Vickery Coal Project

Environmental Impact Statement

APPENDIX J

NON-ABORIGINAL CULTURAL HERITAGE ASSESSMENT





VICKERY COAL PROJECT NON-ABORIGINAL HERITAGE ASSESSMENT

A REPORT FOR WHITEHAVEN COAL LIMITED

BY MICHAEL PEARSON HERITAGE MANAGEMENT CONSULTANTS PTY LTD.

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Attachments

Attachment A Description of Items of Heritage Significance within the Project Area

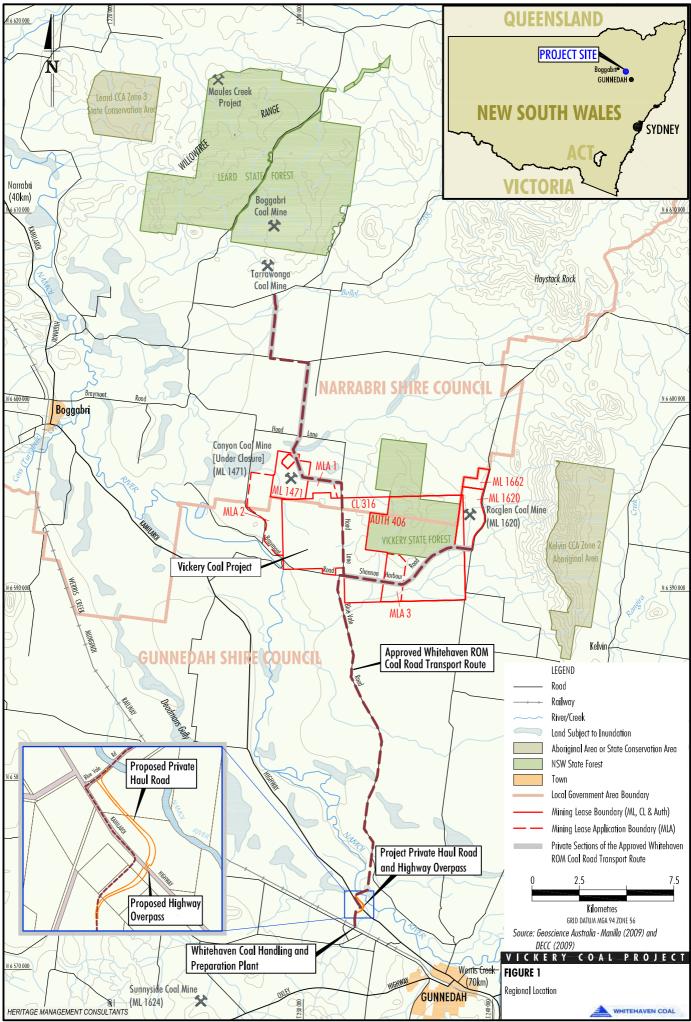
1. INTRODUCTION

1.1 BACKGROUND

Whitehaven Coal Limited (Whitehaven) is seeking approval to develop an open cut coal mining operation and associated infrastructure (herein referred to as the Vickery Coal Project [the Project]) under Part 4 of the New South Wales (NSW) *Environmental Planning and Assessment Act, 1979.* The proposed Project is located approximately 15 kilometres (km) south-east of the township of Boggabri, NSW (Figure 1), and located at the Vickery Coal Mine which ceased operation in 1998 and is currently in care and maintenance.

The key components of the proposed Project are summarised below:

- Development and operation of an open cut mine within Coal Lease 316, Authorisation 406, Mining Lease 1471, Mining Lease Application (MLA) 1, MLA 2 and MLA 3.
- Use of conventional mining equipment, haul trucks and excavators to remove up to 4.5 million tonnes per annum of run-of-mine (ROM) coal and approximately 48 million bank cubic metres of waste rock per annum from the planned open cut.
- Placement of waste rock (i.e. overburden and interburden/partings) within external emplacements to the west and east of the planned open cut (i.e. Western Emplacement and Eastern Emplacement) and within mined-out voids.
- Construction and use of a Mine Infrastructure Area, including on-site coal crushing, screening and handling facilities to produce sized ROM coal, workshops, offices and services.
- Transport of ROM coal by haulage trucks to the Whitehaven Coal Handling and Preparation Plant (CHPP) on the outskirts of Gunnedah (approximately 20 km to the south of the Project open cut) for processing.
- Use of an on-site mobile crusher for coal crushing and screening of up to 150,000 tonnes of domestic specification coal per annum for direct collection by customers at the Project site.
- Use an on-site mobile crusher to produce up to approximately 90,000 cubic metres of gravel materials per annum for direct collection by customers at the Project site.
- Construction and use of water supply bores, and a surface water extraction point on the bank of the Namoi River and associated pump and pipeline systems.
- Construction and use of new dams, sediment basins, channels, dewatering bores and other water management infrastructure required to operate the mine.
- Construction and use of new soil stockpile areas, laydown areas and gravel/borrow areas.
- Construction of a 66 kilovolt (kV)/11 kV electricity substation and 11 kV electricity transmission line.



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- Transport of coarse rejects generated within the Whitehaven CHPP via truck to the Project for emplacement within an in-pit emplacement area.
- Transport of tailings (i.e. fine rejects) generated within the Whitehaven CHPP via truck to the Project for emplacement within co-disposal storage areas in the open cut and/or disposal in existing off-site licensed facilities (e.g. the Brickworks Pit).
- Realignment of sections of Blue Vale Road, Shannon Harbour Road and Hoad Lane to the east and south of the open cut.
- Realignment of the southern extent of Braymont Road to the south of the open cut.
- Construction of an approximately 1 km long section of private haul road (including an overpass over the Kamilaroi Highway) between Blue Vale Road and the Whitehaven CHPP.
- Ongoing exploration, monitoring and rehabilitation activities.
- Construction and use of other associated infrastructure, equipment and mine service facilities.

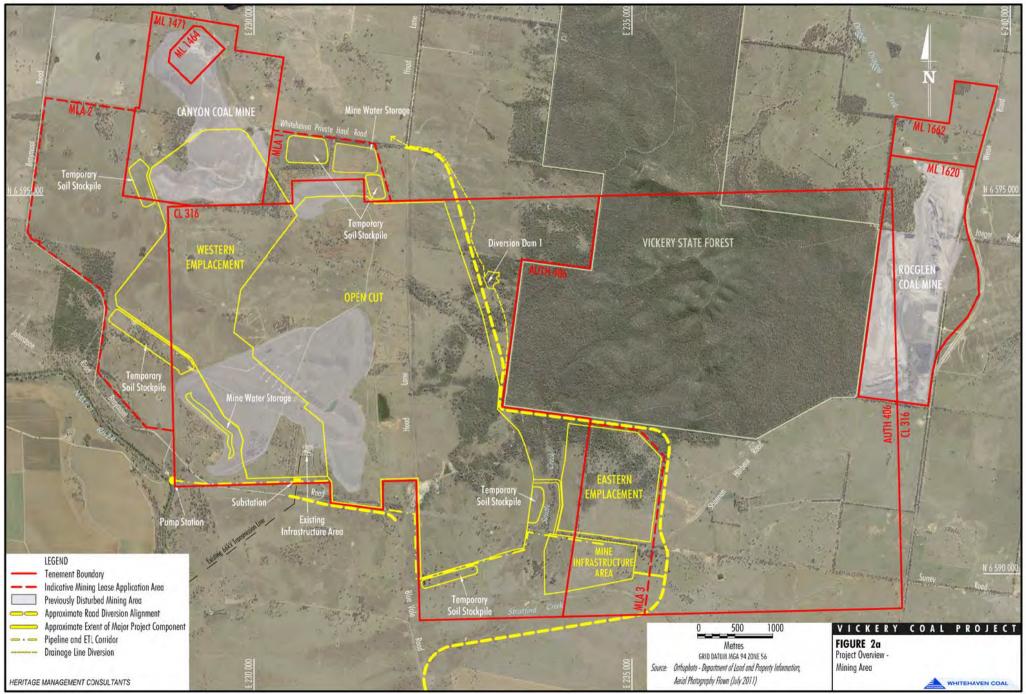
An indicative general arrangement of the Project open cut, waste rock emplacements and infrastructure is shown on Figure 2a, including the approximate extent of previous mining activities. Figure 2b shows the indicative general arrangement of the proposed section of private haul road and Kamilaroi Highway overpass near the Whitehaven CHPP.

In accordance with the Director-Generals Requirements for the Project, the preparation of a non-Aboriginal heritage assessment is required for inclusion in the Environmental Impact Statement for the Project. This report outlines the historical context of non-Aboriginal occupation of the Project area, and investigates existing heritage registers and related information to identify any heritage places that might be impacted by the Project. An assessment of the heritage significance of the identified places and the likely impacts of the Project on non-Aboriginal heritage is then made.

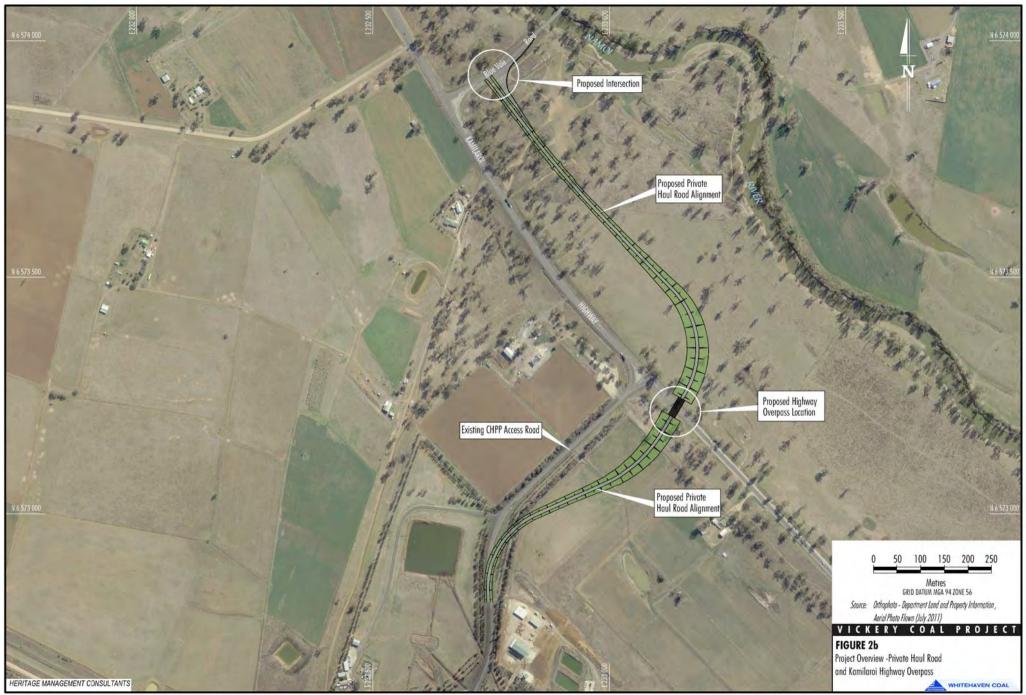
This assessment is based on an analysis of available documentation relating to the history and cultural heritage of the Project area, and on a field survey of the Project area. This report has been drafted in consideration of the relevant principles and articles contained in the Burra Charter (the Australian Branch of the International Council on Monuments and Sites [ICOMOS], 2000) and the NSW Heritage Manual (NSW Heritage Office and Department of Urban Affairs and Planning, 1996).

1.2 AUTHORSHIP

The research and assessment in this report has been undertaken by Dr Michael Pearson of Heritage Management Consultants Pty Ltd.



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1.3 ACKNOWLEDGEMENTS

The input and assistance of the following people is acknowledged with thanks.

Chris Thomas, Environmental Officer, Whitehaven Coal Limited. Josh Peters and Meghan Farr, Resource Strategies Pty Ltd.

1.4 METHODOLOGY

Historical and archival research was carried out, drawing particularly on the resources of the National Library of Australia and web-based sources including the maps of the NSW Department of Lands (Land and Property Management Authority's Parish Map Preservation Project, at <u>http://parishmaps.lands.nsw.gov.au/pmap.html</u>) and library collections nationally via the Trove search engine.

Heritage registers and databases were interrogated to identify any heritage places already identified in or near the Project area. This included the:

- Gunnedah Local Environmental Plan (LEP) 1998 Schedule 1, Heritage Items;
- Narrabri LEP 1992 Schedule 2, Heritage Items;
- Australian Heritage Database and Australian Heritage Places Inventory of the Commonwealth Department of Sustainability, Environment, Water, Population and Communities, which includes heritage registrations in the Register of the National Estate, the Commonwealth Heritage List, the National Heritage List, the World Heritage List and the registers of the States and Territories;
- Heritage Council of NSW's State Heritage Inventory, which includes *State Heritage Register* listings and local government *LEP heritage listings*; and
- National Trust Register (to 1995) and supplement (to 1997) (paper copies).

The Project area and adjacent land was inspected on the ground, targeting buildings and disturbed land evident on recent large scale colour aerial photographs, historical information and local knowledge. All areas subject to proposed development were traversed, as were all proposed haul roads. Features inspected are listed and assessed in Sections 4 and 5 below.

2. HISTORICAL OVERVIEW

2.1 EXPLORATION AND FIRST SETTLEMENT

Surveyor-General John Oxley passed to the south of Gunnedah Basin during his 1818 expedition, but it was Alan Cunningham during his 1827 expedition to the Darling Downs who discovered the Namoi River.¹

However, the first recorded European in the area was not an explorer, but the escaped convict George 'the Barber' Clarke, who lived with the Kamilaroi for five years from 1826, and based himself at Barbers Lagoon on Wilberoi Reserve, 6.4 km south-east of Boggabri, and rustled cattle from the squatters further south. His descriptions of the river system of the north-west prompted Surveyor-General Major Thomas Mitchell's expedition in 1831. Mitchell reached the Namoi ('Ngamaay' to the Kamilaroi) near Gulligal (approximately 2.4 km south-west of the Project area) on 16 December 1831. He found Clarkes' stockyard to the north, then traveled through the Leard Forest area looking for the Kindur River described by Clarke, before returning to the Namoi near Barber's Pinnacle ('Dhangguuldha') and moving on to the north.²

2.2 PASTORAL HISTORY

The Boggabri region was beyond the Limits of Location, the boundary of the Nineteen Counties that had been established by the Colonial Governor in 1829, within which settlement was sanctioned and could be more easily controlled. However, the promise for better grazing land 'further out' enticed pastoralists to send their stock beyond the 'Limits of Location', and the squatting boom followed, the area of the Liverpool Plains south of the Namoi being extensively squatted between 1831 and 1835.

Edward Cox's stockmen established his 'Namoi Hut' run at the confluence of the Namoi and Cox's Creek in 1835, having probably followed Cox's Creek north from the Mudgee area where the family had holdings, to its junction with the Namoi.³ The Namoi Hut property comprised of 19,200 acres by 1849.⁴ Others soon followed including I. Robertson (who was the first holder of Burburgate), Thomas Eather (on Hendriendi), Sir John Jamison (on Baan Baa to the north of Boggabri) and John Town (on Mikengowrie west of the Namoi opposite the Project area).⁵

¹ Feeken, E.H.J. & Feeken, G.E.E. 1970. *The discovery and exploration of Australia*, Nelson, Melbourne: Map 16

² Feeken & Feeken 1970: Map 16; Boggabri Adult Education Committee, 1957. *Boggabri, the story of our town.* Produced to commemorate the Golden Grain Festival, September 1957: 4.

³ Boggabri Adult Education Committee, 1957: 5.

⁴ Longmuir, J. (ed) 1956. *Gunnedah Centenary 1856-1956*. Gunnedah Centenary Committee: 17.

⁵ Boggabri Adult Education Committee, 1957: 7.

By the late 1830s it was clear that the Limits of Location were not in fact limiting the spread of settlement, and that the government was making no income from, or able to effectively control, the spread of squattages beyond the limits. Governor Bourke in 1836 introduced a licensing fee of ten pounds which every squatter had to pay each year for the right to depasture his stock on Crown land beyond the Limits of Location, the licensing system making it clear to the squatter that he was not the owner of the property, but a Crown tenant.⁶

As the government slowly came to grips with the reality of the spread of settlement, it created in 1839 eight pastoral districts ('squatting districts'), one of which, the Liverpool Plains District, included the Project area. By 1840 some 40 pastoral stations were already reported in the Liverpool Plains District. In 1847 the Orders-of-Council giving effect to a new *Leasing Act* of 1846, long-term leases became available in the pastoral districts that enabled graziers to occupy very large runs and secure freehold rights over key homestead blocks. In the Boggabri area this meant that leases of 14 years became available, with the squatter being able to purchase up to 640 acres at $\pounds 1$ per acre each year, to secure freehold over homestead and other improvements.⁷

John Panton took up two leases, at 'Boggybry' and 'Boggabri', in 1843 and 1844. Panton held six leases in the Namoi River and Liverpool Plains district, and 13 other runs in the New England, Macleay River and Wellington areas (Figure 3).⁸ Boggabri was listed as being 96 square miles (61,440 acres) in extent in 1849.⁹ William Charles Wentworth took up six leases in the Namoi River District and four in Liverpool Plains between 1837 and 1845, including the Burburgate run.¹⁰ The Well's Gazetteer of 1848 records 'Boggebrie. The station of J. Panton, in the district of Liverpool Plains, NSW, on the Nammoy River, 63 miles from Tamworth', and 'Burburgate. The station of W.C. Wentworth, in the district of Liverpool Plains, NSW, on the Nammoy River, 80 miles from Murrurundi.'¹¹ The proposed mining area is within the bounds of the Burburgate property, on what appears to have been the 'Bool' (or 'Bull') run in the 1840s.

Thomas Mort the Sydney merchant had acquired Boggabri station from Panton by 1866, which later passed to another Sydney merchant Ebenezer Vickery.¹²

⁶ Campbell, J.F. 1968. Squatting on Crown Lands in New South Wales, Royal Australian Historical Society, Sydney: 12, 15-16, 19, 24; McNaught, J. 1997. Index to Certificates of Depasturing Licences: Licence to Depasture Crown Lands beyond the Limits of Location 1837-1860, Richmond-Tweed Regional Library, Goonellebah: 2.

 ⁷ Roberts, S.H. 1935. *The Squatting Age in Australia 1835-1847*, Melbourne University Press, Carlton: 263-271; Boggabri Adult Education Committee, 1957: 7.

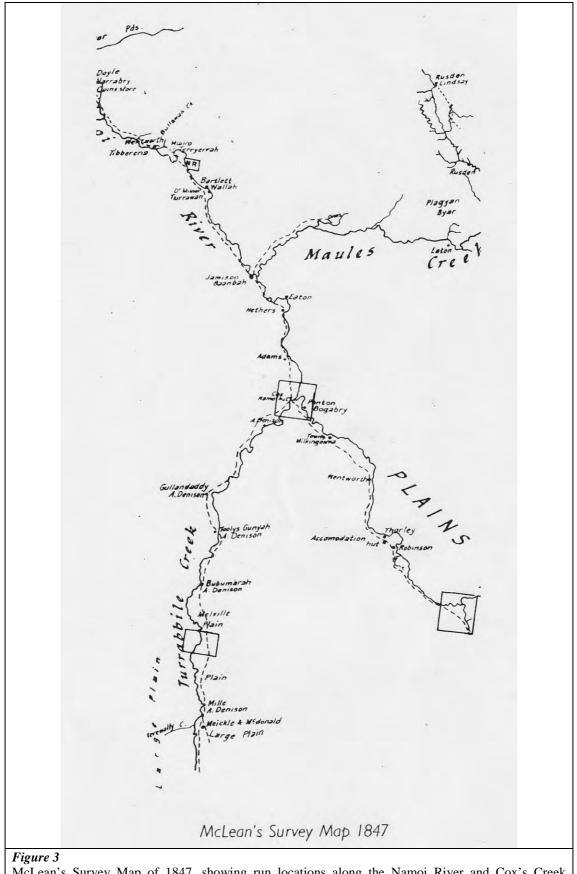
⁸ Listed in McNaught, J. 1997. Index to Certificates of Depasturing Licences: Licence to Depasture Crown Lands beyond the Limits of Location 1837-1860, NSW Archives AO Reel Numbers 5067-5081, Richmond-Tweed Regional Library, Goonellebah.

⁹ Longmuir 1956: 17.

¹⁰ McNaught 1997.

¹¹ Wells, W.H. 1848. A geographical dictionary, or, Gazetteer of the Australian colonies: their physical and political geography, together with a brief notice of all the capitals, principal towns, and villages, also of rivers, bays, gulfs, mountains, population, and general statistics. W. & F. Ford, Sydney: 61, 102.

¹² Boggabri Adult Education Committee, 1957: 11.



McLean's Survey Map of 1847, showing run locations along the Namoi River and Cox's Creek ('Turrabbile'). 'Panton Bogabry' is east of the project area. 'Wentworth' is Burburgate homestead area. Town's 'Mikengowra', west of the Project area, is below the Bogabry block. Source: Boggabri Adult Education Committee, 1957 Wentworth may have occupied Burburgate as early as the late 1830s, to the west of John Johnston's original Bulomin (Gunnedah) Run. The run was listed as being of 65,920 acres in 1849.¹³ In about 1848 John Charles Lloyd became the manager of the Burburgate run, and bought the property from Wentworth in 1853 (though there was a protracted legal battle with Wentworth over the sale arrangements). ¹⁴ John's brother, Edward Henry Lloyd, joined him in 1848, and became manager in 1853 when John returned to England, and Charles William Lloyd joined Edward at Burburgate in 1854 as assistant manager. In 1858 Charles succeeded Edward as manager and resident partner at Burburgate.¹⁵ The Lloyds also owned Ghoolendaadi, Turrawan, Gundemain, Edgeroi, Gurley and other properties in the Gunnedah/Narrabri districts. Oscar De Satge, who became assistant manager at Burburgate and the other Lloyd properties in 1859, indicates that Burburgate was the head station of the Lloyd empire, and had the largest woolshed on the river, with 40 shearers and cover for a day's clip of 1,500 sheep.¹⁶



Charles Lloyd was one of the first graziers to erect wire fences to delimit paddocks, and install steam-driven pumps for washing sheep, in 1856. Forty miles of wire fencing was built initially, which Lloyd claimed to be the first of its kind adopted in NSW, and indeed it has been observed that these were the first big paddocks fenced in Australia.¹⁷

In 1861 Charles Lloyd installed wool scouring machinery, and by 1869 much of the Burburgate wool was shorn in grease and scoured.¹⁸ In 1863 Charles was also successful in the innovation of dipping sheep against scab.

¹³ Longmuir 1956: 17.

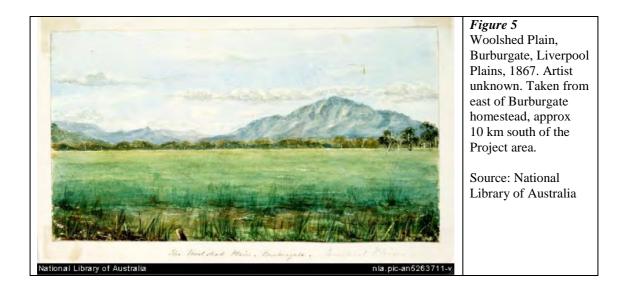
¹⁴ Abbott, G.J. 1974. 'Lloyd, Charles William (1830-1919)', *Australian Dictionary of Biography*, Vol 5, Melbourne University Press: 94-95.

¹⁵ Abbott, G.J. 1974. 'Lloyd, Charles William (1830-1919)', Australian Dictionary of Biography, Vol 5, Melbourne University Press : 94-95; McLean, R. 2006. The Way We Were: Sesquicentenary of Gunnedah 1856 – 2006. Gunnedah and District Historical Society, Gunnedah Shire Council.

¹⁶ De Satge, O. 1901. *Pages from the Journal of a Queensland Squatter*. Hurst and Blackett, London.

 ¹⁷ Walsh, G. 1993. *Pioneering Days: people and innovations in Australia's rural past*. Allen & Unwin, St Leonards, NSW: 13; Rolls, E. 1984. *A Million Wild Acres*. Penguin, Ringwood, Victoria: 166.

¹⁸ Rolls 1984: 176.



While Charles left for Sydney in 1863 and appears to have withdrawn from the family partnership, he is listed in 1866 as being the owner of Dripping Rock and five other runs in partnership with John. In the 1870s he moved again to the Namoi, to Tarriaro at Gulligal, just across the river from the Project.¹⁹

In 1865 Burburgate was acquired by Mort, Cameron and Buchanan, and subsequently by Ebenezer Vickery. Vickery (1827-1906) was a prominent merchant and manufacturer, and one of the largest land-owners and property speculators in NSW.²⁰ The property then came under the ownership of the Namoi Pastoral Company, which also acquired Lloyd's Edgeroi and Gundamain properties, approximately 30 miles out of Narrabri. There are press reports of the movement of stock between the properties in the 1880s.²¹

It is interesting to note that in 1866 Boggabri was a very small settlement with seven to eight houses, a hotel and about 50 people, while it was Gulligal, 15 km to the south-east, that was the postal township, both settlements being linked to the south with a twice-weekly coach service.²² The Gulligal settlement has ceased to exist, and is now farming land 2.4 km south-west of the Project.

The Burburgate Run was said in 1886 to comprise 220,000 acres, 'a struggling kind of run', of which 45,000 acres was freehold, and the property ran 60,000 sheep.²³ The NSW Department of Lands map 573244 of Burburgate property²⁴, stemming from the 1884 *Subdivision of Runs Act*, indicates a leasehold area of 174,700 acres, and a resumption area of 144,900 acres, or 319,600 acres in total. The resumption area was called in from the lease in 1894 for closer settlement.

¹⁹ Abbott 1974: 94-95.

²⁰ Walsh, G.P. 1976. 'Vickery, Ebenezer (1827-1906)', *Australian Dictionary of Biography*, Vol 6, Melbourne University Press: 333-334.

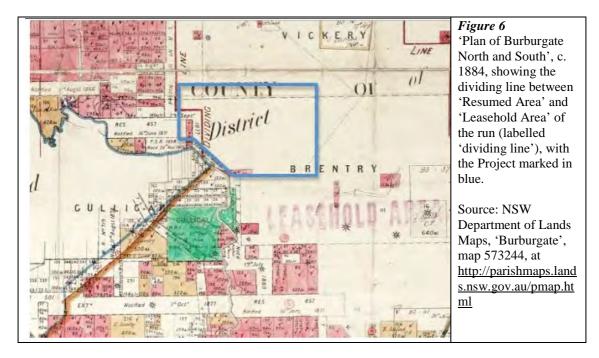
²¹ eg *The Maitland Mercury & Hunter River General Advertiser*, Tuesday 26 May 1885, 'Pastoral News, stock movements'

²² Whitworth, R.P. 1866. Bailliere's New South Wales Gazetteer and Road Guide, F.F. Bailliere, Sydney: 243-244.

²³ The Maitland Mercury & Hunter River General Advertiser, Tuesday 24 August, 1886, 'Irrigation at Burburgate'.

²⁴ 'Burburgate' within NSW Department of Lands http://parishmaps.lands.nsw.gov.au/pmap.html

The Subdivision of Runs Act of 1884 was a reform following the outdated Robertson land reforms for closer settlement of 1861. It limited free selection, and instead each squatter's run was to be divided into two portions, one retained by the lessee and the other 'Resumed Area' to be opened to settlement by small farmers. Figure 6 shows 'Burburgate North & South [annotated within the Lands Department to cross out 'North and South' and replaced it with 'Holding'], Liverpool Plains District, comprising Bogabri, Dripping Rock, Bull, Burburgate North, Burburgate South, Bondobala, Cowmore & Collygrah Runs, Counties of Nandewar and Pottinger', and this list is repeated in a pastoral handbook of 1889, being owned at that date by the Australasian Mortgage and Agency Company. By this date the combined acreage had shrunk to 179,765 acres (though this might have reflected the leasehold area alone).²⁵



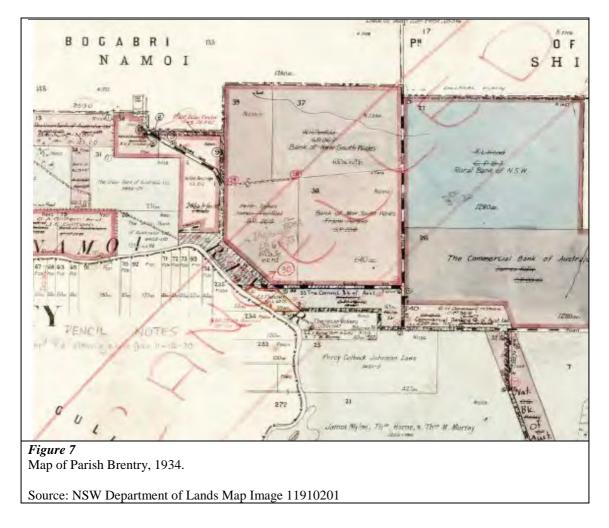
However, the 1880s and 90s were periods of decline in the central and western regions, and increasingly the runs were in the hands of banks (623 runs and 577 occupation leases in Resumed Areas by 1889). By 1893, 8 million acres of settled land had been abandoned. This system was in place for a decade, but rural recession led to a decline in pastoral settlement, and the Resumed Areas were not effectively taken up. In 1894 the *Carruthers Land Settlement Act* returned the remaining balance of the Resumed Areas back to the leaseholder, to be resumed by government only when needed.²⁶ However, much of the Burburgate run was subdivided for rural settlement, and the Burburgate pastoral activities withdrew to the area closer to Gunnedah, south of the Project area, focused on the station homestead which is approximately 13 km south of the Project.

²⁵ Hanson, W. 1889. *The Pastoral Possessions of New South Wales*. Gibbs, Shallard & Co., Sydney: 212.

²⁶ Roberts, S.H. 1968. *History of Australian Land Settlement 1788-1920*. Macmillan of Australia, Melbourne: pp 309-311.

In 1905 the surviving Burburgate property, by that date reduced to about 47,000 acres, was sold to H.S Rich and Sons for subdivision for closer settlement, and 58 blocks of from 105 to 2,200 acres, and the homestead block of 4,088 acres, were subsequently auctioned at the Gunnedah School of Arts.²⁷

The history of the ownership of portions within the Project area, as indicated on parish maps, is presented in Table 1. Title searches have not been carried out to clarify or expand this sequence of ownership, so it is indicative rather than definitive. Note that the maps (Figure 7) referred to are working maps that have been annotated within the NSW Department of Lands, so the information provided is often more recent than the map date, as the maps were manually updated for many years.



²⁷ Sydney Morning Herald Friday 18 August 1905, *Sale of Burburgate Station*; McLean, R. 2006.

Project Area	Portion	Owner	Reference ¹
Western	Parish Brentry	Bool Run Leasehold Area	Parish Brentry 1884
Emplacement	Parish Brentry,	Bank of Australasia.	Parish Brentry 1896
	Portion 28	Conditional Lease 1900.	
		Subdivided into Portions 37,	
		38 and 39 in 1917 as	
		'Broadwater Settlement	
		Purchase'	
	Parish Brentry, Portion 37	W.H. Penfold. Settlement Purchase 1926.	Parish Brentry 1917
	1 0111011 57	Bank of NSW (after 1934)	Parish Brentry 1934
	Parish Brentry,	Frank Penfold. Settlement	Parish Brentry 1917
	Portion 38	Purchase 1926.	Turish Dientry 1917
		Bank of NSW (after 1934)	Parish Brentry 1934
	Parish Brentry,	James Penfold. Settlement	Parish Brentry 1917
	Portion 39	Purchase 1926.	
		Peter Sykes (disposal 1961)	Parish Brentry 1934
	Parish	T.H. McDonald. Conditional	Parish Boggabri 1907
	Boggabri,	Purchase 1910.	
	Portion 133	E.K.E Vickery 1926	Parish Boggabri 1923
	Parish Vickery	Burburgate North Run	Parish Vickery 1881
		Leasehold Area	
		Forest Reserve. Notified 1901.	Parish Vickery 1881
		Annotated "low gravelly	
		spurs, good grazing, not	
		arable, pine and ironbark"	
		Frank Bray White. Homestead	Parish Vickery 1881
		Farm (Settlement Purchase) 1920.	
Open Cut Pit	Parish Brentry	Bool Run Leasehold Area.	Parish Brentry 1884
open out i te	Parish Brentry,	The Namoi Pastoral Company.	Parish Brentry 1884
	Portion 7	James Mylne, Thomas Horne	Parish Brentry 1896
	1 of tion y	and Thomas M. Murray.	ranon Brondy 1070
	Parish Brentry, Portion 10	Bank of New South Wales.	Parish Brentry 1884
	Portion 10 Parish Brentry,	Michael Donaghue,	Parish Brentry 1896
	Portion 26	Homestead Grant 1901.	runsh brond y 1090
		James Kelly. OCP 1920.	Parish Brentry 1917
		Commercial Bank of Australia	Parish Brentry 1934
		(after 1934).	
	Parish Brentry,	Ronald A. Wilkinson.	Parish Brentry 1896
	Portion 27	Homestead Grant 1904.	
		Frederick Leslie Hoad.	Parish Brentry 1917
		Conditional Purchase 1918.	
		Rural Bank of NSW (after 1934).	Parish Brentry 1934
	Parish Brentry,	Bank of Australasia.	Parish Brentry 1896
	Portion 28	Conditional Lease 1900.	
		Subdivided into Portions 37,	
		38 and 39 in 1917 as	
		'Broadwater Settlement	
	1	Purchase'.	

Table 1.History of Ownership of Portions within the Project Area

Project Area	Portion	Owner	Reference ¹	
Open Cut Pit	Parish Brentry,	W.H. Penfold. Settlement	Parish Brentry 1917	
(continued)	Portion 37	Purchase 1926.		
	Parish Brentry,	Frank Penfold. Settlement	Parish Brentry 1917	
	Portion 38	Purchase 1926.		
	Parish Brentry	Travelling Stock Route.	Parish Brentry 1896	
	Portion 40	Notified 17 July 1907.		
		D.H. Goaden. Conditional	Parish Brentry 1934	
		Purchase 1936.		
	Parish Vickery	Burburgate North Run	Parish Vickery 1881	
	Portion 17	Leasehold Area.		
		Forest Reserve. Notified 1901.	Parish Vickery 1881	
		Annotated "low gravelly		
		spurs, good grazing, not		
		arable, pine and ironbark".		
		Frank Bray White. Homestead	Parish Vickery 1881	
		Farm (solider settlement)	5	
		1920.		
Eastern	Parish Brentry	Bool Run Leasehold Area.	Parish Brentry 1884	
Emplacement	Parish Brentry,	The Namoi Pastoral Company.	Parish Brentry 1884	
	Portion 7	James Mylne, Thomas Horne	Parish Brentry 1896	
		and Thomas M. Murray.		
	Parish Brentry,	Bank of New South Wales.	Parish Brentry 1884	
	Portion 11			
	Parish Brentry,	Joseph Augustus Curley,	Parish Brentry 1896	
	Portion 23	Homestead Grant.	5	
		Commissioner of the	Parish Brentry 1917	
		Government, Savings Bank of		
		NSW.		
		The Commercial Banking	Parish Brentry 1934	
		Company of Sydney Limited	· J ·	
		(after 1934)		
Haul Road and	Parish	Travelling Stock Route.	Parish Gunnedah 1894	
Overpass Area	Gunnedah	Notified 13 March 1897.		
	Portion 36			
	Parish	Ebenzer Vickery.	Parish Gunnedah 1894	
	Gunnedah	J		
	Portion 80			
	Parish	W.J.A Bradbury.	Parish Gunnedah 1914	
	Gunnedah			
	Portion 445			
	Parish	P.J. Neil.	Parish Gunnedah 1914	
	Gunnedah			
	Portion 446			
¹ All ownership dat		NSW Department of Lands maps (La	nd and Property Manageme	

Table 1. History of Ownership of Portions within the Project Area (continued)

All ownership data has been sourced from NSW Department of Lands maps (Land and Property Management Authority, Parish Map Preservation Project)

2.3 SCHOOLS

The nearest school to the Project area was at Gulligal, across the Namoi to the west. The Gulligal provisional school (i.e. in an area having at least 15 but fewer than 25 children requiring education) was established in 1882, operating to 1884, then again opening from 1915 to 1918. It became a public school (ie having at least 20 students) in 1919, and closed in 1938.²⁸

²⁸ Department of School Education Library (NSW), 1993. Government Schools of New South Wales 1848-1993, NSW Board of School Education, Parramatta.

3. OTHER HERITAGE STUDIES AND LISTINGS

Previous heritage studies covering the Project area and surrounds have included the:

- Gunnedah LEP 1998 Schedule 1, Heritage Items (no heritage items in or near the Project area); and
- Narrabri LEP1992 Schedule 2, Heritage Items (no heritage items in or near the Project area).

The existence of heritage listed properties within the Project area has been tested by interrogating the following databases and paper sources:

- Gunnedah LEP1998 Schedule 1, Heritage Items;
- Narrabri LEP 1992 Schedule 2, Heritage Items;
- Australian Heritage Database and Australian Heritage Places Inventory of the Commonwealth Department of Sustainability, Environment, Water, Population and Communities, which includes heritage registrations in the Register of the National Estate, the Commonwealth Heritage List, the National Heritage List, the World Heritage List and the registers of the States and Territories;
- Heritage Council of NSW's State Heritage Inventory; and
- National Trust Register (to 1995) and supplement (to 1997) (paper copies).

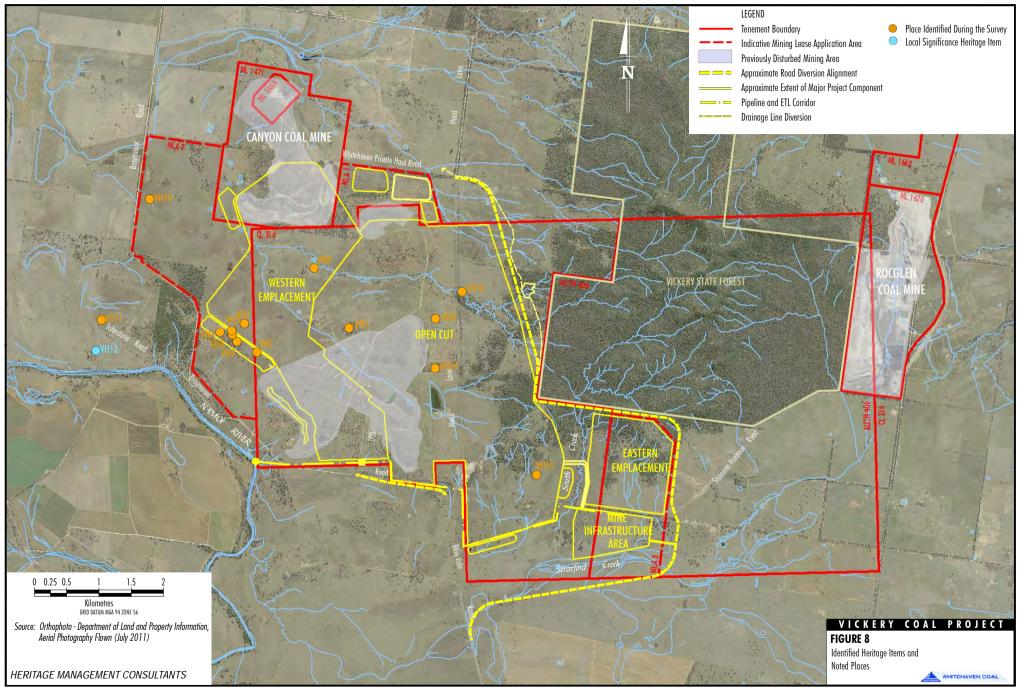
No heritage items have been previously identified in or adjacent to the Project area. The nearest listed heritage items to the Project area are in Boggabri, 15 km to the north-west: the Boggabri Railway Station (Rail Corp's s.170 State Agency Heritage Register); and the iron bridge over the Namoi River near Boggabri (Roads and Traffic Authority's s.170 State Agency Heritage Register). The nearest item in the State Heritage Register is the Gunnedah Railway Station, 25 km to the south.

4. HERITAGE SURVEY OF THE PROJECT AREA

Much of the Project area comprises of undulating cleared agricultural land. Areas in the north and west of the site have been previously mined and have been rehabilitated (much of Portions 26, 27, 38 and 17). Vickery State Forest is located to the immediate east of the Project area (Figure 2a).

The proposed private haul road and Kamilaroi Highway overpass area is located between the Kamilaroi Highway and the Namoi River, 20 km to the south of the proposed Project mining area (Figure 2b). The area is predominately cleared and is currently used for cattle grazing.

Table 2 provides a summary of places that were assessed for heritage significance, which are described in detail in Section 4.1. Clearly modern rural infrastructure, such as current fencing, steel yards and modern steel silos were not included as having heritage value. Figure 8 shows the location of places that were identified at the proposed Project mining area. No places were identified in the proposed private haul road and Kamilaroi Highway overpass area.



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Table 2Places Located within or in Close Proximity to the Project AreaAssessed for Heritage Significance

ID	Place	Location	Description	Significance
VH1*	Garage area	(Latitude/Longitude) -30.7627 150.1832	Garage with rear room,	No local
		2011027 12011022	built of fibro and aluminium, concrete slab, and nearby animal yards	significance
			and shelter. Possibly 1970s in date.	
VH2	Modern Cottage	-30.7658 150.1682	Recently-built cottage with metal sheet cladding, aluminium window frames, concrete slab, water tank and adjacent	No local significance
1/112	X 1	20 7642 150 165	modern caravan.	NT - 1 1
VH3	Yards and shed remains	-30.7642 150.165	Timber stumps and corrugated galvanised iron (CGI) sheets, probably a shed site. Immediately	No local significance
			across track is a collapsing split timber yards with counting race and loading ramp.	
VH4	Building foundations	-30.7632 150.1643	Concrete-filled drum foundations and timber remain, possibly of woolshed, with collapsing yards opposite.	No local significance
VH5	Building sites	-30.7627 150.1642	Concrete slab with fire-shattered fibro sheeting and CGI water tank, and nearby site with building materials (CGI, timber) and an iron ship tank (for water).	No local significance
VH6	Spray dip and shed	-30.7628 150.1623	Timber-framed CGI clad shed, most cladding removed, adjacent to concrete slab and CGI walls and piping of a circular spray dip, and yards. Possibly a crutching shed.	No local significance
VH7*	Shed	-30.7617 150.1663	Timber-framed, CGI clad storage shed with raised timber floor on round timber stumps.	No local significance
VH8*	'Wilga' homestead complex	-30.7542 150.1778	Weatherboard clad, CGI roofed cottage with masonite internal cladding, and associated sheds complex.	No local significance
VH9*	Shearing shed	-30.7617 150.1972	Two-stand shearing shed, pole and sawn timber framed with CGI roof and wall cladding, though most wall cladding has been removed.	No local significance

Table 2	Places Located Within or in Close Proximity to the Project Area
	Assessed for Heritage Significance (continued)

ID	Place	Location	Description	Significance
1/1/10		(Latitude/Longitude)		
VH10	Cottage	-30.744 150.1515	Weatherboard cottage, timber frame, CGI roof, matchboard lining, brick fireplace and iron stove on floor. In very poor condition.	No local significance
VH11	Cottage and shed	-30.7607 150.1432	Weatherboard cottage with CGI roof, brick chimney in rear skillion, very decayed condition. Opposite 'Broadwater' homestead. Pole-framed CGI clad machinery shed 100 metres (m) to east.	No local significance
VH12	'Broadwater' homestead complex	-30.765 150.1422	Weatherboard CGI roofed cottage, occupied; brick modern cottage occupied; old woolshed with old press and horse tack room (not accessed); several outbuildings and old tractors in paddock.	Local significance
VH13*	Surveyors scarred tree	-30.7580 150.2015	Located to the east of Blue Vale Road, along a creekline. It is approximately 30 m off the road. The scar on the tree faces west. Blaze marked 'RD' and with broad arrow.	No local significance
VH14*	Surveyors scarred tree and adjacent survey mark	-30.7686, 150.1969	The tree and mark are located to in a patch of trees to the north of the large dam, west of Blue Vale Road. The tree is approximately 5 m east of the metal pipe and plaque survey mark and the scar on the tree faces west.	No local significance
VH15	Horse drawn scoop	-30.7839 1502129	Located to the north of Shannon Harbour Road, near a farm dam.	No local significance

* Place to be disturbed by the Project.

4.1 SITE DESCRIPTIONS

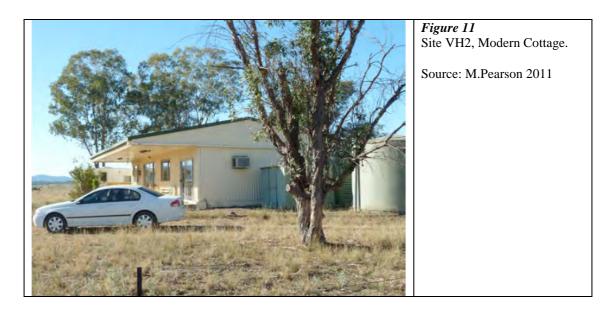
VH1. Garage Area

Garage with rear room, built of aluminium sheet and fibro cladding, with skillion roof and concrete floor (Figures 9 and 10). Appears to be c.1960s in date. Adjacent concrete slab and water tanks. Collapsed yards with animal shelter and crush within 100 m to the south located on Portion 38 and within the footprint of the Project open cut.



VH2. Modern Cottage

Recently-built cottage with metal sheet cladding, aluminium window frames, concrete slab, water tank and adjacent modern caravan (Figure 11).



VH3. Yards and Shed Remains

Timber stumps and corroded CGI sheets on the ground, probably a shed site (Figure 12). Immediately across track are collapsing split timber yards with counting race and loading ramp. Located on Portion 39, and possibly related to the 1960s occupation of the block.



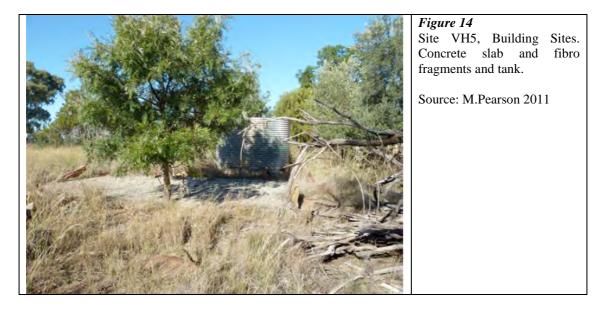
VH4. Building Foundations

A set of concrete-filled five-gallon drums with a steel bar projecting from each, the foundations of a now-removed building (Figure 13). Timber frame and animal yard fences at one end. Possibly a woolshed. Maybe related to site VH5.



VH5. Building Sites

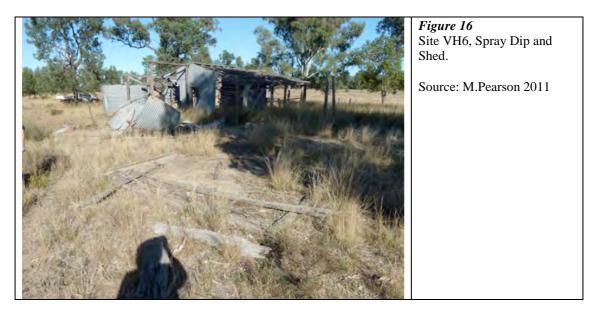
Concrete slab with fire-shattered fibro sheeting and CGI water tank, and site 25 m west with building materials (CGI, timber) and an iron ship tank (for water), possibly bulldozed remains of one building (Figures 14 and 15). Use of site unknown. On Portion 39, and possibly related to the 1960s occupation of the block. Maybe related to site VH4.

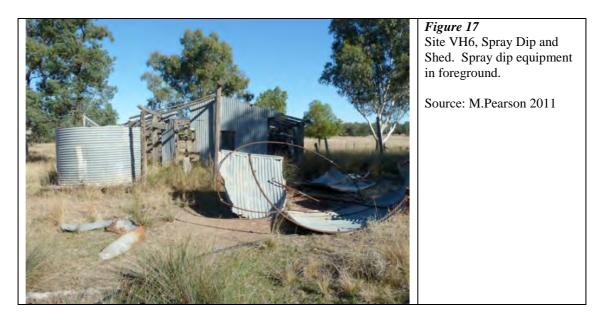




VH6. Spray Dip and Shed

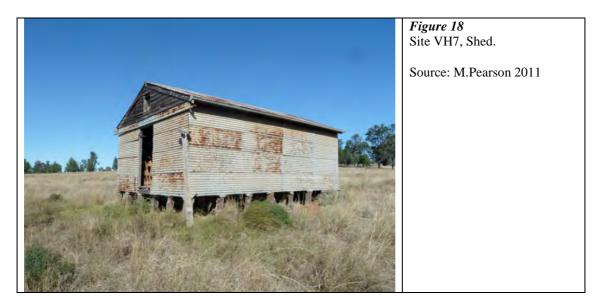
Timber-framed CGI clad shed, most cladding removed, adjacent to concrete slab and CGI walls and piping of a circular spray dip, and yards (Figures 16 and 17). Possibly a crutching shed. On Portion 39, and possibly related to the 1960s occupation of the block.





VH7. Shed

Timber-framed, CGI clad storage shed with raised timber floor on round timber stumps (Figure 18). Iron rusted but in sound condition. Concrete water tank at gate in fence 150 m north. On Portion 39. Located within the footprint of the proposed Western Emplacement.



VH8. 'Wilga' Homestead Complex

Weatherboard clad, CGI roofed cottage with masonite internal cladding (Figure 19). Abandoned and services stripped out. 1960s in date. Vegetable patch with stone laid pathways (Figure 20). Approximately 100 m to west is a shed group:

- 1. Steel-framed CGI clad shed with skillion shelter for truck (Figure 21).
- 2. CGI clad workshed with skillion shelter on side (Figure 22).
- 3. CGI shed, occupied by cattle as a shelter (Figure 23).
- 4. Steel silo (Figure 24).
- 5. Cattle yards with welded steel and timber fences (Figure 25).

6. Two-stand shearing shed, timber pole-frame CGI clad, with dirt floor, shearing drive gear intact, and associated sheep yards (Figures 26 and 27). Now unused and in very poor condition.

Stumps of another shed and a chicken wire enclosure are also part of the complex. A windmill without sails and water tank on a stand are between the homestead and the sheds. Located within the footprint of the proposed Western Emplacement.



Complex on Portion 37.





Figure 23 Site VH8, Wilga Homestead Complex. Shed 3.

Source: M.Pearson 2011



Figure 24 Site VH8, Wilga Homestead Complex. Silo.

Source: M.Pearson 2011

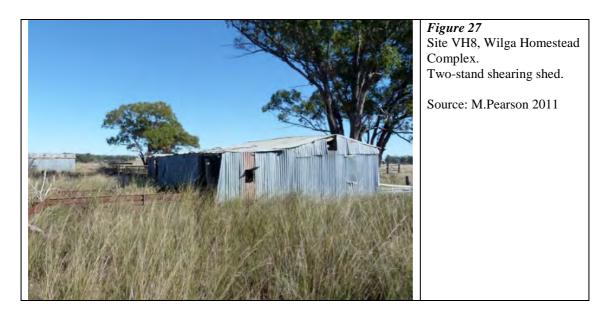
Figure 25 Site VH8, Wilga Homestead Complex. Cattle yards.

Source: M.Pearson 2011



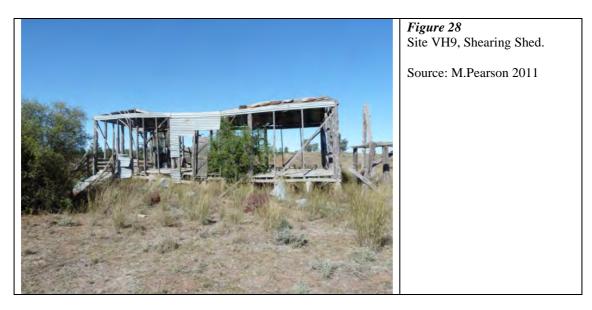
Figure 26 Site VH8, Wilga Homestead Complex. Two-stand shearing shed.

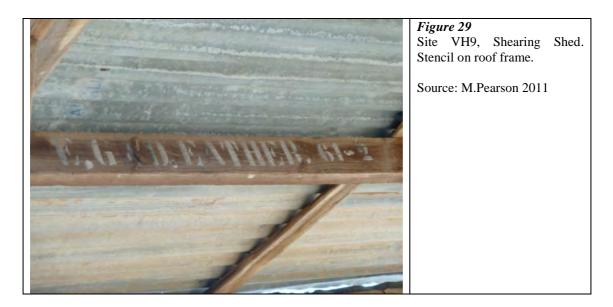
Source: M.Pearson 2011



VH9. Shearing Shed

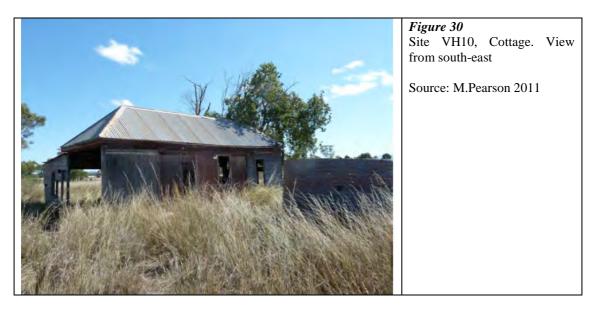
Two-stand shearing shed, pole and sawn timber framed with CGI roof and wall cladding, though most wall cladding has been removed (Figure 28). Raised timber floor is pitched along the centre line in the wool room section. Two chutes which service the stand and entry ramp remain intact. A water tank stand is located adjacent. Shearing gear has been removed. Stencils on roof framing include 'EG & D EATHER. 61-2'; 'RL.Bish.'; 'LOLA HOAD ?3'; 'BRYDA (?) HOAD.10' (Figure 29). Located on Portion 27 (held by Hoads from 1918) and within the footprint of the Project open cut.





VH10. Cottage

Weatherboard cottage, timber frame, CGI roof, matchboard lining, brick fireplace and iron stove on floor (Figures 30 to 33). The cottage is in very poor condition. Some internal and external walls have been removed, the timber floor is rotten and impacted by cattle sheltering in it. A water tank and stand are located in a paddock 150 m to the south. An outside toilet of weatherboard construction is south of the cottage. Late 19th to early 20th century in date. Located 1 km from the proposed Western Emplacement. May originate from purchase of Portion 133 by T.H. McDonald in 1910.



<i>Figure 31</i> Site VH10, Cottage. View from north-east. Source: M.Pearson 2011
Figure 32 Site VH10, Cottage. Collapsing fireplace and stove. Source: M.Pearson 2011
<i>Figure 33</i> Site VH10, Cottage. View from west. Source: M.Pearson 2011

VH11. Cottage and Shed

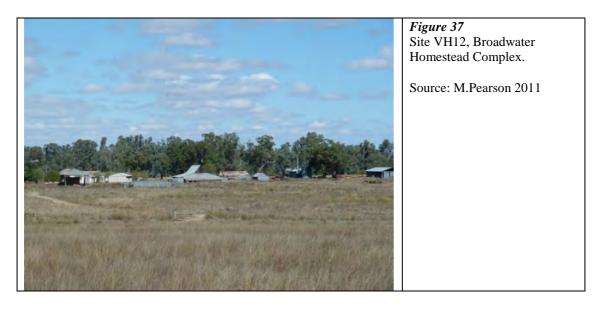
Weatherboard cottage with CGI roof, brick chimney in rear skillion, very decayed condition, verandahs and skillion collapsed, perhaps appears 20th century in date (Figures 34 and 35). Opposite 'Broadwater' homestead. Pole-framed CGI clad machinery shed 100 m to the east, housing two international long-bed trucks, with a tractor outside and a cultivator nearby (Figure 36). Appears late 20th century in date. Cottage located approximately 2 km west of proposed Western Emplacement and approximately 3 km west of the Project open cut.





VH12. 'Broadwater' Homestead Complex

Weatherboard and CGI roofed cottage, extended in fibro, occupied and in fair to good condition (Figures 37 to 39). A textured brick, tile-roofed cottage in good condition, occupied (Figure 40). A CGI clad and roofed old woolshed with high-pitched roof and skillion additions, old wool press and horse tack room seen through gap in wall (not accessed). Several CGI outbuildings and old tractors in the house paddock. Located approximately 2 km from the proposed Western Emplacement and 3 km from the Project open cut.



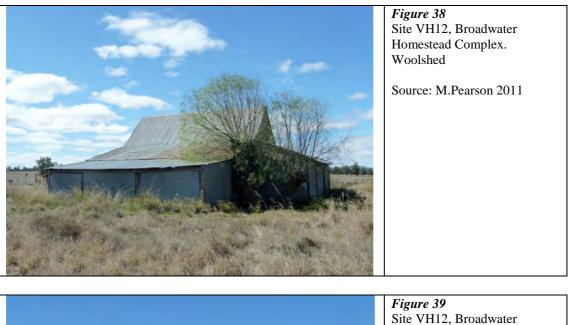




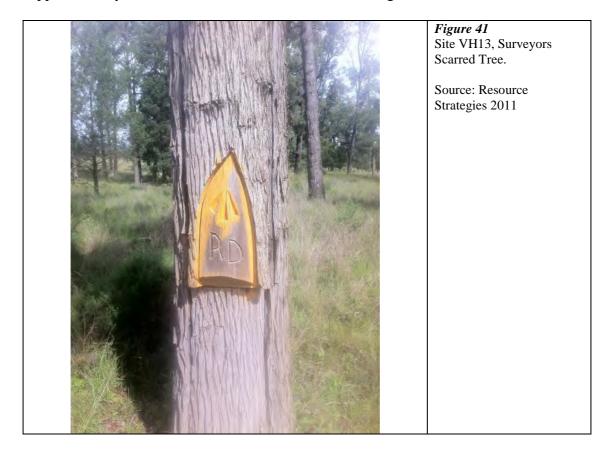
Figure 39 Site VH12, Broadwater Homestead Complex. Weatherboard cottage.

Source: M.Pearson 2011

<i>Figure 40</i> Site VH12, Broadwater Homestead Complex. Brick cottage.
Source: M.Pearson 2011

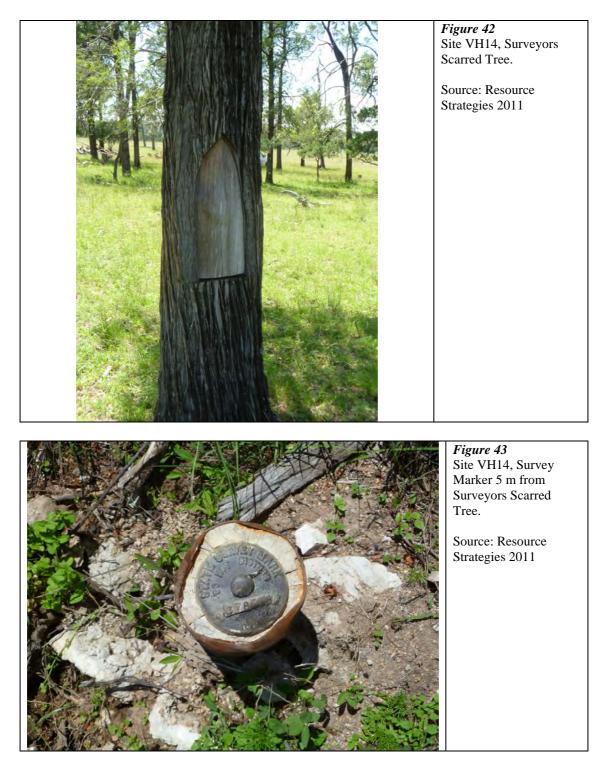
VH13. Surveyors Scarred Tree

Tree marked on its western side with a blaze, with the letters 'RD' and a broad arrow carved into the blaze (Figure 41). The blaze and carving is fresh and recent. Located approximately 30 m to the east of Blue Vale Road, along a creekline.



VH14. Surveyors Scarred Tree and Adjacent Survey Mark

A blazed tree (with blaze facing west and with no carved lettering) located 5 m east of an iron pipe filled with concrete and topped with a metal survey plaque with cast lettering 'State Survey Mark Do not Disturb' and stamped '3787' (Figures 42 and 43). The tree and mark are located in a patch of trees to the north of the large dam, west of Blue Vale Road, within the footprint of the Project open cut.



VH15. Horse Drawn Scoop

An iron horse drawn scoop used for clearing accumulated silt from dams. It has a sprung rear section, possibly to aid unloading silt (Figure 44). A makers plate is labeled 'Aldred's Patent Silt Scoop, N.P. Nielsen & Co Makers 491 Kent St. Sydney' (Figure 45). Such equipment was commonly used in the 19th and 20th centuries. N.P. Nielson & Co was operating in Kent Street at least between 1888 and 1918, appearing in *Sand's Commercial Directories* for those years.



Figure 44 Site VH15, Horse Drawn Dam Scoop.

Source: Resource Strategies 2011



Figure 45 Site VH15, Horse Drawn Dam Scoop. Makers plate.

Source: Resource Strategies 2011

5. EVALUATION OF THE HERITAGE SIGNIFICANCE OF IDENTIFIED PLACES

5.1 HERITAGE CRITERIA

The evaluation of the heritage significance of the identified places is based on the NSW State Heritage Register criteria. The application of the criteria at the local level is done by simply replacing the words 'NSW's' with the word 'local'. The criteria are as follows:

- **Criterion A:** an item is important in the course, or pattern, of NSW's cultural or natural history.
- **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.
- **Criterion C:** an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.
- **Criterion D:** an item has strong or special associations with a particular community or cultural group in NSW for social, cultural or spiritual reasons.
- **Criterion E:** an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.
- **Criterion F:** an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history.
- **Criterion G:** an item is important in demonstrating the principal characteristics of a class of NSW's:
 - cultural or natural places; or
 - cultural or natural environments.

5.2 Assessment against criteria

None of the places identified are assessed as meeting the criteria at the state level, that is, they cannot be considered to be of state significance and would not meet the threshold for entry in the NSW State Heritage Register.

The assessments below are therefore made within the context of local significance alone, that is: whether they are sufficiently uncommon, representative of their type; historically important; architecturally or aesthetically noteworthy; or of such social value in the terms of the criteria as to be considered of significance within the local area. The threshold for judging local significance is taken to be that necessary to justify entry in the LEP Heritage Schedule. "No local significance" (as used in Table 2) means that the place would be unlikely to be recognised as significant in an LEP assessment. The items assessed as having local heritage significance are discussed in more detail in Attachment A. The sites VH1 to VH7 and VH13 to VH15 described in Table 2 and Section 4.1 above are assessed as being of no heritage significance in relation to all of the criteria. They are common types of places in rural Australia and in the local region, and are not unusual or special in any way. They do not warrant conservation or detailed recording. VH15, the dam scoop, may be of interest to one of the local historical museum collections, and should be offered to them.

Elements within sites VH8 and VH9, the Wilga woolshed and the woolshed at VH9 are of historical and technological interest as shearing practices have changed over time and such small woolsheds are becoming more uncommon, though many still survive. However, the sheds are in very poor condition and have low integrity because of the loss of significant fabric. As a result, they are not assessed as being significant as good examples of small woolsheds at the local level (Criterion G). They do not warrant conservation, and their detailed recording would add little to the knowledge of such sheds.

Sites VH10, VH11, the two weatherboard cottages, are of historical interest as surviving relics of late-19th or early-20th century rural development of the area. However, the poor condition of the two cottages and their lack of high integrity and any realistic likelihood that conservation would be technically feasible, makes them poor examples of their type, lowering their significance, and making it highly unlikely that they would be entered in a LEP. They are therefore not assessed as being significant at the local level under any of the criteria.

Site VH12, the 'Broadwater' homestead complex, is assessed as being of low to moderate local significance, reflecting late-19th or early-20th century rural settlements in the local area, and including building types that are becoming uncommon. At 'Broadwater' the weatherboard cottage, not accessible during the survey, deserves further assessment, and the woolshed may be of moderate significance, but again it was not inspected in any detail as the occupier's permission to enter the building or yards had not been obtained. These buildings appear to be in fair to good condition, making conservation feasible and LEP listing possible.

No work was undertaken to assess social significance of any of the places inspected, but given the nature of the places their community associations are likely to be very localised, possibly just to a single family.

5.3 Assessment of 'Relics'

As a result of the 2009 amendments to the NSW *Heritage Act, 1977* (the Act), none of the places are assessed as having archaeological deposits or objects that are 'relics' in the meaning of the Act, and are hence not specifically protected by the Act. Previously the Act defined relic as being a deposit or artefact older than 50 years, but the 2009 amendments altered the definition of 'relic' to say:

relic means any deposit, artefact, object or material evidence that:

- (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
- (b) is of State or local heritage significance.

None of the sites VH1 to VH11 and VH13 to VH15, and the deposits or artefacts associated with them, are assessed as being of local heritage significance, and therefore are not 'relics' in the meaning of the Act. Site VH12 is assessed as being of low to moderate local significance, and therefore any deposits or artefacts associated with the site might be defined as a 'relic'. Some items of rural equipment associated with these sites include early cultivators, tractors and dam scoops. The Act is not clear as to whether 'of local significance' means identified in the LEP. If it does, these places are not yet 'relics' in the meaning of the Act as the sites are not identified on the LEP.

6. ASSESSMENT OF THE POTENTIAL IMPACTS OF THE PROJECT ON NON-ABORIGINAL HERITAGE

On the basis of the assessment in Section 5, the elements of the 'Broadwater' homestead group, site VH12, are found to have a low to moderate degree of local significance. The site is located approximately 2 km from the proposed Western Emplacement and approximately 3 km from the Project open cut developments. As such, the site would not be directly impacted by the Project. In regards to potential indirect impacts from blasting vibration, Wilkinson Murray has undertaken a noise and blasting assessment for the Project and have concluded that blasting impacts to the site would be negligible.

Items of rural technology are related to several of the identified sites, and other items were seen abandoned in paddocks. While these items were not assessed in detail, they may have a degree of technological interest as surviving examples of 19^{th} and early 20^{th} century rural technology.

7. ASSESSMENT OF THE CUMULATIVE EFFECTS OF THE PROJECT

Consideration has been given to the potential cumulative impacts of the Project on non-Aboriginal heritage values in the context of other major developments in the region. On the basis of the information presented above, there would not appear to be any material Project effects on non-Aboriginal heritage values and therefore the Project would not materially contribute to local or regional cumulative effects on non-Aboriginal heritage.

8. DEVELOPMENT OF MITIGATION MEASURES

No potential impacts on heritage items (i.e. items with heritage significance) have been identified.

Several sites contain objects that would potentially be of interest to local historical collections, and several other objects abandoned in paddocks may also be of collection interest. It is recommended that Whitehaven offers the opportunity to the Boggabri Historical Society (in the first instance), and the Gunnedah Rural Museum (in the second instance) to select items that would be useful additions to their collections.

9. CONCLUSIONS

The study of the non-Aboriginal heritage places in the Project area has indicated that one site, the elements of the Broadwater homestead complex (VH12) is of low to moderate local significance. The site is located approximately 2 km from the proposed Western Emplacement and approximately 3 km from the open cut developments and would not be directly or indirectly impacted by the Project.

It is recommended that Whitehaven offers the opportunity to the Boggabri Historical Society (in the first instance), and the Gunnedah Rural Museum (in the second instance) to select any items from the various identified sites and individually abandoned in paddocks related to the Project, that would be useful additions to their collections.

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ATTACHMENT A

DESCRIPTION OF ITEMS OF HERITAGE SIGNIFICANCE WITHIN THE PROJECT AREA

The following citation is for the single place (VH12) assessed as having local significance. In terms of the New South Wales (NSW) Heritage Office guidelines, local heritage items are those of significance to the local government area. An assessment of the Broadwater Homestead Complex against the local heritage assessment criteria is provided below.

SITE VH12. BROADWATER HOMESTEAD COMPLEX

A1.1 History

The detailed history of the Broadwater homestead complex has not yet been researched. However, the surviving woolshed and cottage structures appear in their construction to date to the second half of the 19th or early 20th century. A more detailed historical analysis would need to be undertaken if site recording is required.

A1.2 Physical Description

The Broadwater homestead complex consists of six main buildings and five ancillary buildings of differing age. A weatherboard and corrugated galvanised iron (CGI) roofed cottage, extended in fibro, occupied and in fair-good condition, probably dates to the early 20th century. A more modern textured brick, tile-roofed cottage in good condition, is presently occupied. A timber framed CGI clad and roofed woolshed with a high-pitched roof and skillion additions, contains an old wool press and horse tack room (seen through gap in wall, not directly accessed). The woolshed appears to date from the second half of the 19th century. The CGI outbuildings were not inspected. A number of old tractors and other pieces of equipment are located in the house paddock.

A1.3 Location

Broadwater is located on the Namoi River, on Johnston Road 12 kilometres (km) south-east of Boggabri and approximately 2 km from the Western Emplacement and approximately 3 km from the proposed open cut. (Latitude 30.765, Longitude 150.1422)

A1.4 Physical Condition

The main buildings appear to be well maintained.

A1.5 Heritage Assessment Criteria

The relevant heritage criteria under which this place might be assessed as significant locally are as follows:

Criterion A: an item is important in the course, or pattern, of NSW's cultural or natural history.

Broadwater homestead complex contains a number of well-maintained buildings that reflect the development of pastoral complexes in the local area. The deteriorating condition of many other buildings of the same period elsewhere in the district suggests this complex is important locally.

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.

The history of the development of the complex has not yet been undertaken, so this criterion cannot be assessed.

Criterion E: an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.

The woolshed is of an unusually high-pitched design that may prove to be of technologically or design interest.

Criterion F: an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history.

The survival of buildings within a complex at this small-scale of pastoral enterprise appears to be at least uncommon in the local area.

A1.6 Statement of Significance

The Broadwater homestead complex is of local significance as a relatively intact example of an evolved small-scale pastoral enterprise. The several generations of cottages, the distinctive high-pitched woolshed, and the complex of related buildings may be of sufficient local significance to be added to the Local Environment Plan. Larger rural property homestead complexes survive in the region, but the medium to small scale pastoral holdings are under threat from changing pastoral economics and demographics.