 – Keinghton and Farm Complex 4 – Browns Corner as they were assessed as having no heritage significance; and
- site of the Watermark Public School as no potential impacts have been identified.

This report has been prepared in accordance with the NSW Heritage Office & Department of Urban Affairs and Planning *NSW Heritage Manual* (1996) and NSW Heritage Office *Statements of Heritage Impact* (NSW Heritage Office, 2002). The guidelines pose a series of questions as prompts to aid in the consideration of impacts due to the Project. The questions vary in the guideline, depending on the nature of the impact to the heritage site. In relation to Farm Complexes 1, 2, 6, 8, 9, 10, 11, 14 and 15 the set of questions related to demolition are the most appropriate:

- Have all options for retention been explored?
- Can all of the significant elements of the heritage site be kept and any new development be located elsewhere on the site?
- Is demolition essential at this time or can it be postponed in case future circumstances make its retention and conservation more feasible?
- Has the advice of a conservation consultant been sought? Has the consultant's advice been implemented?

For Farm Complexes 3, 7, 12, 13 and Watermark Public School, the questions addressed by this SOHI are 'New landscape works and features' (i.e. overburden emplacement areas, mining areas and mine infrastructure area) thereby altering the landscape:

- How has the impact of the new work on the heritage significance of the existing landscape been minimised?
- Has evidence (archival and physical) of previous landscape work been investigated? Are previous works being reinstated?
- Has the advice of a consultant skilled in the conservation of heritage landscapes been sought? If so, have their recommendations been implemented?
- Are any known or potential archaeological deposits affected by the landscape works? If so, what alternatives have been considered?
- How does the work impact on views to, and from, adjacent heritage sites?

The guideline also specifies the minimum supporting information required. In the case of sites of local significance, a Statement of Significance is required. These can be found in Section 6.0.

Due to the number of sites involved, the SOHIs have been grouped together by site type and impact to avoid repetition of information. SOHIs for Farm Complexes directly impacted by the Project have been undertaken as a group (See Section 1.1). A SOHI for sites visually impacted by the Project is provided in Section 1.2. A SOHI for sites indirectly impacted by blasting is provided in Section 1.3.

1.1 Directly Impacted Farm Complexes SOHI

The following SOHI relates to the Farm Complexes assessed as being directly impacted by the Project:

- Farm Complex 1 – Shar;
- Farm Complex 2 – Demeter;
- Farm Complex 6 – Cloveneden;
- Farm Complex 8 – The Watermark;
- Farm Complex 9 – Linavardi Hut;
- Farm Complex 10 – Barwo;
- Farm Complex 11 – Molonga;
- Farm Complex 14 – Flakenhoe; and
- Farm Complex 15 – Lilyfield.

1.1.1 Summary of Impact to heritage significance

The above sites are located within the Disturbance Boundary and will therefore be demolished. More specific individual impacts are outlined below.

Table 7 Summary of direct impacts

Farm Complex	Property	Summary of Impacts to heritage significance
Farm Complex 1	Shar	The proposed rail loop will run within 60 m of the site. The potential archaeological deposits, assessed as being of scientific significance are likely to be disturbed by the construction and operation of the line. Disturbance will impact on the integrity of the site and thereby its scientific significance.
Farm Complex 2	Demeter	Demeter is within the Disturbance Boundary and will be removed by open cut mining practices. As no element of the site will be retained, the assessed historical and scientific significance of the site will be irrevocably lost.
Farm Complex 6	Cloveneden	Cloveneden is within the Disturbance Boundary and will be removed by open cut mining practices. As no element of the site will be retained, the assessed historical and scientific significance of the site will be irrevocably lost.
Farm Complex 8	Watermark	The Watermark is within the Disturbance Boundary and will be removed by open cut mining practices. As no element of the site will be retained, the assessed historical and scientific significance of the site will be irrevocably lost.
Farm Complex 9	Linavardi Hut	Linavardi is within the Disturbance Boundary and will be removed by open cut mining practices. As no element of the site will be retained, the assessed historical and scientific significance of the site will be irrevocably lost.
Farm Complex 10	Barwo	Barwo is within the Disturbance Boundary and will be removed by open cut mining practices. As no element of the site will be retained, the assessed historical and scientific significance of the site will be irrevocably lost.
Farm Complex 11	Molonga	Molonga is within the Disturbance Boundary and will be removed by open cut mining practices. As no element of the site will be retained, the assessed historical and scientific significance of the site will be irrevocably lost.
Farm Complex 14	Flakenhoe	The Flakenhoe Complex is within the Disturbance Boundary and will be removed by open cut mining practices. As no element of the site will be retained, the assessed historical and scientific significance of the site will be irrevocably lost.
Farm Complex 15	Lilyfield	Lilyfield is within the Disturbance Boundary and will be removed by open cut mining practices. As no element of the site will be retained, the assessed historical and scientific significance of the site will be irrevocably lost.

1.1.2 Heritage Impact Assessment

Have all options for retention been explored?

The nature of open cut mining does not allow for the retention of the sites. For retention to be a viable option, there needs to be a use for the sites to ensure their continued survival and preservation. There is no viable function for the heritage components of the Farm Complexes within the Disturbance Boundary.

Underground mining would allow the retention of the heritage sites, but would also result in the sterilisation of significant viable open cut coal reserves and render the Project economically unfeasible. It is therefore considered to be beneficial to mitigate the impacts on these sites through archival recording, archaeological test excavation and salvage excavation, if warranted. This will ensure the archaeological potential of the sites is mitigated and the information retrieved can contribute to an understanding of the development of the Gunnedah area.

Can all of the significant elements of the heritage site be kept and any new development be located elsewhere on the site?

The Project has been designed to exploit the coal resource with minimal impact to a variety of factors. The nature of open cut mining does not allow the development to be located elsewhere as the excavation must be over the coal resource. As discussed above, underground mining is not economically feasible as it would result in the sterilisation of significant open cut coal reserves.

Is demolition essential at this time or can it be postponed in case future circumstances make its retention and conservation more feasible?

The development of the Project will be staged over a 30 year period with mining commencing in the Eastern Mining Area, then progressing to the Southern Mining Area in advance of the Western Mining Area. Sites in the Eastern Mining Area, Southern Mining Area and infrastructure areas, being Farm Complexes 1, 3, 6, 9 and 14, will require demolition during the initial construction phases of the Project. Therefore there is an opportunity to postpone the demolition of Farm Complexes 8, 10, 11 and 15 until the development of the Western Mining Area commences. However, delaying the demolition is unlikely to alter the feasibility of retention as it is highly probable the sites will remain within the mining areas. In addition, delaying the mitigation of these sites will result in a loss of context and information through their further deterioration and potential direct and indirect impacts through increased usage of the area.

Has the advice of a conservation consultant been sought? Has the consultant's advice been implemented?

This report outlines the advice of an historical archaeologist. The report has identified the sites, assessed the significance of the sites, and identified the impacts and proposed management recommendations. The implementation of the advice provided herein will be dependent on approval from DP&I.

1.1.3 Statement of Heritage Impact

From the detailed assessment against the Heritage Branch guidelines (NSW Heritage Office, 2002) a number of potential impacts have been assessed. These are graded to determine their impact against the significance of the site.

The impacts of the Project are summarised in Table 8.

Table 8 Summary of the nature of the direct impacts

Impact Type	Impact
Major negative impacts (substantially affects fabric or values of state significance)	None
Moderate negative impacts (irreversible loss of fabric or values of local significance; minor impacts on State significance)	The demolition of the Farm Complexes and their removal from the landscape will have a moderate negative impact to their significance. The Project will remove their historical significance, however, the archaeological investigation of the sites will result in a better understanding of the archaeology of the region.
Minor negative impacts (reversible loss of local significance fabric or where mitigation retrieves some value of significance; loss of fabric not of significance but which supports or buffers local significance values)	None
Negligible or no impacts (does not affect heritage values either negatively or positively)	None
Minor positive impacts (enhances access to, understanding or conservation of fabric or values of local significance)	The detailed historical and archaeological investigation of the sites will have a minor positive impact as the investigation will enable the gathering of information that would otherwise be overlooked within the rural context. There is a currently a gap in knowledge regarding the specifics of settlement in the Breeza/Watermark area. While the Project will necessitate the demolition of the sites, it also provides an opportunity to undertake research that has the potential to yield significant new information.
Major positive impacts (enhances access to, understanding or conservation of fabric or values of state significance)	None

1.2 Indirectly Impacted Farm Complexes SOHI: Visual

The following SOHI relates to the Farm Complexes assessed as being indirectly impacted by the Project:

- Farm Complex 3 – The Wilgas;
- Farm Complex 7 – Inverness;
- Farm Complex 12 – Tilbrook; and
- Farm Complex 13 – Wattle Vale.

1.2.1 Summary of impact to heritage significance

The visual impact assessment for the Project undertaken by JVP Visual Planning and Design (2012) (Appendix J of the EIS) concludes that the Project will impact on the landscape setting of Farm Complex 3 – The Wilgas, Farm Complex 7 – Inverness, Farm Complex 12 – Tilbrook and Farm Complex 13 – Wattle Vale.

Due to the proximity of the heritage sites to the Project, each will have a high sensitivity to changes in the existing landscape.

Northern Sector

Farm Complex 7 – Inverness is situated within the Project Boundary to the north of the Disturbance Boundary.

Due to the proximity, limited availability of surface features and direct line of sight, this heritage site will experience views to the Mine Infrastructure Area for the life of the Project resulting in a high visual effect and consequently a high visual impact.

Mt Watermark is a prominent feature in the landscape and shields the majority of views in the Eastern Mining Area during the early stages of the Project. At approximately Year 21, operations advance to the Southern Mining Area and then the Western Mining Area. Due to the proximity, limited availability of surface features and direct line of sight, this heritage site will experience views to the Southern and Western Mining Area during the final stages of the Project, resulting in a high visual effect and consequently a high visual impact. This impact will be reduced to moderate once the overburden emplacement area is fully constructed and low to very low as rehabilitation progresses and matures.

Once successfully rehabilitated, the elements of the Project will be substantially integrated into the existing landscape and the visual effect and overall visual impact will be negligible.

Eastern Sector

Farm Complex 3 – The Wilgas is situated within the Project Boundary to the east of the Disturbance Boundary.

Based on topography alone, views from this heritage site to the Mine Infrastructure Area will be shielded for the life of the Project.

During the initial years of operations, the Eastern Mining Area will create high visual effects and consequently high visual impacts on this heritage site. This impact will be reduced to moderate once the eastern face of the overburden emplacement area is fully constructed by Year 15 and low to very low as rehabilitation progresses and matures.

Once successfully rehabilitated, the elements of the Project will be substantially integrated into the existing landscape and the visual effect and overall visual impact will be negligible.

Western Sector

Farm Complex 12 – Tilbrook and Farm Complex 13 – Wattle Vale are situated within the Project Boundary to the west of the Disturbance Boundary.

Based on topography alone and other surface features, these heritage sites will be shielded from the Mine Infrastructure Area for the life of the Project and mining operations in the east until approximately Year 24. Visibility from the Western Sector to the Southern Mining Area is restrained by the hills and vegetation of the Breeza State Forest and other topographical features.

By Year 25, operations advance to the Western Mining Area within close proximity to these heritage sites creating a high visual effects and consequently high visual impacts during the final stages of the Project. This impact will be reduced to moderate once the overburden emplacement area is fully constructed and low to very low as rehabilitation progresses and matures. Once successfully rehabilitated, the elements of the Project will be substantially integrated into the existing landscape.

1.2.2 Heritage Impact Assessment

How has the impact of the new work on the heritage significance of the existing landscape been minimised?

As outlined in the visual impact assessment (JVP, 2012) (see Appendix J of the EIS), several mitigation measures to reduce visual impacts at sensitive viewing locations, including heritage sites, have been incorporated into the design and operation of the Project, including:

- Maintaining existing topography (i.e. Mt Watermark, Smokey Point, Black Mountain and a significant hill on the Springhurst property); and
- Progressive rehabilitation of overburden emplacement areas and disturbed areas.

If required, offsite mitigation measures, such as tree screening or plantings, can be implemented to reduce the visual impact to landscapes surrounding heritage sites further.

Has evidence (archival and physical) of previous landscape work been investigated? Are previous works being reinstated?

No previous landscape work has been conducted in the vicinity of the Project, however, a visual impact assessment has recently been undertaken by JVP (see Appendix J of the EIS) to define the character of the surrounding landscape, assess the visual impacts of the Project and recommend measures to mitigate and manage these impacts.

Has the advice of a consultant skilled in the conservation of heritage landscapes been sought? If so, have their recommendations been implemented?

A visual impact assessment has recently been undertaken by JVP for the Project (see Appendix J of the EIS). As described above, several mitigation measures to reduce visual impacts at sensitive viewing locations, including heritage sites, have been incorporated into the design and operation of the Project.

Are any known or potential archaeological deposits affected by the landscape works? If so, what alternatives have been considered?

The heritage sites to be directly impacted by the Project have been addressed in Section 1.1. This SOHI deals with the visual impacts to the surrounding heritage sites only.

How does the work impact on views to, and from, adjacent heritage sites?

As outlined in Section 7.2.2 and 1.2.1 the Project will impact on the landscape setting of Farm Complex 3 – The Wilgas, Farm Complex 7 – Inverness, Farm Complex 12 – Tilbrook and Farm Complex 13 – Wattle Vale.

1.2.3 Statement of Heritage Impact

From the detailed assessment against the Heritage Branch guidelines a number of potential impacts have been assessed. These are graded to determine their impact against the significance of the site.

The nature of the impacts is summarised in Table 9

Table 9 Summary of the nature of the indirect visual impacts

Impact Type	Impact
Major negative impacts (substantially affects fabric or values of state significance)	None
Moderate negative impacts (irreversible loss of fabric or values of local significance; minor impacts on State significance)	None
Minor negative impacts (reversible loss of local significance fabric or where mitigation retrieves some value of significance; loss of fabric not of significance but which supports or buffers local significance values)	The change in the visual landscape of Farm Complex 3 – The Wilgas, Farm Complex 7 – Inverness, Farm Complex 12 – Tilbrook and Farm Complex 13 – Wattle Vale will have a minor negative impact to their significance when visual impacts are high. Once rehabilitated, the elements of the Project will be substantially integrated into the existing landscape and the visual effect and overall visual impact will be negligible.
Negligible or no impacts (does not affect heritage values either negatively or positively)	None
Minor positive impacts (enhances access to, understanding or conservation of fabric or values of local significance)	None
Major positive impacts (enhances access to, understanding or conservation of fabric or values of state significance)	None

1.3 Indirectly Impacted Farm Complexes SOHI: Blasting

The following SOHI relates to the Farm Complexes assessed as being indirectly impacted by the proposed Project:

- Farm Complex 3 – The Wilgas.

1.3.1 Summary of Impact to heritage significance

Bridges Acoustics (2012) (see Appendix H of the EIS) concluded that the blast vibrations generated by the Project will not exceed the recommended vibration and overpressure criteria at all heritage sites.

1.3.2 Heritage Impact Assessment

How is the impact of the proposed Project on the heritage significance of the sites to be minimised in relation to blasting?

Blasting impacts include noise, ground vibration and overpressure at modified levels. These impacts have the potential to result in structural or cosmetic damage to heritage sites within the Project Boundary. The impacts of blasting from the Project on sites of heritage significance is to be minimised through the implementation of mitigation and management measures, including various blasting techniques, monitoring blasting of effects and conducting dilapidation surveys of the sites.

1.3.3 Statement of Heritage Impact

From the detailed assessment against the Heritage Branch guidelines a number of potential impacts have been assessed. These are graded to determine their impact against the significance of the site.

The nature of the impacts is summarised in Table 10.

Table 10 Summary of the nature of the indirect blasting impacts

Impact Type	Impact
Major negative impacts (substantially affects fabric or values of state significance)	None
Moderate negative impacts (irreversible loss of fabric or values of local significance; minor impacts on State significance)	None
Minor negative impacts (reversible loss of local significance fabric or where mitigation retrieves some value of significance; loss of fabric not of significance but which supports or buffers local significance values)	None
Negligible or no impacts (does not affect heritage values either negatively or positively)	There will be negligible or no impact on heritage sites as all relevant criteria can be met by implementing relevant blast management techniques.
Minor positive impacts (enhances access to, understanding or conservation of fabric or values of local significance)	None
Major positive impacts (enhances access to, understanding or conservation of fabric or values of state significance)	None

Appendix C

Research Design

Appendix C Research Design

2.0 Research Design

2.1 Introduction

The following research design and test methodology was requested by the Heritage Council as part of the DGRs for inclusion in the historic heritage impact assessment.

The main aim of a research design is to develop a research framework that poses questions, which can be tested by the archaeological deposits. It ensures that even though the archaeological resource is being destroyed, the information is recovered and contributes to broader archaeological and historical knowledge.

The archaeological investigation of a group of sites offers a unique opportunity to examine the historical development of the Project Boundary and immediate surrounds and the Breeza area between c.1895 and the present. It is unique in that the sites are within close proximity, potentially spanning the period of closer European settlement in the region and of similar function (rural residential). In order to capture this opportunity a comparative and landscapes based approach, using the standing structures, through the proposed archival recording, and the associated material culture retrieved through the excavation has been taken¹. As the archaeology is largely undisturbed by later development, the integrity of the deposits allows for greater certainty in interpretation. Thus this is a rare opportunity and has the potential to contribute significantly to our historical understanding of the settlement and development of rural NSW.

In order to enable a comparative approach, the research design has been developed to encompass the nine sites proposed for archaeological testing:

- Farm Complex 1 – Shar;
- Farm Complex 2 – Demeter;
- Farm Complex 6 – Cloveneden;
- Farm Complex 8 –Watermark;
- Farm Complex 9 – Linavardi Hut;
- Farm Complex 10 – Barwo;
- Farm Complex 11 – Molonga;
- Farm Complex 14 – Flakenhoe; and
- Farm Complex 15 – Lilyfield.

The aim of the research design for the Project is to examine the standing structures in conjunction with the material culture and how the structures were placed in the landscape.

2.2 Archaeological Potential

The archaeological potential of a site can be defined as the potential of a site to contain archaeological relics, as defined by the *Heritage Act 1977*. The potential is determined by conducting research into the history of the site to determine what was there. This is then balanced by a consideration of what has occurred on the site, together with a physical inspection of the site and whether this is likely to have removed evidence of the uses identified during the historical research.

The disturbance of the sites, subsequent to the phase of occupation, has been limited as they were abandoned and infrequently visited. The exception is the structures at Shar and Flakenhoe, the dump associated with Demeter and the brick kiln and early hut associated with Watermark, whose demolition has impacted on the archaeological integrity of the sites. Despite demolition, it is acknowledged that the sites still retain the potential to contain deposits with ability to answer the defined research questions (See Section 2.5).

¹ Material culture refers to artefacts – on a historical site this can consist of glass, ceramic, bone, plastic, metal or any other material modified by the inhabitants. Material culture is usually retrieved from a site through excavation.

The sites are residential in nature and the archaeological potential of the site includes domestic artefact deposits, including yard sheet deposits, underfloor deposits and potential rubbish pits. The probability of encountering archaeological deposits is also strengthened by the lack of municipal rubbish disposal services during the period of interest.

On consideration of the above factors, the archaeological potential of all sites is deemed to be medium to high.

2.3 Archaeological Context

Despite a search of the NSW Heritage Branch Library, Mitchell Library, the Gunnedah Shire Library and the University of Sydney Archaeology On-line: Grey Literature Project, no reports relating to the archaeological excavation of a site in the Gunnedah LGA was found. The search was extended to the Tamworth Regional Council LGA, also without result. The investigation of rural sites to date appears to have been limited within the broader region. This is likely due to a relative lack of large scale development in the region necessitating archaeological excavation. The potential, therefore, of archaeological investigations at Watermark expanding our understanding of the region is elevated.

2.4 Archaeological Significance

This section examines the archaeological significance of the sites as a group, using Heritage Branch guidelines *Assessing Significance for Sites and 'Relics'* (2009). The guideline suggests two approaches to assessing archaeological significance. The first is a traditional approach, which is focused on determining whether archaeological investigation is likely to "add to the knowledge of the past in an important way, rather than merely duplicating known information or information that might be more readily available from other sources such as documentary records or oral history." This can be determined by addressing a set of three questions, outlined below. The second is a broader approach, which examines the site as a whole. As the sites as a whole have been assessed in Section 6.0, this section will focus on addressing the traditional approach.

Below is the framework suggested by the Guidelines for a traditional archaeological significance assessment and the responses relevant to the Project.

1. Can the sites contribute knowledge that no other resource can?

Other resources can include documentary records and oral histories. The documentary records for the Project Boundary and immediate surrounds are sparse. To date, no detailed maps of the area, beyond the Parish Plans, have been identified to indicate the nature and extent of settlement in the area. Crown Plans have provided some additional details regarding the subdivision of the area and its closer settlement. Even when the information from this sparse resource is collated, it can provide limited insight into the realities of establishing a farm in central NSW from 1895 onwards.

The current farmers of the Project Boundary and immediate surrounds took up farms in the 1950s and, although many had grown up in the area, their ability to provide details regarding the daily life and challenges of their predecessors is limited. Conversations with farmers during the field survey indicated that this sort of information held little relevance or interest to them. They therefore did not remember such details or it was difficult to elicit this information from them.

The archaeological deposits will therefore contribute knowledge regarding the settlement of the Project Boundary and immediate surrounds from 1895 onwards with a level of detail that is not available from the documentary and oral sources.

2. Can the sites contribute knowledge that no other site can?

There is reasonable probability that there are similar sites within the region and NSW more broadly. However, as the sites are proposed for removal, there will not be the opportunity to revisit the archaeology in the future. These sites can contribute knowledge specific to the local area that no other sites can.

In addition, the Project provides a unique opportunity to examine a group of rural residential properties that may not occur again. The opportunity to excavate the sites using the same research design and methodology will result in datum that is comparable in a manner that is unlikely to occur when sites are excavated individually.

3. Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?

The archaeology of rural settlement in the Gunnedah LGA, and probably rural NSW more generally, is currently poorly understood, with no known previous archaeological assessments in the LGA. Despite the dominant place farming and rural life held in the construction of Australian identity, there is little understanding of the realities of daily life on the land, on access to goods and services, the difference in standards of living between the urban and rural areas and so on. The archaeology of the Project Boundary and immediate surrounds has the potential to add substantially to our knowledge of the settlement of the Project Boundary, immediate surrounds and central NSW more broadly. Further, it has the potential to answer questions about the reality of daily life on the land, which is poorly understood from an archaeological perspective, in comparison to urban areas.

2.5 Research Questions

The following research questions have been developed in light of the objective specified above – to archaeologically examine the reality of daily life on the land. With the exception of Flakenhoe, Shar and The Watermark, the structures are still standing and the archaeology is therefore not focused on answering questions regarding the structures, but how they were used and what can be learnt about domestic life in the area from the material culture:

- What does the material culture reveal about the standard of living within the Project Boundary and immediate surrounds?
- Does the material culture indicate that access to goods was limited by isolation or is there evidence of personal preference (determined through variations between the sites), indicating access to wider markets? And does this change over time?
- If suitable comparative sites can be found, does the material culture differ from urban sites of a similar period? This comparison may also help answer questions relating to access to markets.
- Is there a difference in the material culture related to the initial settlement of the area as indicated by the rudimentary cottages of Cloveneden, Linavardi Hut, Barwo, Molonga and the former Boundary Rider's hut on Demeter, in comparison to the later, more permanent houses at Cloveneden, Flakenhoe, Lilyfield and Shar?
- Is there a difference in the material culture relating to the WWI soldier settlement of Cloveneden and Linavardi in comparison to that of the other sites?
- What can or does the material culture reveal about the settlers attitudes to the dominant social ideologies of respectability (the cult of domesticity) and consumerism within a rural context, particularly in relation to the role of women and children within an environment traditionally seen as male-dominated?
- What can the spatial arrangement of the homesteads reveal about land use? Can a rationale for the site selection be identified?
- What do the homesteads, their construction, modification and extension, indicate about:
 - The initial expectations of those who settled the land; and
 - The changing fortunes of the settlers;
- Is there evidence of changing ownership in the structure, fittings or finishes?

In relation to the brick kiln associated with Watermark, the following research questions are proposed:

- Is the site intact enough to provide an understanding of the brick making process undertaken at the site?
- If so:
 - Is there evidence of what method was used to form and fire the bricks?
 - Does this indicate an understanding of brick-making or was there a period of trial and error as evidenced by a high number of wasters etc?
 - Is there evidence for associated structures or industry?

2.6 Methodology

The methodology is comprised of three parts:

- Monitoring of the Shar and Watermark (Section 2.6.1);
- Test excavation of the balance of sites listed in Section 2.0 (Section 2.6.2); and
- Archaeological salvage, if warranted (Section 2.6.3).

The approach for each retrieval method is outlined below.

2.6.1 Monitoring

As the Shar and Watermark sites have been disturbed to an unknown extent, the sites should be monitored during construction to determine the nature, extent and significance of the sites.

The monitoring of the Watermark homestead and the brick kiln and early hut site at Watermark should be carried out in the following manner and by a suitably qualified archaeologist:

- Clear vegetation by slashing or other non-invasive method;
- Undertake a surface inspection to identify whether artefacts are exposed on the surface and collect if present;
- Initial removal of 100 mm deep scrapes with a straight bladed bucket while an archaeologist monitors for artefacts or features;
- The archaeologist may alter the depth of the scrapes based on the conditions and archaeological findings; and
- Monitoring and/or recording (procedure specified below) to continue until the archaeologist is satisfied that the archaeological potential of the site has been exhausted.

Should archaeological monitoring reveal substantial, intact or significant archaeological features, deposits and/or relics be uncovered, construction should cease and the archaeologist/s be given sufficient time to record the sites. The following recording program should be implemented.

- Establish a survey datum to record the location of the features, deposits and/or relics;
- Archaeological excavation and/or cleaning with hand tools, as required, in order to define the feature, deposits and/or relics;
- Produce scaled plans and cross-sections as required;
- Photographically record all phases of the monitoring and recording with an appropriate photographic scale;
- Complete a context recording form completed for each feature, context and/or spit which should be sequentially numbered and record the location, dimensions and characteristics of the feature, context and/or spit; and
- Artefacts should be bagged according to the feature, context and/or spit from which they were retrieved.

2.6.2 Test Excavation

The methodology is centred upon the retrieval of material culture, as discussed in Section 2.3. The basic methodology for the test excavation is to excavate a maximum of four test squares at each site to determine the archaeological potential. The location of the squares has been devised to test the potential of the underfloor deposits with one or two trenches and the potential for sheet yard deposits or rubbish pits with the other two trenches.

The following should guide the excavation of the squares:

- The location of the squares should be recorded, in relation to the extant structures and other features, using Differential Global Positioning System to produce a detailed site plan;
- Squares during the test excavation phase should be limited to 1 m² in each instance;

- Squares should not be placed adjacent to another test trench;
- The squares should be excavated according to context, or in 20 mm spits in the absence of identifiable contexts;
- Spoil from the squares should be sieved through 3 mm mesh and all artefacts retrieved;
- Artefacts should be bagged according to the feature, context and/or spit from which they were retrieved; and
- Squares should be excavated to sterile soil or until safe working limits are reached.

In relation to recording, the following should be undertaken:

1. A plan of the site prior to excavation;
2. Standardised context recording form completed for each feature, context and/or spit which should be sequentially numbered and record the location, dimensions and characteristics of the feature, context and/or spit;
3. A plan of features and contexts (if found) prior to excavation;
4. Plan and sections of the trench on completion of excavation;
5. Photographic record of the excavation including the site prior, during and on the completion of the excavation using an appropriate photographic scale.

On the completion of the excavation artefacts retrieved should be entered into a database containing the following as a minimum:

1. Unique artefact number;
2. Test square number;
3. Context/spit number;
4. Material type;
5. Form/function;
6. Colour/decoration;
7. Dimensions;
8. Weight; and
9. Additional comments if necessary.

The artefact database should be developed with regard to quantity and nature of the material retrieved. Once catalogued and analysed the artefacts should be kept by Shenhua Watermark in a secure location.

A report should be produced detailing the excavation, including the implementation of the methodology, the results of the excavation, analysis of artefacts retrieved (if any) and an assessment of the ability of the information to answer the research questions provided in Section 2.5, together with discussion of answers provided. The following headings should be used as a minimum and should include any additional requirements included in the excavation permit:

1. Executive Summary;
2. Introduction;
3. Site History;
4. Methodology;
5. Excavation results, including descriptions of spits and or contexts and artefacts retrieved (if any);
6. Analysis;
7. Conclusion and future management recommendations.

2.6.2.1 Location of the test squares

The following section indicates the proposed location of the test excavation squares for each site. In some instances it has been difficult to propose location due to heavy ground cover during the inspections. In these instances the locations of one or two squares has been allocated, with the remaining squares to be placed after vegetation clearance and detailed inspection of the underlying ground surface.

The rationale for the location of the trenches is provided below.

- Demeter – Four test squares are proposed to cover the Boundary Rider's Hut and dump:
 1. Within the area to the south of the present cottage, identified as the location of a former Boundary Rider's cottage associated with Breeza Station;
 2. Within the area to the south of the present cottage, identified as the location of a former Boundary Rider's cottage associated with Breeza Station;
 3. Over the dump to test the depth and age of the deposits; and
 4. A second square to test the dump area, if warranted.
- Cloveneden – during the inspection the grass around the house was waist high, making the location of artefact scatters and potential rubbish pits unfeasible. The location of the test squares is therefore highly generalised and is based on previous experience regarding the location of such features. Four test squares are proposed for Cloveneden in the following general areas:
 1. Located between the rear of the house and the ice house to test the potential of the yard deposits;
 2. To the rear of the cottage to locate a rubbish pit;
 3. Within the cottage to test the potential of the underfloor deposits; and
 4. Within the house to test the potential of the underfloor deposits.
- Linavardi Hut – Three test squares are proposed within the vicinity of the hut:
 1. In front or to the north of the hut to test the potential of the yard deposits;
 2. To the rear of the hut in an area with potential for a rubbish pit; and
 3. To determine the nature of the feature located 95 m to the south east of the hut, if warranted once the undergrowth is cleared.
- Barwo – Three test squares are proposed within the vicinity of the hut:
 1. Within the cottage to test the potential of the underfloor deposits;
 2. The cottage as it stands does not have a chimney. It is therefore likely that there was a separate kitchen to the rear (north) or east of the cottage; and
 3. Third square to be placed based on the outcome of the above squares.
- Molonga - Three test squares are proposed within the vicinity of the hut:
 1. Within the cottage to test the potential of the underfloor deposits;
 2. To the rear of the cottage to locate a rubbish pit or to test the sheet yard deposits; and
 3. Third square to be placed based on the outcome of the above squares.
- Lilyfield - Three test squares are proposed within the vicinity of the hut:
 1. Within the cottage to test the potential of the underfloor deposits;
 2. To the north or west of the cottage is considered to be the most likely location to locate a rubbish pit. Square to be placed in this area based on detailed survey once vegetation is removed; and
 3. Third square to be placed based on the outcome of the above squares.

- Flakenhoe – The Complex includes three distinct areas and in order to adequately test the archaeological potential of each, these have been treated separately allowing for up to four test squares in each, although it is expected that two to three will be sufficient:

Homestead (Chimney) area:

1. To the south of the chimney to test the potential for underfloor deposits to have survived the demolition of the homestead. This area is considered to have higher potential as there appeared to be less bull dozer activity in the area;
2. Test square located based on a surface inspection with the objective of identifying the extent of the cottage;
3. To the south or east of the cottage is considered to be the most likely location to locate a rubbish pit. Square to be placed in this area based on detailed survey once vegetation is removed; and
4. Another area of interest, if warranted, identified during detailed inspection.

Brick structure:

1. Square to test the extent and form of the structure and the potential for underfloor deposits;
2. Second square to assist in the above, if required; and
3. In the vicinity of the artefact scatter identified to the south of the brick structure to determine the depth and possible extent.

Workshop area:

1. Within the blacksmith workshop to test the nature and extent of the deposits;
2. Survey the area to the south east of the workshop to locate the nuclei of the artefact scatter and test;
3. Square to test the artefact scatter located 95 m to the north east of the workshop; and
4. Another area of interest, if warranted, identified during detailed inspection.

2.6.3 Archaeological Salvage

The mitigation measures recommend the archaeological salvage of sites if test excavation determines it is warranted. The following criteria should be used to determine whether further excavation is required:

- The testing reveals intact deposits that have the potential to answer the research questions posed in Section 2.3;
- Where the deposits recovered during the testing were inadequate to answer the research questions, but where there is sufficient indication that further excavation has the potential uncover deposits that will answer the research questions; and
- Where the deposits have the potential to answer archaeological questions not foreseen by the research questions but deemed to be of interest by the archaeologist, NSW Heritage Branch or Heritage Council.